



# E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

(Accredited by NAAC with 'A' Grade and NBA)

Email: [principal@egspec.org](mailto:principal@egspec.org)

website: [www.egspec.org](http://www.egspec.org)

Ph: 04365-251112

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### VALUE ADDED COURSES

#### ACADEMIC YEAR

2019-2020

Name of the value added courses offered	Program	No. of times offered during the same year	Duration of course	Number of students enrolled in the year	Number of Students completing the course in the year
Getting Started with Python	UG	1	36 Hours	84	84
Introduction to Data Centre Virtualization and Cloud Computing	UG	2	36 Hours	119	119
Introduction to ASP.Net Framework	UG	2	36 Hours	116	116
Studying Machine Learning Techniques using MATLAB 9.7 R2019b	PG	1	40 Hours	24	24

*MChs*  
HOD/CSE

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

ATTESTED

*[Signature]*  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL

E.G.S. Pillay Engineering College,  
Thechi, Nagore - 611 002,  
Nagapattinam (Dt) Tamil Nadu.

**E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS),  
NAGAPATTINAM**



**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**


**ORGANIZED**

**VALUE ADDED  
COURSE ON  
GETTING STARTED  
WITH PYTHON**

**E.G.S.PILLAY ENGINEERING COLLEGE (AUTONOMOUS)**  
**NAGAPATTINAM**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**VALUE ADDED COURSE**  
**ON**  
**GETTING STARTED WITH PYTHON**

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HOD/CSE

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

**PERMISSION LETTER**

Date: 13.04.2020

From

Dr.R.Manivannan,  
Associate Professor/CSE,  
Department of CSE,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

To

The Principal,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

Through

The Head of Department,  
Department of CSE,  
E.G.S.Pillay Engineering College,  
Nagapattinam.



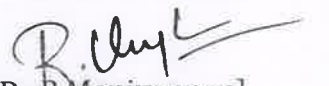
Respected Sir,



Sub: Requisition to conduct Value Added Course – Reg

We are happy to inform you that we have planned to organize 15 days value added course titled **“Getting Started with Python”** for II CSE Students from 20.04.2020 to 04.05.2020 through online mode. Herewith, I have enclosed name list and session details. Kindly give permission for conducting this value added course.

Thanking you,

yours sincerely,

  
[Dr.R.Manivannan]

  
HEAD OF DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002  
**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.**  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thiru. Nagar - 611 002.  
Nagapattinam (Dt) Tamil Nadu.





HOD CSE <hodcse@egspec.org>

### Permission to conduct Value Added Course - Reg..

2 messages

HOD CSE <hodcse@egspec.org>

Mon, Apr 13, 2020 at 9:30 AM

To: PRINCIPAL EGSPEC <principal@egspec.org>

Respected Sir,

We are happy to inform you that we have planned to organize an online value added course on title "Getting Started with Python" for II CSE UG Students from 20.04.2020 to 04.05.2020. Herewith, I have enclosed the Brochure & session details. Kindly give us permission for conducting the value added course.

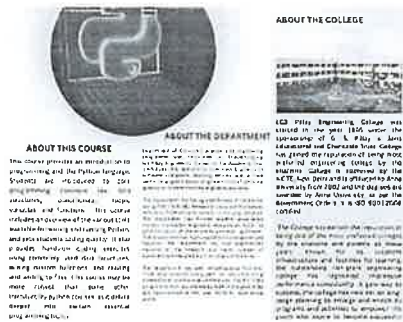
Thanking you

-- with regards,  
**Head of Department**  
**Department of Computer Science and Engineering,**  
**E.G.S. Pillay Engineering College,**  
**Nagapattinam.**  
Mobile: 7373067032  
Email: [hodcse@egspec.org](mailto:hodcse@egspec.org)

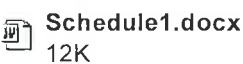
### 3 attachments



Getting Started with Python1.png  
996K



Getting Started with Python2.png  
996K



**ATTESTED**  
*[Signature]*  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Tinetti, Nagore - 611 002,**  
**Nagapattinam (Dt) Tamil Nadu.**

05/07/20, 1:30 PM

E.G.S. Pillay Engineering College Mail - Permission to conduct Value Added Course - Reg..

**PRINCIPAL EGSPEC** <principal@egspec.org>

Mon, Apr 13, 2020 at 12:10 PM

To: HOD CSE <hodcse@egspec.org>

Good Morning Sir,

Request to conduct the Value added course is accepted and permitted.

Regards,

**The Principal**

E.G.S.Pillay Engineering College,

Nagapattinam

Mobile: 9894831458

Email: principal@egspec.org

[Quoted text hidden]

ATTESTED

  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

## Convenor

**Prof.Dr.M.CHINNADURAI**

Professor & Head / CSE

## Course Coordinator

**Dr.R.MANIVANNAN**

ASSOCIATE PROFESSOR/CSE

**Mrs.B.RANJANI**

ASSISTANT PROFESSOR

## Resource Person

**Ms.M.PRIYADARSHINI**

ASSISTANT PROFESSOR / CSE

## Industry Person

**Mrs.S.Rama,**

Sr.Database Administrator,

**Dr.S.RAMASWALAN**, Chennai

PRINCIPAL,  
E.G.S. Pillay Engineering College,  
Thethi, Nagore,  
Nagapattinam

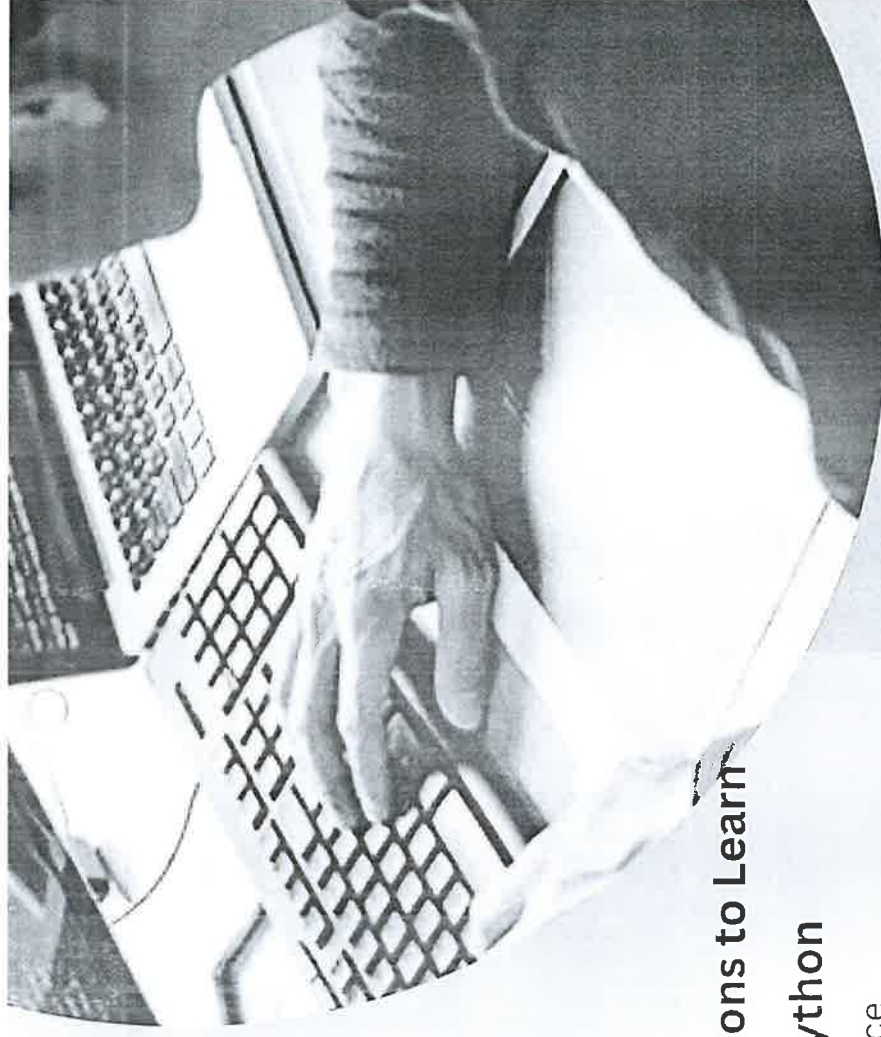
Beneficiaries

2018-22 Batch

UG CSE Students

**Course Duration : 36Hours**

**Learning Mode : Online**



## Top Reasons to Learn

### Python

1. Data science.
2. Scientific and mathematical computing.
3. Web development.
4. Finance and trading.
5. System automation and administration.
6. Computer graphics.
7. Basic game development.
8. Security and penetration testing.

## Getting Started with Python (value added course)

**Organized by**  
**Department of CSE**

**Date:**  
**20.04.20-04.05.20**



ATTESTED



**Dr. S. RAMABALAN, M.E., Ph.D.**  
**PRINCIPAL**

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**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

## ABOUT THIS COURSE

This course provides an introduction to programming and the Python language. Students are introduced to core programming concepts like data structures, conditionals, loops, variables, and functions. This course includes an overview of the various tools available for writing and running Python, and gets students coding quickly. It also provides hands-on coding exercises using commonly used data structures, writing custom functions, and reading and writing to files. This course may be more robust than some other introductory python courses, as it delves deeper into certain essential programming topics.

## ABOUT THE DEPARTMENT

Department of Computer Science and Engineering programme was introduced at Edayathangudy G.S.Pillay Engineering College in the Academic Year 1995-1996. The demand for Computer Engineers in software companies, banking sectors and private sectors engaged in developing new trends of software generation is more than the engineers available.

The department has Recognized Research Centre for doing PhD / M.S. (By Research), obtained Permanent Affiliation from Anna University in the year 2014-15. The department has formed student association namely Computer Engineers Association (CEA) to promote talent of the students and their upliftment. The department has highly qualified and experienced faculties. The department has well experienced faculties in the research and more number of publications in reputed Journals and Conferences.

The department has well infrastructural facilities. From 2011 onwards every year, we are conducting International and National conferences. The B.E (CSE) programme was accredited by NBA in the year 2016 and reaccredited in the year 2019 for next three years.

## ABOUT THE COLLEGE



EGS Pillay Engineering College was started in the year 1995 under the sponsorship of G. S. Pillay & Sons Educational and Charitable Trust. College has gained the reputation of being most preferred engineering college by the students. College is approved by the AICTE, New Delhi and is affiliated to Anna University from 2002 and the degrees are awarded by Anna University, as per the Government Orders. It is ISO 9001:2008 certified.

The College has earned the reputation of being one of the most preferred colleges by the students and parents all these years. Known for its excellent infrastructure and facilities for learning, the outstanding non-grant engineering college has registered impressive performance consistently. A gate-way to success, the college has now set on long-range planning to enlarge and enrich its programs and activities to empower the youth who aspire to become successful

**E. G. S. PILLAY ENGINEERING COLLEGE(AUTONOMOUS),  
NAGAPATTINAM.**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**EGSPEC/CSE/UG/VAC/2019-20/02**

**Date: 15.04.2020**

**CIRCULAR**

It is here by informed that Department of CSE is going to organize a Value Added Course on "Getting Started with Python" from 20.04.2020 to 04.05.2020 (10.00 am to 12.30 pm) through online mode by, **Mrs.M.Priyadarshini, Assistant Professor**, Department of Computer Science and Engineering, E.G.S.Pillay Engineering College(Autonomous), Nagapattinam for second year UG CSE Students. All the second year students are instructed to attend and complete the course without fail.

Meeting Link: <https://meet.google.com/nno-grdi-trd>

  
CONVENER

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

  
HOD/CSE

HEAD OF THE  
DEPARTMENT  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

**ATTESTED**

  
**Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

5:10

VoLTE 4G LTE 39%



2018 - 2022 Batch CSE  
tap here for group info



Greetings!!

We are pleased to inform you that E.G.S. Pillay Engineering College (Autonomous), Nagapattinam, Department of Computer Science and Engineering is organizing a Value Added Course on "Python Programming"

Resource Person:  
Mrs.M.Priyadarshini  
Assistant Professor/CSE  
EGSPEC

Industry Person:  
Mrs.S.Rama  
Sr.Database Administrator  
IBM,Chennai

Meet Link:  
<https://meet.google.com/nno-grdi-trd>

Date: 20/04/20 - 04/05/20  
Time: 10.00 a.m

**\*\*Certificate will be issued to students on successful completion of this course.**

Thanks and Regards,  
Convenor  
Dr.M.Chinnadurai  
Professor/CSE  
EGSPEC

Coordinator  
Dr.R.Manivannan

ATTESTED  
  
Dr. S. RAMABALAN, M.E., Ph.D.,  
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E.G.S. Pillay Engineering College,  
Thethi, Nagore - 617 002,  
Nagapattinam (Dt) Tamil Nadu.

Message





HOD CSE <hodcse@egspec.org>

### Online Value Added Course Invitation - Reg.

2 messages

HOD CSE <hodcse@egspec.org>

Thu, Apr 16, 2020 at 12:40 PM

To: ramaibm9@gmail.com

Respected Mam,

Greetings from EGSPEC 🌸

We are glad to have you as a resource person for the online Value Added Course on **"Getting Started with Python"** from **20.04.2020-04.05.2020**. As the convener of this event, I invite you for this online value added course guest lecture on behalf of my college and department to share your valuable knowledge on the topic.  
Kindly accept our invitation.

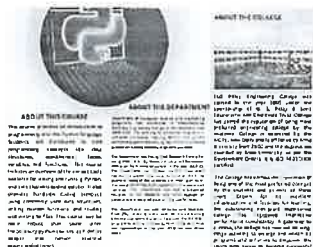
Thanking you

-- With Regards,  
**Head of Department**  
**Department of Computer Science and Engineering,**  
**E.G.S. Pillay Engineering College,**  
**Nagapattinam.**  
Mobile: 7373067032  
Email: [hodcse@egspec.org](mailto:hodcse@egspec.org)

#### 2 attachments



Getting Started with Python1.png  
996K



Getting Started with Python2.png  
1170K

Rama S <ramaibm9@gmail.com>  
To: "HOD CSE" <hodcse@egspec.org>

Good Morning sir/mam,

I accept the invitation and I will join any one of the session.

Regards,  
Rama S,  
IBM,Chennai  
[Quoted text hidden]

ATTESTED

Fri, Apr 17, 2020 at 8:30 AM

*[Signature]*  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**



**E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS) NAGAPATTINAM**

**DEPARTMENT OF CSE**

Value Added Course on **“GETTING STARTED WITH PYTHON”**

**PROGRAM SCHEDULE**

S. NO	DAY	DATE	TOPIC
1	DAY 1	20/04/2020	STARTING PYTHON
2	DAY 2	21/04/2020	VALUES AND DATA TYPES
3	DAY 3	22/04/2020	VARIABLES
4	DAY 4	23/04/2020	KEYWORDS
5	DAY 5	24/04/2020	IDENTIFIERS
6	DAY 6	25/04/2020	STATEMENT AND EXPRESSION (TUPLE)
7	DAY 7	26/04/2020	OPERATORS
8	DAY 8	27/04/2020	LOOPING AND ITERATIONS
9	DAY 9	28/04/2020	CONDITIONAL STATEMENTS
10	DAY 10	29/04/2020	STRING
11	DAY 11	30/04/2020	LISTS
12	DAY 12	01/05/2020	TUPLES
13	DAY 13	02/05/2020	FILES
14	DAY 14	03/05/2020	SAMPLE EXERCISES
15	DAY 15	04/05/2020	ASSESSMENT TEST

**COORDINATOR**

- 1. Dr.R.MANIVANNAN, ASP / CSE**
- 2. Mrs.B.RANJANI, AP / CSE**

**CONVENOR**

- 1. DR. M. CHINNADURAI**  
**PROF/HOD - CSE**


**RESOURCE PERSON**

- 1. Ms.M.Priyadharshini, AP / CSE**

**INDUSTRY PERSON**

Mrs.S.Rama,  
Sr.Database Administrator, IISST, Chennai


**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
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Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

  
**HOD/CSE**  
**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

## SYLLABUS

GETTING STARTED WITH PYTHON				L	T	P	C	
				0	0	0	1	
<b>Course Objectives:</b>								
1. To read and write simple python programs.								
2. To develop python program with loops and functions.								
3. To use python data structures- lists, tuples.								
<b>Unit I</b>	<b>STARTING PYTHON</b>						<b>12 Hours</b>	
Python Introduction- Installing Python - values and types: int, float, Boolean, string, and list-variables- expressions- statements-tuple assignment-precedence of operators-comments.								
<b>Unit II</b>	<b>LOOPS AND ITERATIONS</b>						<b>12 Hours</b>	
Conditionals: Boolean values and operators, conditional(if),alternative(if-else),chained conditional(if-elif-else)-Iterations:state,while,for,break,continue,pass- strings: string slices, string functions and methods.								
<b>Unit III</b>	<b>LISTS, TUPLES, FILES</b>						<b>12 Hours</b>	
Lists: list operations, list slices, list methods, list loop, cloning lists- Tuples: tuple assignment, tuple as return value- Files and exceptions: text files, reading and writing files.								
						<b>Total:</b>	<b>36 Hours</b>	
<b>Course Outcomes:</b>								
After completion of the course, Student will be able to								
CO1	Install Python, Read ,write, execute by hand simple python programs.							
CO2	Describe the basics of Python Programming Language							
CO3	Represent compound data using python lists, tuples and files							
<b>References:</b>								
1.AllenB.Downey,"Think Python: How to Think like a Computer Scientist", 2 <sup>nd</sup> edition,updated for python 3,Shroff//O' Reilly publishers,2016.								
2. Guido van Rossum and Fred L.DrakeJr,"An Introduction to Python- Revised and updated for python 3.2,Network Theory ltd.,2011.								

**ATTESTED**  
  
**Dr. B. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) 1      Nadu.**

  
**HOD/CSE**  
**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
**E.G.S.P. Engineering College,**  
**Nagapattinam - 611 002**

E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS), NAGAPATTINAM

DEPARTMENT OF CSE

VALUE ADDED COURSE ON "GETTING STARTED WITH PYTHON"

ENROLLMENT LIST

S.NO	REGISTER NUMBER	NAME OF THE STUDENT
1.	E18CSR001	AAKASH A
2.	E18CSR002	ABDUL AZEES A
3.	E18CSR003	ABDUL HAMEED M
4.	E18CSR004	ABINESH B
5.	E18CSR005	AJAYVENGATESH S
6.	E18CSR006	AKALYA L
7.	E18CSR007	AKASH U
8.	E18CSR008	AKILA A
9.	E18CSR010	AMEEN MARZOOK S
10.	E18CSR011	ANBU DEVI R
11.	E18CSR012	ANUSUYA S
12.	E18CSR013	ARULRAJ G
13.	E18CSR014	ARUNESH D
14.	E18CSR015	AYYAPPAN S
15.	E18CSR016	BALA B
16.	E18CSR017	BANU PRIYA B
17.	E18CSR018	BAVADHARANI I
18.	E18CSR020	CHITRA S
19.	E18CSR022	DINESH D
20.	E18CSR023	GAYATHRI K
21.	E18CSR025	GOWSALYA R
22.	E18CSR026	GUNASUNDARI M
23.	E18CSR028	HARINI K
24.	E18CSR029	HARISH V
25.	E18CSR030	HENCYSOWMIYA C
26.	E18CSR031	JAYA A
27.	E18CSR032	JAYAPREETHI G
28.	E18CSR033	JAYASRI M
29.	E18CSR034	KABILAN G
30.	E18CSR035	KARTHIKESAN G
31.	E18CSR036	KEERTHANA A
32.	E18CSR037	KUBERAN R
33.	E18CSR039	LOGESHWARAN N
34.	E18CSR041	MANIKANDAN M

ATTESTED

H.S. RAMARALAN, M.E., Ph.D.  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Methi, Nagore- 611 002,  
Nagapattinam (Dt), Tamil Nadu.

35.	E18CSR042	MANIKANDAN R
36.	E18CSR043	MANIMARAN D
37.	E18CSR044	MOHAMED FARVEEZ B
38.	E18CSR046	MUNIYANDI M
39.	E18CSR047	MUTHULAKSHMI K
40.	E18CSR048	NAVEEN S
41.	E18CSR049	NIRANJAN S
42.	E18CSR050	NITHIYA V
43.	E18CSR051	NOORMOHAMED M
44.	E18CSR052	PARTHASARATHI R
45.	E18CSR053	PASUBATHI K
46.	E18CSR054	PAVITHRA A
47.	E18CSR055	PRATHEESHA E
48.	E18CSR056	RAGAVI R
49.	E18CSR057	RAJAGOPAL B
50.	E18CSR058	RAJAVEL S
51.	E18CSR060	SAILAKSHMI S
52.	E18CSR061	SAKTHI SUNDARAM A
53.	E18CSR062	SAKTHIVEL L
54.	E18CSR063	SANTHIYA L
55.	E18CSR064	SANTHOSHRAJ S
56.	E18CSR065	SAYAD ABDUL RAHMAN A
57.	E18CSR066	SILVAMANIKANDAN PR
58.	E18CSR067	SHAFEEQ S
59.	E18CSR070	SIVASURYA V
60.	E18CSR071	SNEKA R
61.	E18CSR072	SUBHASHINI S
62.	E18CSR073	SUGANDHINI A
63.	E18CSR074	SUSHIMA S
64.	E18CSR075	SUVEETHA B
65.	E18CSR076	TAMILMATHI S S
66.	E18CSR077	TAMILMARAN D
67.	E18CSR078	THIAMIZHPRIYA M
68.	E18CSR079	UDHAYAPRIYA U
69.	E18CSR080	VARUN KUMAR K
70.	E18CSR081	VELAYUTHAM K
71.	E18CSR083	VIJAYAKUMARY S
72.	E18CSR084	VISHINUPRIYA S
73.	E18CSR085	VISHWA S
74.	E18CSL301	ARAVINTH M
75.	E18CSL302	GOKULNATH S
76.	E18CSL303	KEERTHIGA K
77.	E18CSL305	NESAPRIYA M
78.	E18CSL306	PADMASRI G
79.	E18CSL307	SANJAYBHARATHI T

**ATTESTED**

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**

**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

80.	E18CSL308	SANKAR S
81.	E18CSL309	SASHWAR MOSES S
82.	E18CSL310	SASIPRINCE D
83.	E18CSL311	SUSHMITHA B
84.	E18CSL312	VIKNESH M

  
COURSE COORDINATOR

  
HOD/CSE

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

ATTESTED  
  
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Nagapattinam (Dt) Tamil Nadu.

## COURSE MATERIAL

### UNIT 1- STARTING PYTHON

#### INTRODUCTION TO PYTHON:

- *Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language.*
- It was created by Guido van Rossum during 1985- 1990.
- Python got its name from “Monty Python’s flying circus”. Python was released in the year 2000.
- **Python is interpreted:** Python is processed at runtime by the interpreter. You do not need to compile your program before executing it.
- **Python is Interactive:** You can actually sit at a Python prompt and interact with the interpreter directly to write your programs.
- **Python is Object-Oriented:** Python supports Object-Oriented style or technique of programming that encapsulates code within objects.
- **Python is a Beginner's Language:** Python is a great language for the beginner-level programmers and supports the development of a wide range of applications.

#### **Python Features:**

**Easy-to-learn:** Python is clearly defined and easily readable. The structure of the program is very simple. It uses few keywords.


**Easy-to-maintain:** Python's source code is fairly easy-to-maintain.

**Portable:** Python can run on a wide variety of hardware platforms and has the same interface on all platforms.

**Interpreted:** Python is processed at runtime by the interpreter. So, there is no need to compile a program before executing it. You can simply run the program.

**Extensible:** Programmers can embed python within their C,C++,Java script ,ActiveX, etc.

**Free and Open Source:** Anyone can freely distribute and edit it.

**ATTESTED**  
  
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**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
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**High Level Language:** When writing programs, programmers concentrate on solutions of the current problem, no need to worry about the low level details.

**Scalable:** Python provides a better structure and support for large programs than shell scripting.

### Applications

- Bit Torrent file sharing
- Google search engine, Youtube
- Intel, Cisco, HP, IBM
- i-Robot
- NASA
- Facebook, Drop box

### Python interpreter:

**Interpreter:** To execute a program in a high-level language by translating it one line at a time.

**Compiler:** To translate a program written in a high-level language into a low-level language all at once, in preparation for later execution.

Compiler	Interpreter
Compiler Takes <b>Entire</b> program as input	Interpreter Takes <b>Single</b> instruction as input
Intermediate Object Code is <b>Generated</b>	<b>No</b> Intermediate Object Code is <b>Generated</b>
Conditional Control Statements are Executes <b>faster</b>	Conditional Control Statements are Executes <b>slower</b>
<b>Memory Requirement is More</b> (Since Object Code is Generated)	<b>Memory Requirement is Less</b>
Program need not be <b>compiled</b> every time	Every time higher level program is converted into lower level program
<b>Errors</b> are displayed after <b>entire program</b> is checked	<b>Errors</b> are displayed for <b>every instruction</b> interpreted (if any)
<b>Example : C Compiler</b>	<b>Example : PYTHON</b>

### MODES OF PYTHON INTERPRETER:


**Python Interpreter** is a program that reads and executes Python code. It uses 2 modes of Execution.

1. Interactive mode
2. Script mode

#### 1. Interactive mode:

Interactive Mode, as the name suggests, allows us to interact with OS.

When we type Python statement, interpreter displays result(s) immediately.

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### Advantages:

Python, in interactive mode, is good enough to learn, experiment or explore.

Working in interactive mode is convenient for beginners and for testing small pieces of code.

### Drawback:

We cannot save the statements and have to retype all the statements once again to re-run them.

In interactive mode, you type Python programs and the interpreter displays the result:

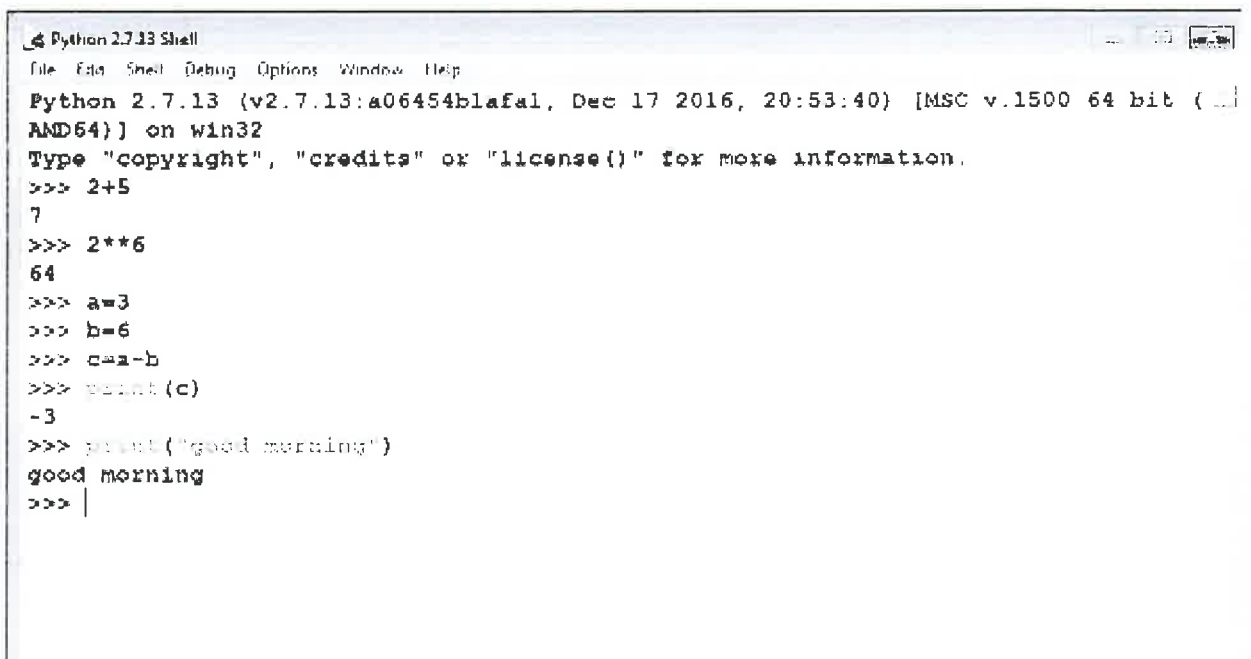
```
>>> 1 + 1
2
```

The chevron, `>>>`, is the prompt the interpreter uses to indicate that it is ready for you to enter code. If you type `1 + 1`, the interpreter replies `2`.

```
>>> print('Hello, World!')
```

Hello, World!

This is an example of a print statement. It displays a result on the screen. In this case, the result is the words.



```
Python 2.7.13 Shell
File Edit Shell Debug Options Window Help
Python 2.7.13 (v2.7.13:a06454b1afaf1, Dec 17 2016, 20:53:40) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> 2+5
7
>>> 2**6
64
>>> a=3
>>> b=6
>>> c=a-b
>>> print(c)
-3
>>> print("good morning")
good morning
>>> |
```

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# Getting Started with Python- Assessment Test

\* Required

1. Register Number \*

2. Class \*

*Mark only one oval.*

II CSE A

II CSE B

3. 1. Which type of Programming does Python support? \*

1 point

*Mark only one oval.*

object-oriented programmingstructured

programming functional

programming

all of the mentioned

4. 2. Which of the following is the correct extension of the Python file? \*

1 point

*Mark only one oval.*

.python

.pl

.py

.p

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5. 3. What will be the value of the following Python expression? \*

1 point

 $4 + 3 \% 5$ 

Mark only one oval.

- 7
- 2
- 4
- 1

6. 4. What will be the output of the following Python code? \*

1 point

```
i = 1
while True:
    if i%3 == 0:
        break
    print(i)

    i += 1
```

Mark only one oval.

- 1 2 3
- error
- 1 2
- none of the mentioned

7. 5. What will be the output of the following Python code snippet if x=1? \*

1 point

 $x << 2$ 

Mark only one oval.

- 4
- 2
- 1
- 8

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8. 6. What will be the output of the following Python code? \*

1 point

```
l=[1, 0, 2, 0, 'hello', ", []]  
list(filter(bool, l))
```

Mark only one oval.

- [1, 0, 2, 'hello', ", []]  
 Error  
 [1, 2, 'hello']  
 [1, 0, 2, 0, 'hello', ", []]

9. 7. What will be the output of the following Python code snippet? \*

1 point

```
for i in [1, 2, 3, 4][::-1]:  
    print (i)
```

Mark only one oval.

- 4 3 2 1  
 error  
 1 2 3 4  
 none of the mentioned

10. 8. Which of the following statements is used to create an empty set in Python?

\* 1 point

Mark only one oval.

- ()  
 []  
 {}  
 set()

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21

11. 9. What will be the output of the following Python code? \*

1 point

```
print('*', "abcde".center(6), '*', sep="")
```

Mark only one oval.

- \* abcde \*
- \*abcde \*
- \*abcde\*
- \* abcde \*

12. 10. Which of the following is a Python tuple? \*

1 point

Mark only one oval.

- {1, 2, 3}
- {}
- [1, 2, 3]
- (1, 2, 3)

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# Getting Started with Python- Assessment Test

Register Number \*

E18CSR004

Class \*

- II CSE A
- II CSE B

1. Which type of Programming does Python support? \*

1 point

- object-oriented programming
- structured programming
- functional programming
- all of the mentioned

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23

2. Which of the following is the correct extension of the Python file? \*

1 point

- .python
- .pl
- .py
- .P

3. What will be the value of the following Python expression? \*

1 point

$4 + 3 \% 5$

- 7
- 2
- 4
- 1

4. What will be the output of the following Python code? \*

1 point

```
i = 1
```

```
while True:
```

```
    if i%3 == 0:
```

```
        break
```

```
    print(i)
```

```
    i += 1
```

- 1 2 3
- error
- 2
- none of the mentioned

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**Nagapattinam (ex) Tamil Nadu.**



5. What will be the output of the following Python code snippet if x=1? \*

1 point

```
x<<2
```

- 4
- 2
- 1
- 8

6. What will be the output of the following Python code? \*

1 point

```
l=[1, 0, 2, 0, 'hello', "", []]  
list(filter(bool, l))
```

- [1, 0, 2, 'hello', "", []]
- Error
- [1, 2, 'hello']
- [1, 0, 2, 0, 'hello', "",

7. What will be the output of the following Python code snippet? \*

1 point

```
for i in [1, 2, 3, 4][::-1]:  
    print(i)
```

- 4 3 2 1
- error
- 1 2 3 4
- none of the mentioned

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8. Which of the following statements is used to create an empty set in Python? \*

1 point

- ()
- []
- {}
- set()

9. What will be the output of the following Python code? \*

1 point

```
print('*', "abcde".center(6), '*', sep="")
```

- \* abcde \*
- \*abcde \*
- \* abcde\*
- \* abcde \*

10. Which of the following is a Python tuple? \*

1 point

- {1, 2, 3}
- {}
- [1, 2, 3]
- (1, 2, 3)

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DEPARTMENT OF CSE

VALUE ADDED COURSE ON  
"GETTING STARTED WITH PYTHON"  
Simple Activities in Python Programming

Name : SNEKA R  
Reg.No:E18CSR071

20/100

Exercise 1: Calculate the multiplication and sum of any two numbers

```
1 def multiplication_or_sum(num1, num2):
2     # calculate product of two number
3     product = num1 * num2
4     # check if product is less than 1000
5     if product < 1000:
6         return product
7     else:
8         # product is greater than 1000 calculate the
9         return num1 + num2
10
11 # first condition
12 result = multiplication_or_sum(10, 60)
13 print("The result is", result)
14
15 # second condition
16 result = multiplication_or_sum(50, 14)
17 print("The result is", result)
```

input: 10 60  
The result is 600  
The result is 70  
Program finished with exit code 0  
Press ENTER to exit console.

Exercise 2: Print characters from a string that are present at an even index number

```
1 # accept input string from a user
2 word = input("word: ")
3 print("Original string is", word)
4
5 # find the length of a string
6 size = len(word)
7
8 # iterate in each character of a string
9 # start 0 to start with first character
10 # step: size-1 because index starts with 0
11 # step: 2 to get the characters present at even index like 0, 2, 4
12 print("Printing only even index chars")
13 for i in range(0, size, 2):
14     print("index", i, "|", word[i])
```

input: aeeeee  
Printing only even index chars  
index 0 | a  
index 2 | e  
Program finished with exit code 0  
Press ENTER to exit console.

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### Exercise 3: Check if the first and last number of a list is the same

```
main.py
1 def first_last_same(numberlist):
2     print("Given list:", numberlist)
3
4     first_num = numberlist[0]
5     last_num = numberlist[-1]
6
7     if first_num == last_num:
8         return True
9     else:
10        return False
11
12 numbers_x = [50, 20, 30, 40, 50]
13 print("result is", first_last_same(numbers_x))
14
15 numbers_y = [10, 45, 20, 35, 20]
16 print("result is", first_last_same(numbers_y))
```

input

```
Given list: [50, 20, 30, 40, 50]
result is True
Given list: [10, 45, 20, 35, 20]
result is False
... Program finished with exit code 0
```

### Exercise 4: Return the count of a given substring from a string

```
main.py
1 str x = "sneka is good programmer, sneka studies in EGSPEEC, sneka loves music"
2 cnt = str.count method of str class
3 cnt = str x.count('sneka')
4 print(cnt)
```

input

```
... Program finished with exit code 0
Press ENTER to exit console []
```

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**Exercise 5: Print the following pattern**

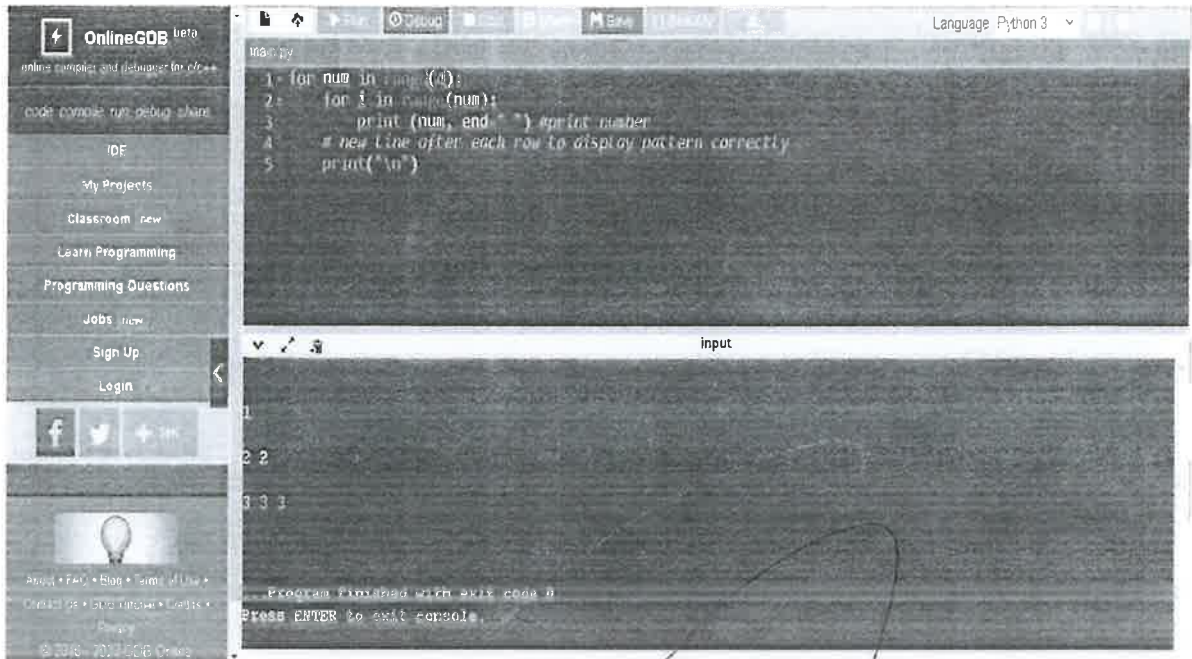
1

2 2

3 3 3

4 4 4 4

5 5 5 5 5



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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**VALUE ADDED COURSES ON**  
**“GETTING STARTED WITH PYTHON”**  
**Assessment Mark Statement**

S.NO	REGISTER NUMBER	NAME OF THE STUDENT	TEST MARKS (10)	ACTIVITY MARKS (20)
1.	E18CSR001	AAKASH A	10	20
2.	E18CSR002	ABDUL AZEES A	10	20
3.	E18CSR003	ABDUL HAMEED M	10	20
4.	E18CSR004	ABINESH B	9	20
5.	E18CSR005	AJAYVENGATESH S	8	17
6.	E18CSR006	AKALYA L	10	20
7.	E18CSR007	AKASH U	10	18
8.	E18CSR008	AKILA A	10	20
9.	E18CSR010	AMEEN MARZOOK S	10	20
10.	E18CSR011	ANBU DEVI R	9	18
11.	E18CSR012	ANUSUYA S	10	19
12.	E18CSR013	ARULRAJ G	10	18
13.	E18CSR014	ARUNESH D	10	19
14.	E18CSR015	AYYAPPAN S	10	18
15.	E18CSR016	BALA B	10	20
16.	E18CSR017	BANU PRIYA B	9	19
17.	E18CSR018	BAVADHARANI I	10	20
18.	E18CSR020	CHITRA S	10	19
19.	E18CSR022	DINESH D	10	19
20.	E18CSR023	GAYATHRI K	9	18
21.	E18CSR025	GOWSALYA R	10	19
22.	E18CSR026	GUNASUNDARI M	10	17
23.	E18CSR028	HARINI K	10	18
24.	E18CSR029	HARISH V	10	19
25.	E18CSR030	HENCY SOWMIYA C	10	20
26.	E18CSR031	JAYA A	8	20
27.	E18CSR032	JAYAPREETHI G	10	19
28.	E18CSR033	JAYASRI M	10	18
29.	E18CSR034	KABILAN G	10	19
30.	E18CSR035	KARTHIKESAN G	10	18
31.	E18CSR036	KEERTHANA A	8	19
32.	E18CSR037	KUBERAN R	10	18
33.	E18CSR039	LOGESHWARAN N	10	19
34.	E18CSR041	MANIKANDAN M	10	19
35.	E18CSR042	MANIKANDAN R	10	19

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36.	E18CSR043	MANIMARAN D	10	20
37.	E18CSR044	MOHAMED FARVEEZ B	10	19
38.	E18CSR046	MUNIYANDI M	10	19
39.	E18CSR047	MUTHULAKSHMI K	9	19
40.	E18CSR048	NAVEEN S	10	20
41.	E18CSR049	NIRANJAN S	10	20
42.	E18CSR050	NITHYA V	10	20
43.	E18CSR051	NOORMOHAMED M	10	20
44.	E18CSR052	PARTHASARATHI R	9	19
45.	E18CSR053	PASUBATHI K	10	18
46.	E18CSR054	PAVITHRA A	10	18
47.	E18CSR055	PRATHEESHA E	9	19
48.	E18CSR056	RAGAVI R	10	20
49.	E18CSR057	RAJAGOPAL B	9	19
50.	E18CSR058	RAJAVEL S	9	18
51.	E18CSR060	SAILAKSHMI S	10	18
52.	E18CSR061	SAKTHI SUNDARAM A	10	19
53.	E18CSR062	SAKTHIVEL L	10	18
54.	E18CSR063	SANTHIYA L	9	19
55.	E18CSR064	SANTHOSHRAJ S	10	19
56.	E18CSR065	SAYAD ABDUL RAHMAN A	10	19
57.	E18CSR066	SELVAMANIKANDAN PR	10	20
58.	E18CSR067	SHAFEEQ S	9	18
59.	E18CSR070	SIVASURYA V	9	19
60.	E18CSR071	SNEKA R	9	20
61.	E18CSR072	SUBHASHINI S	10	19
62.	E18CSR073	SUGANDHINI A	10	18
63.	E18CSR074	SUSHMA S	9	18
64.	E18CSR075	SUVETHA B	10	19
65.	E18CSR076	TAMILMATHI S S	9	20
66.	E18CSR077	TAMILMARAN D	8	19
67.	E18CSR078	THIAMIZIPRIYA M	10	18
68.	E18CSR079	UDHAYAPRIYA U	10	18
69.	E18CSR080	VARUN KUMAR K	10	19
70.	E18CSR081	VELAYUTHAM K	9	18
71.	E18CSR083	VIJAYAKUMARY S	9	19
72.	E18CSR084	VISHNUPRIYA S	9	18
73.	E18CSR085	VISHWA S	10	19
74.	E18CSL301	ARAVINTH M	10	18
75.	E18CSL302	GOKULNATH S	10	20
76.	E18CSL303	KEERTHIGA K	10	19
77.	E18CSL305	NESAPRIYA M	10	20
78.	E18CSL306	PADMASRI G	10	19
79.	E18CSL307	SANJAYBHARATHI T	10	19
80.	E18CSL308	SANKAR S	9	18

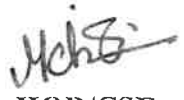
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*[Signature]*  
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**Nagapattinam (Dt) Tamil N.**



81.	E18CSL309	SASHWAR MOSES S	8	17
82.	E18CSL310	SASIPRINCE D	8	19
83.	E18CSL311	SUSHMITHA B	10	20
84.	E18CSL312	VIKNESH M	10	19

  
Course Coordinator

  
HOD/CSE  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**VALUE ADDED COURSES ON**

**“GETTING STARTED WITH PYTHON”**

**ANALYSIS REPORT**

S.No.	Reg No	Student Name	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Activity(20)
1.	E18CSR001	AAKASH A	1	1	1	1	1	1	1	1	1	1	20
2.	E18CSR002	ABDUL AZEES A	1	1	1	1	1	1	1	1	1	1	20
3.	E18CSR003	ABDUL HAMEED M	1	1	1	1	1	1	1	1	1	1	20
4.	E18CSR004	ABINESH B	1	1	1	1	1	1	1	1	0	1	20
5.	E18CSR005	AJAYVENGATESH S	1	0	1	0	1	1	1	1	1	1	17
6.	E18CSR006	AKALYA L	1	1	1	1	1	1	1	1	1	1	20
7.	E18CSR007	AKASH U	1	1	1	1	1	1	1	1	1	1	18
8.	E18CSR008	AKILA A	1	1	1	1	1	1	1	1	1	1	20
9.	E18CSR010	AMEEN MARZOOK S	1	1	1	1	1	1	1	1	1	1	20
10.	E18CSR011	ANBU DEVI R	1	1	1	0	1	1	1	1	1	1	18
11.	E18CSR012	ANUSUYA S	1	1	1	1	1	1	1	1	1	1	19
12.	E18CSR013	ARULRAJ G	1	1	1	1	1	1	1	1	1	1	18
13.	E18CSR014	ARUNESH D	1	1	1	1	1	1	1	1	1	1	19
14.	E18CSR015	AYYAPPAN S	1	1	1	1	1	1	1	1	1	1	18
15.	E18CSR016	BALA B	1	1	1	1	1	1	1	1	1	1	20
16.	E18CSR017	BANU PRIYA B	1	1	1	1	1	1	1	0	1	1	19
17.	E18CSR018	BAVADHARAN I	1	1	1	1	1	1	1	1	1	1	20
18.	E18CSR020	CHITRA S	1	1	1	1	1	1	1	1	1	1	19
19.	E18CSR022	DINESH D	1	1	1	1	1	1	1	1	1	1	19
20.	E18CSR023	GAYATHRI K	1	1	1	1	1	1	1	1	0	1	18
21.	E18CSR025	GOWSALYA R	1	1	1	1	1	1	1	1	1	1	19
22.	E18CSR026	GUNASUNDARI M	1	1	1	1	1	1	1	1	1	1	17
23.	E18CSR028	HARINI K	1	1	1	1	1	1	1	1	1	1	18
24.	E18CSR029	HARISH V	1	1	1	1	1	1	1	1	1	1	19
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27.	E18CSR032	JAYAPREETHI G	1	1	1	1	1	1	1	1	1	1	19
28.	E18CSR033	JAYASRI M	1	1	1	1	1	1	1	1	1	1	18
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30.	E18CSR035	KARTHIKESAN G	1	1	1	1	1	1	1	1	1	1	18
31.	E18CSR036	KEERTHANA A	1	1	0	1	1	1	1	1	0	1	19
32.	E18CSR037	KUBERAN R	1	1	1	1	1	1	1	1	1	1	18

**ATTESTED**  
  
**D.S. RAMABALAN**, M.B.A.,  
**PRINCIPAL**  
 E.G.S. Pillay Engineering College,  
 Mysore - 571 006,  
 Nagapattinam (TN) Tamil Nadu



77.	E18CSL305	NESAPRIYA M	1	1	1	0	1	1	1	0	0	1	20
78.	E18CSL306	PADMASRI G	1	1	1	1	1	1	1	1	1	1	19
79.	E18CSL307	SANJAYBHARATHI T	1	1	1	1	1	1	1	1	1	1	19
80.	E18CSL308	SANKAR S	1	1	1	0	1	1	1	1	1	1	18
81.	E18CSL309	SASHWAR MOSES S	1	0	1	0	1	1	1	1	1	1	17
82.	E18CSL310	SASIPRINCE D	1	1	1	0	1	1	1	1	0	1	19
83.	E18CSL311	SUSHMITHA B	1	1	1	1	1	1	1	1	1	1	20
84.	E18CSL312	VIKNESH M	1	1	1	1	1	1	1	1	1	1	19
<b>Total</b>			<b>84</b>	<b>79</b>	<b>81</b>	<b>76</b>	<b>84</b>	<b>81</b>	<b>81</b>	<b>80</b>	<b>76</b>	<b>84</b>	<b>1590</b>
<b>Attainment</b>			<b>100</b>	<b>94</b>	<b>96.43</b>	<b>90.5</b>	<b>100</b>	<b>96.43</b>	<b>96.43</b>	<b>95.2</b>	<b>90.48</b>	<b>100</b>	<b>94.6</b>
<b>Level of Attainment</b>			<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>

Attainment level calculation	
> 79%-79%	1 (L)
> 80%-89%	2 (M)
> 90%	3 (S)

  
**ATTESTED**  
**G. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

  
**HOD/CSE**

**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
**E.G.S.P. Engineering College,**  
**Nagapattinam - 611 002**

### Mapping of Course Outcomes Vs Program Outcomes

CO Number	Competency	Cognitive level
CO1	Install Python, Read ,write, execute by hand simple python programs.	Understand
CO2	Describe the basics of Python Programming Language	Analyze
CO3	Represent compound data using python lists, tuples and files	Apply

#### CO to PO Mapping

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	-	-	-	-	-	-	-	-	1
CO2	3	2	3	-	-	-	-	-	-	-	-	2
CO3	3	3	3	-	-	-	-	-	-	-	-	3

#### CO to PSO Mapping

Course Outcome	PSO1	PSO2
CO1	3	1
CO2	2	3
CO3	3	3

1. Slight(Low) 2. Moderate(Medium) 3.Substantial(High) “-“ No Correlation

  
HOD/CSE

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam -611 002

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

# Feedback form for value added course on Getting Started with Python

\* Required

1. Name \*

2. Register Number \*

3. Department \*

4. Class \*

*Mark only one oval.*

II CSE A

II CSE B

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi Nagore - 611 002,  
Nagapattinam, (Dt) Tamil Nadu.



5. Value added course objectives were stated clearly and met \*

Mark only one oval.

1

2

3

4

6. Value added course was well organized \*

Mark only one oval.

1

2

3

4

ATTESTED  
  
Dr. S. RAMARAJ, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethri, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

7. This Value added course increased my knowledge and skills \*

Mark only one oval.

1

2

3

4

8. Coverage of syllabus was satisfied \*

Mark only one oval.

1

2

3

4

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam, (PT) Tamil Nadu.**

This content is neither created nor endorsed by Google.

# Feedback form for value added course on Getting Started with Python

Name \*

Sailakshmi S

Register Number \*

E18CSR060

Department \*

CSE

Class \*

II CSE A

II CSE B

ATTESTED

  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**

E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

Value added course objectives were stated clearly and met \*

- 1
- 2
- 3
- 4

Value added course was well organized \*

- 1
- 2
- 3
- 4

This Value added course increased my knowledge and skills \*

- 1
- 2
- 3
- 4

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
Principal,  
Sri Sri Engineering College,  
Chennai - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

Coverage of syllabus was satisfied \*

1

2

3

4

This form was created inside of E.G.S. Pillay Engineering College.

Google Forms

ATTESTED



**Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL**

**E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.**

43

	A	B	C	D	E	F	G	H	I	J
	Timestamp	Name	Register Number	Department	Class	Value added course objective	Value added course was	This Value added course	Coverage of syllabus	was satisfied
2	5/4/2020 12:07:43	Saliakshmi S	E18CSR060	CSE	II CSE A	4	4	3	4	4
3	5/4/2020 12:07:44	AKILA A	E18CSR008	CSE	II CSE A	4	4	3	4	4
4	5/4/2020 12:07:47	Benupriya	e18csr017	CSE	II CSE A	4	4	3	4	4
5	5/4/2020 12:07:49	HARISH V	E18CSR029	CSE	II CSE B	4	4	3	4	4
6	5/4/2020 12:08:13	KUBERAN R	E18CSR037	CSE	II CSE A	4	4	3	4	4
7	5/4/2020 12:08:25	NAVEEN S	E18CSR048	CSE	II CSE A	4	4	4	3	4
8	5/4/2020 12:08:40	Ragaki	E18CSR056	CSE	II CSE A	4	4	4	4	4
9	5/4/2020 12:08:45	SAYAD ABDUL RAHMAN	E18CSR065	CSE	II CSE A	4	4	4	4	4
10	5/4/2020 12:08:48	SUVEETHA B	E18CSR075	CSE	II CSE A	4	4	4	4	4
11	5/4/2020 12:08:50	Vishupriya S	E18csr084	CSE	II CSE A	4	4	4	4	4
12	5/4/2020 12:08:26	aakash a	e18csr001	CSE	II CSE B	4	4	3	4	4
13	5/4/2020 12:09:27	AMEEN IMARZOOK S	E18CSR010	CSE	II CSE B	4	4	3	4	4
14	5/4/2020 12:09:30	Beketharanni	E18CSR018	CSE	II CSE A	4	4	3	4	4
15	5/4/2020 12:09:36	HENCYSOWMIYAC	E18CSR030	CSE	II CSE A	4	4	3	4	4
16	5/4/2020 12:09:40	LOGESHWARAN N	E18CSR039	CSE	II CSE A	4	4	3	4	4
17	5/4/2020 12:09:46	Nitarjan S	E18CSR049	CSE	II CSE B	4	4	4	4	4
18	5/4/2020 12:09:48	RAJAGOPAL B	E18CSR057	CSE	II CSE B	4	3	4	3	4
19	5/4/2020 12:09:50	Selvamankandan P R	E18CSR066	CSE	II CSE B	4	4	4	4	3
20	5/4/2020 12:09:56	TAMILMATHI S S	E18CSR076	CSE	II CSE A	4	4	4	4	3
21	5/4/2020 12:09:58	VISHWA S	E18CSR085	CSE	II CSE B	4	4	4	4	3
22	5/4/2020 12:10:12	Abdul Azeez	E18CSR002	CSE	II CSE A	4	4	4	4	4
23	5/4/2020 12:10:20	Arbujal	E18CSR011	CSE	II CSE B	4	4	4	4	4
24	5/4/2020 12:10:22	CHITRA S	E18CSR020	CSE	II CSE B	4	4	4	4	4
25	5/4/2020 12:10:27	ANUSHA	E18CSR031	CSE	II CSE A	4	4	4	4	4
26	5/4/2020 12:10:28	ANUSHA ANANDAM	E18CSR041	CSE	II CSE B	4	4	4	4	4
27	5/4/2020 12:10:32	NITHYAN	E18CSR050	CSE	II CSE B	4	4	3	4	4
28	5/4/2020 12:10:35	RAJESH	E18CSR055	CSE	II CSE B	4	4	4	4	3
29	5/4/2020 12:10:38	Prasanna Engineering College,	E18CSR067	CSE	II CSE A	4	4	4	4	3

## COURSE SUMMARY REPORT

This value added course ‘Getting started with Python’ provides an introduction to programming and the Python language. This course was handled in online mode during 20<sup>th</sup> April 2020 to 4<sup>th</sup> May 2020. The course has been organized for B.E. CSE II year students. Total of 84 students attended this course and get benefitted. The course details and meeting link was shared to students via Watsapp Group. Mrs.M.Priyadarshini, Assistant Professor of CSE Department, E.G.S.Pillay Engineering College is the speaker of the course. The Industry Person Mrs.S.Rama, Sr.Database Administrator in IBM, Chennai has been invited for one session to handle the course to give deep exposure on how the programming was developed in industry side. She shared her experience on industry and about job opportunities related to this course.

In this course, students are introduced to core programming concepts like data structures, conditionals, loops, variables, and functions. This course includes an overview of the various tools available for writing and running Python, and gets students coding quickly. It also provides hands-on coding exercises using commonly used data structures, writing custom functions, and reading and writing to files. This course may be more robust than some other introductory python courses, as it goes deeper into certain essential programming topics. Student felt this course very much helpful for them and interesting too. With this course skill, they will begin to get a better sense of the dynamic power of Python and how it can be easily integrated with other systems.

ATTESTED  
  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002,  
Nagapattinam (Dt) Tamil Nadu.



**Engineering College (Autonomous)**

Accredited with NBA & NAAC "A" Grade, Recognized by UGC 2(F) & 12 (B), An ISO 9001:2015 Certified Institution

# Department of Computer Science & Engineering

## Certificate of Completion

*This certificate is awarded to*

**ATTESTED**

**AAKASH A**

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
PRINCIPAL

of

**E.G.S. Pillay Engineering College,**  
Thethi, Nagore - 611 002,  
Nagapattinam (Dt) Tamil Nadu.

**E.G.S PILLAY ENGINEERING COLLEGE**

has successfully completed the online

**Value Added Course on "Getting Started with Python"**

**from 20.04.2020 to 04.05.2020**

**Dr. R. Manivanan**  
Coordinator

**Dr. M. Chinnadurai**  
HOD-CSE

**Dr. S. Ramabalan**  
Principal



# CERTIFICATE E.G.S Pillay

Engineering College (Autonomous)

Accredited with NBA & NAAC "A" Grade. Recognized by UGC 2(F) & 12 (B). An ISO 9001:2015 Certified Institution

## Department of Computer Science & Engineering Certificate of Completion

*This certificate is awarded to*

ATTESTED



**Dr. S. RAMABALAN, M.E., Ph.D.,**  
PRINCIPAL

**E.G.S. Pillay Engineering College,**  
Thethi, Nagore - 611 062,  
Nagapattinam (Dt) Tamil Nadu.

**ANUSUYA S**

of

**E.G.S PILLAY ENGINEERING COLLEGE**

has successfully completed the online

Value Added Course on "Getting Started with Python"

from 20.04.2020 to 04.05.2020



**Dr. R. Manivanan**  
Coordinator



**Dr. M. Chinnadurai**  
HOD-CSE



**Dr. S. Ramabalan**  
Principal

You have attachments included that may affect the quality of your call

Prityabannan is presenting

# Python Tuple Vs List

- 01 **Python Tuple Vs List**  
The tuple is immutable, whereas the list is mutable and its elements can be changed.
- 02 **Test here**  
The tuple is immutable, whereas the list is mutable and its elements can be changed.
- 03 **Test here**  
The tuple is immutable, whereas the list is mutable and its elements can be changed.
- 04 **ATTESTED**  
**Test here**  
The tuple is immutable, whereas the list is mutable and its elements can be changed.

**Dr. S. RAMABALAN, M.E., Ph.D.**  
**PRINCIPAL**  
 E.G.S. Pillay Engineering College,  
 Thethi, Nagore - 611 002.  
 Nagapattinam (Dt) Tamil Nadu.

- People
- Rajavel S
  - Adithyan A
  - Hareesh
  - Logeshwaran
  - Dr. R. Manikandan
  - Jaya
  - Tamilmaran
  - R. Manikandan
  - Udhayapriya A



Prityabannan

C D

80 others



You



Please attend to the matters listed below that may affect the quality of your mail

Zoom Meeting

Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba
Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba
Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba	Prathiba

10:43 AM | 55 participants

**ATTESTED**  
  
**DR. S. RAMABALAN, M.E., Ph.D.**  
**PRINCIPAL**  
**E.G.S. PILLAY Engineering College,**  
Thiruthi, Mysore - 571 002.  
Nagapattinam (Dist) Tamil Nadu.

**E.G.S. Pillay Engineering College (Autonomous), Nagapattinam**

**Department Of Computer Science & Engineering**

**Organized**

**Value Added Course on**

**1704CS047 - Introduction  
to Data Center  
Virtualization and Cloud  
Computing**

**E. G. S. PILLAY ENGINEERING COLLEGE, NAGAPATTINAM.**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**VALUE ADDED COURSE**

**ON**

**INTRODUCTION TO DATA CENTRE VIRTUALIZATION AND CLOUD COMPUTING**

**TABLE OF CONTENT**

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*M. S. S.*  
HOD/CSE

**ATTESTED**  
*[Signature]*  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
**E.G.S.P. Engineering College,**  
**Nagapattinam - 611 002**

PERMISSION LETTER

From

Date: 14.04.2020

Mr.J.NoorulAmeen,  
Assistant Professor/CSE,  
Department of CSE,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

To

The Principal,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

Through

The Head of Department,  
Department of CSE,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

Respected Sir,

Sub: Request to conduct Value Added Course – Reg

We are happy to inform you that we have planned to conduct a value added course titled "Introduction to Data Centre Virtualization and Cloud Computing" for UG III CSE Students from 19.04.2020 to 11.05.2020. Herewith, I have enclosed name list and session details. Kindly give permission for conducting value added course.

Thanking you,

ATTESTED

Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL

E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

yours faithfully,

Mr. J. Noorul Ameen  
HEAD OF THE DEPT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002





HOD CSE <hodcse@egspec.org>

Permission to conduct Value Added Course - Reg..

2 messages

HOD CSE <hodcse@egspec.org>

Tue, Apr 14, 2020 at 9:12 AM

To: PRINCIPAL EGSPEC <principal@egspec.org>

Respected Sir,

We are happy to inform you that we have planned to organize one week value added course titled "Introduction to Data Centre Virtualization and Cloud Computing" through online mode (google classroom) for III CSE UG Students from 19.04.2020 to 11.05.2020. Herewith, I have enclosed the Brochure & session details. Kindly give us permission for conducting the value added course.

Thanking you

-- with regards,

Head of Department
Department of Computer Science and Engineering,
E.G.S. Pillay Engineering College,
Nagapattinam.
Mobile: 7373067032
Email: hodcse@egspec.org

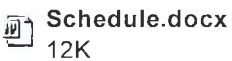
3 attachments



DCV - Brochure 1.png
1120K



DCV - Brochure 2.png
1460K



ATTESTED
Dr. S. RAMABALAN, M.E., Ph.D.,
PRINCIPAL
E.G.S. Pillay Engineering College,
Therhi Nagore - 611 602,
Nagapattinam (Dt) Tamil Nadu.

05/12/20, 2:50 PM

E.G.S. Pillay Engineering College Mail - Permission to conduct Value Added Course - Reg..

**PRINCIPAL EGSPEC** <principal@egspec.org>

Tue, Apr 14, 2020 at 2:10 PM

To: HOD CSE <hodcse@egspec.org>

Good Morning Sir,

The request to conduct the Value added course through google classroom is permitted.

Regards,

**The Principal**

E.G.S.Pillay Engineering College,

Nagapattinam

Mobile: 9894831458

Email: principal@egspec.org

[Quoted text hidden]

ATTESTED

  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL

E.G.S. Pillay Engineering College,  
Thethi. Nagore - 611 002,  
Nagapattinam (Dt) Tamil Nadu



HOD CSE <hodcse@egspec.org>

**Online Value Added Course Invitation - Reg.**

2 messages

HOD CSE <hodcse@egspec.org>

Wed, Apr 15, 2020 at 3:40 PM

To: jammalmohammed@gmail.com

Respected sir,

Greetings from EGSPEC ☀

We are glad to have you as a resource person for the online Value Added Course on **"Introduction to Data Centre Virtualization and Cloud Computing"** from **19.04.2020-11.05.2020**. As a convener of this event, I invite you for this online value added course guest lecture in behalf of my college and department to share your valuable knowledge on the topic.

Kindly accept our invitation.

Thanking you

-- With Regards,  
**Head of Department**  
**Department of Computer Science and Engineering,**  
**E.G.S. Pillay Engineering College,**  
**Nagapattinam.**  
Mobile: 7373067032  
Email: [hodcse@egspec.org](mailto:hodcse@egspec.org)

**2 attachments**



**Introduction to Data Centre Virtualization & Cloud Computing (2019-20)-1.png**  
991K



**Introduction to Data Centre Virtualization & Cloud Computing (2019-20)-2.png**  
1178K

jammal mohammed <jammalmohammed@gmail.com>  
To: "HOD CSE" <hodcse@egspec.org>

Hello sir/mam,

I accept the invitation and I will join any one of the session on 01.05.2020.

Regards,  
JammalMohammed,  
[Quoted text hidden]

**ATTESTED**

Thu, Apr 16, 2020 at 8:26 AM

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Nagapattinam - 611 002.**  
**Nagapattinam (TN), Tamil Nadu.**

### Industry Person Details

Name: Jamal Mohamed  
Experience: Swaas Systems Private Limited  
Software Engineer  
March 2016 - July 2022 (6 years 5 months)

Education: MAM COLLEGE OF ENGINEERING  
M.E, Computer Science · (2012 - 2014)  
Grade: 7.2

Top Skills: SQL Microsoft, SQL Server, C#, ASP.NET ASP.NET, ASP.NET  
MVC ASP.NET MVC, jQuery, HTML5, Cascading Style Sheets  
(CSS), ASP.NET Web API, REST API, Web Services API, API  
Development, Postman API

ATTESTED  
  
Dr. S. RAMADALAN, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thebbi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

**Convenor**

**Prof.Dr.M.CHINNADURAI**

Professor & Head / CSE

**Course Coordinators**

**Prof.J.NOORUL AMEEN**

ASSISTANT PROFESSOR / CSE

**&**

**Mr.A.BASKAR**

ASSISTANT PROFESSOR / CSE

**Resource Person**

**Prof.J.NOORUL AMEEN**

ASSISTANT PROFESSOR / CSE

**Industry Person**

**Mr.J.Jamal Mohamed,**  
SwaasSystems Private Limited,  
Chennai. **ATTESTED**

**Course Duration** **PRINCIPAL**

**36 HOURS** E.G.S.Pillay Engineering College,

Thethi, Nagore - 611 002.

Mode: **Online** (Dr) Tamil Nadu

**E.G.S.Pillay Engineering College**  
**(Autonomous)**

**NAGAPATTINAM**

[www.egspec.org](http://www.egspec.org) | [principal@egspec.org](mailto:principal@egspec.org) |

[enquiries@egspec.org](mailto:enquiries@egspec.org)

+91-4365-251112 | +91-4365-251114

*Organized by*

Department of Computer Science  
and Engineering



**Value Added Course**  
**ON**

**Introduction to**  
**Data Centre Virtualization**  
**and**  
**Cloud Computing**

**Date:**

**19.04.20 - 11.05.20**



## ABOUT THIS COURSE

We have designed an online value added course on Data Center Virtualization and Cloud Computing to gain basic knowledge of Data Center Virtualization and Cloud Computing

This course consists of the following modules--

**Module 1:** Introduction to Data Center Virtualization with VMware vSphere

**Module 2:** Components of VMware vSphere

**Module 3:** How does it fit together?

**Module 4:** Cloud Primer

**Course Outcomes:** After completion of the course, students will be able to

1. Define and describe the need for data center virtualization
2. Provide an overview of features of vSphere 5.5
3. Understand how VMware's products help to solve business and technical challenges with regard to data center virtualization

## ABOUT THE COLLEGE



EGS Pillay Engineering College was started in the year 1995 under the sponsorship of G. S. Pillay & Sons Educational and Charitable Trust. The college has gained the reputation of being the most preferred engineering college by the students. The college is approved by the AICTE, New Delhi and is affiliated to Anna University from 2002 and the degrees are awarded by Anna University, as per the Government Orders. It is ISO 9001:2008 certified.

The college has earned the reputation of being one of the most preferred colleges by the students and parents all these years. Known for its excellent infrastructure and facilities for learning, the outstanding non-grant engineering college has registered impressive performance consistently. A gateway to success, the college has now set on long-range planning to enlarge and enrich its programs and activities to empower the youth who aspire to become successful Engineers, Scientists and Managers.

## ABOUT THE DEPARTMENT

Department of Computer Science and Engineering programme was introduced at Edayathangudy G.S.Pillay Engineering College in the Academic Year 1995-1996. The demand for Computer Engineers in software companies, banking sectors and private sectors engaged in developing new trends of software generation is more than the engineers available.

The department has been recognized as a Research Centre for doing PhD / M.S. (By Research), obtained Permanent Affiliation from Anna University in the year 2014-15. The department has formed a student association namely Computer Engineers Association (CEA) to promote the talent of the students and their upliftment. The department has highly qualified and experienced faculties. The department has well experienced faculties in the research and more number of publications in reputed Journals and Conferences.

The department has well infrastructural facilities. From 2011 onwards every year, we are conducting International and National conferences. The B.E (CSE) programme was accredited by NBA in the year 2016 and reaccredited in the year 2019 for the next three years.



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NAGAPATTINAM.**


**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

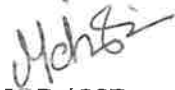
**EGSPEC/CSE/UG/VAC/2019-20/01**

**Date: 16.04.2020**

**CIRCULAR**

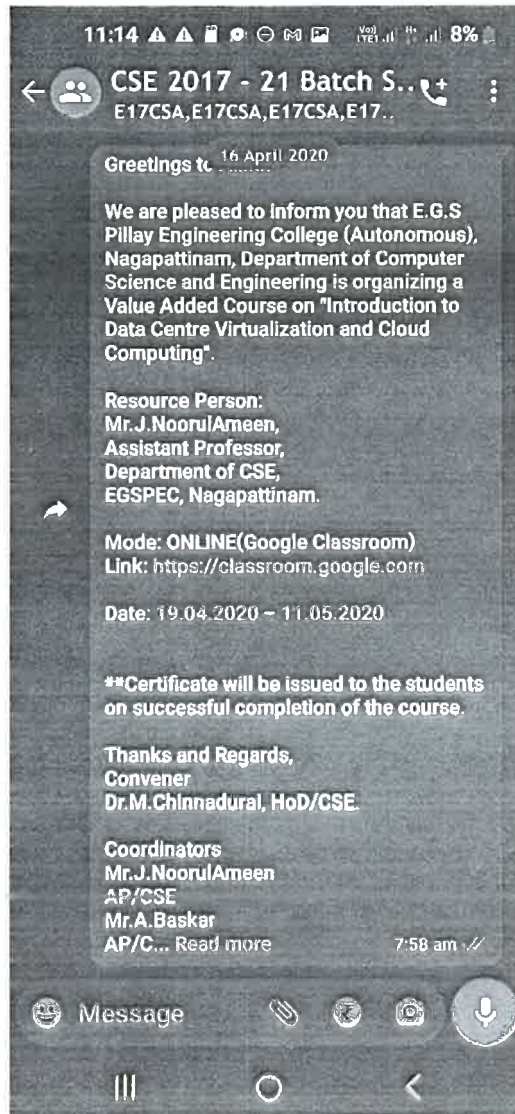
It is here by informed that Department of CSE is going to organize a Value Added Course on "Introduction to Data Center Virtualization and Cloud Computing" through online mode (Google Classroom) from 19.04.2020 to 11.05.2020 by, **Mr. J. NoorulAmeen , Assistant Professor, Department of Computer Science and Engineering, EGSPEC** for third year UG-CSE Students. All the third year students are instructed to attend the course without fail.

  
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**DEPARTMENT OF CSE**  
**E.G.S.P. Engineering College,**  
**Nagapattinam - 611 002**

  
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**DEPARTMENT OF CSE**

**Introduction to Data Center Virtualization and Cloud computing**

We have designed a online value added course on Data Center Virtualization and Cloud Computing to gain basic knowledge of Data Center Virtualization and Cloud Computing

This course consist of following modules (**Syllabus**)

1. Module 1: Introduction to Data Center Virtualization with VMware vSphere – 7.5 Hours
2. Module 2: Components of VMware vSphere – 7.5 Hours
3. Module 3: How does all fits together? – 7.5 Hours
4. Module 4: Cloud Computing Primer – 7.5 Hours
5. Assessment Test – 2 Hours

Course developed, coordinated and taught by  
Prof J. NoorulAmeen M.E, D.Acu.Therapy,  
Assistant Professor  
Department of CSE  
E.G.S Pillay Engineering College  
Nagapattinam - 611002

Mr.A.Baskar  
Assistant Professor  
Department of CSE  
E.G.S Pillay Engineering College  
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**Convenor**

Prof.Dr.M.Chinnadurai  
Professor  
Department of CSE  
E.G.S Pillay Engineering College  
Nagapattinam– 611002

**Industry Person**

Mr.J.Jamal Mohamed  
Swass Systems Private Limited,  
Chennai.

**Course Duration : 36 Hours**

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## Program Schedule


S. No	Date	Module	Topic
1.	19/04/2020	Module 1	Introduction to Data Center Virtualization with VMware vSphere
2.	25/04/2020	Module 2	Components of VMware vSphere
3.	30/04/2020	Module 3	How does all fits together?
4.	04/05/2020	Module 4	Cloud Computing Primer
5.	-	Test	Assessment Test (Conducted at the end of each module)
6.	11/05/2020	Hands on Training	Hands on training on VMware vSphere

**Mode:** Online (Google Classroom)

  
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## SYLLABUS

1704CS047	<b>INTRODUCTION TO DATA CENTER VIRTUALIZATION AND CLOUD COMPUTING</b>	L	T	P	C
					1
<b>Course Objectives:</b>					
1. Define and describe the need for data center virtualization					
2. Discuss the features of VMware vSphere					
3. Describe how VMware's products help to solve business and technical challenges with regard to data center virtualization					
<b>Module I</b>	<b>INTRODUCTION TO DATA CENTER VIRTUALIZATION WITH VMWARE VSPHERE</b>	<b>8.5 Hours</b>			
Introduction, Business challenges, Technical challenges, VSphere 5.5 Overview, Virtualization, Virtual architecture. Introduction to virtual machines, Hypervisor					
<b>Module II</b>	<b>COMPONENTS OF VMWARE VSPHERE</b>	<b>9.5 Hours</b>			
Virtual machines, ESXi Hypervisor, vCenter and its features, Storage and virtual networking, vCenter operation manager, vCenter configuration manager, vCenter site recovery manager					
<b>Module III</b>	<b>HOW DOES ALL FITS TOGETHER?</b>	<b>8.5 Hours</b>			
Availability solutions, Scalability solutions, Optimization solutions, Management solutions					
<b>Module IV</b>	<b>CLOUD COMPUTING PRIMER</b>	<b>9.5 Hours</b>			
Overview of Cloud Computing, Cloud Services and Deployment Models, Economics of Cloud, Cloud Infrastructure Framework, Infrastructure Management and Service Creation Tools. Cloud Service Management, Cloud Migration Considerations					
<b>Total:</b>					<b>36 Hours</b>
<b>Course Outcomes:</b>					
After completion of the course, Student will be able to					
CO1	Define and describe the need for data center virtualization				
CO2	Provide an overview of features of vSphere 5.5				
CO3	Understand how VMware's products helps to solve business and technical challenges with regard to data center virtualization				
<b>References:</b>					
1. <a href="https://www.vmware.com/in/learning.html?gclid=CjwKCAjwmcilBhA6liiwAuaclV324malDxz5wIh hadQIBYR9WQCj_azXx-caB peTJIWVQJelT71XxoCclIAQAvD_Bwl3">https://www.vmware.com/in/learning.html?gclid=CjwKCAjwmcilBhA6liiwAuaclV324malDxz5wIh hadQIBYR9WQCj_azXx-caB peTJIWVQJelT71XxoCclIAQAvD_Bwl3</a>					
2. Cloud Infrastructure and Services I:MC2 Bangalore Book					

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**DEPARTMENT OF CSE**

**Value Added Course - ENROLLMENT LIST**

**“INRODUCTION TO DATA CENTRE VIRTUALIZATION AND CLOUD COMPUTING”**

S.NO	REGISTER NUMBER	NAME OF THE STUDENT
1.	E17CSR001	AANANI D
2.	E17CSR002	AARTHI K
3.	E17CSR004	ABINAYA K
4.	E17CSR005	ABINAYASRI G
5.	E17CSR006	ABINESHA K
6.	E17CSR007	ABISHEK J
7.	E17CSR008	AJITHA J
8.	E17CSR010	AKASHRAJ M
9.	E17CSR011	AMRITHA K
10.	E17CSR012	AMSAVARDHINI R
11.	E17CSR013	ARTHI P
12.	E17CSR014	ATCHAYA E
13.	E17CSR015	BABIN B
14.	E17CSR017	BHARATH KUMAR R
15.	E17CSR018	BHAVADHARSHINI B
16.	E17CSR019	BHUVANESHWARI R
17.	E17CSR021	DEEPA P
18.	E17CSR022	DEEPIGA G
19.	E17CSR023	DEVADHARSHINI G
20.	E17CSR024	DEVIPRIYA R
21.	E17CSR025	DIKSHNASUDHAN R
22.	E17CSR026	DHINESH K
23.	E17CSR027	DHIVYABHARATHI S
24.	E17CSR028	DINESH V
25.	E17CSR029	DIVYABHARATHI R
26.	E17CSR030	DURGADEVI R
27.	E17CSR032	ESWARI T
28.	E17CSR033	FAIROSEBANU A
29.	E17CSR034	FATHIMA BEEVI M
30.	E17CSR035	GANGADEVI T
31.	E17CSR036	GAYATHRI S
32.	E17CSR037	GEETHA A
33.	E17CSR038	HARIHARAN E.
34.	E17CSR039	HASSIM ASLAM S
35.	E17CSR040	HEMA R
36.	E17CSR041	JAISURYA K

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37.	E17CSR042	JAYADIHARANI C
38.	E17CSR043	JEEVANANTHAM S
39.	E17CSR044	JENITHA M
40.	E17CSR045	JINSI S
41.	E17CSR046	KAYATHRI V
42.	E17CSR047	KEERTHANA R
43.	E17CSR048	KEERTHIKA J
44.	E17CSR049	KIRUBAKARAN K
45.	E17CSR050	KISHORE G
46.	E17CSR051	KUMARAN R
47.	E17CSR052	MADIHURI D
48.	E17CSR053	MAHESWARI V
49.	E17CSR055	MANOJKUMAR M
50.	E17CSR056	MATHANRAJ C
51.	E17CSR057	MEENAKSHI J
52.	E17CSR058	MEERA R
53.	E17CSR059	MOHAMMED SALMAN FASITH S
54.	E17CSR060	MOHAMMED YUSUF M
55.	E17CSR061	MONISHA P
56.	E17CSR062	MURUGESWARI V
57.	E17CSR063	MUTHUKARTHIIGA S
58.	E17CSR064	NANTHINI BHARATHI R
59.	E17CSR065	NIRMAL T
60.	E17CSR066	NIHSHIKUMAR I
61.	E17CSR067	NIVEDIHITHA D
62.	E17CSR068	PAVITHRA M P
63.	E17CSR069	POONTHAMIZH P
64.	E17CSR070	PRADEEPA A
65.	E17CSR071	PRAVINKUMAR M
66.	E17CSR072	PREETHA S
67.	E17CSR073	PREETHI V
68.	E17CSR074	PRINCE SUJA K
69.	E17CSR075	PRIYADHARSHINI J
70.	E17CSR076	PRIYADHARSHINI R
71.	E17CSR077	PRIYADHARSHINI V
72.	E17CSR078	PRIYANKA R
73.	E17CSR079	PUNITHA S
74.	E17CSR080	RAHUL R
75.	E17CSR081	RAJESHWARI M
76.	E17CSR082	RAM PRASATH R K
77.	E17CSR083	RANJANI DEVI T
78.	E17CSR084	RAVIKUMAR P
79.	E17CSR085	RAVINA R

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80.	E17CSR086	SAMEERABANU M
81.	E17CSR087	SAMUVEL R
82.	E17CSR089	SANTHOSH M
83.	E17CSR090	SATHISWARAN M
84.	E17CSR091	SATHYAPRIYA M
85.	E17CSR092	SELVAKUMARI R
86.	E17CSR093	SELVAMUTHUKUMARAN R
87.	E17CSR094	SHAGARBIAN S
88.	E17CSR095	SHANMUGARAJAN T
89.	E17CSR096	SHANTHINI R
90.	E17CSR097	SHOBANA PRIYA S
91.	E17CSR098	SHOBIYA J
92.	E17CSR099	SHRINIDHI B
93.	E17CSR100	SIVAKAMI S
94.	E17CSR101	SIVARANJANI I
95.	E17CSR102	SOCRATES A
96.	E17CSR103	SOWMIYA R
97.	E17CSR104	SRIMATHI P
98.	E17CSR105	SUBASRI K
99.	E17CSR106	SUBRAJA A
100.	E17CSR107	SUDHA M
101.	E17CSR108	SUGAPRIYA K
102.	E17CSR109	SUNDHARAVEL S
103.	E17CSR110	SURENDAR D
104.	E17CSR111	SURIYA PRABHA I
105.	E17CSR112	SURYA R
106.	E17CSR113	SUSHMITHA B
107.	E17CSR114	SUSUMITHA K
108.	E17CSR115	SWATHI R
109.	E17CSR116	THAHLEMA BANU S
110.	E17CSR117	VARATHA MANIKANDAN S
111.	E17CSR118	VENBU E
112.	E17CSR119	VENGATRAMANAN E
113.	E17CSR120	VIGNESH A
114.	E17CSR122	VIJAYALAKSHMI N
115.	E17CSR123	VINODHINI R
116.	E17CSR124	VINODHINI V
117.	E17CSR125	YAMUNA S
118.	E17CSR126	YOHAPRIYA B
119.	E17CSL301	ABINAYA K

Course Coordinator

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## STUDY MATERIAL

### Introduction

#### Data Center Virtualization

Data center virtualization typically uses virtualization software along with cloud computing technology to replace traditional physical servers and other equipment housed in a physical data center.

A data center that uses virtualization in data centers, sometimes referred to as a Software Defined Data Center (SDCC), allows organizations to control their entire IT framework as a singular entity—and often from a central interface. The approach can trim capital and operational costs; improve agility, flexibility and efficiency; save IT staff time and resources; and allow businesses to focus on core business and IT issues.

Research firm MarketersMedia reports that the global data center virtualization market is projected to grow by 8 percent annually from 2017 through 2023. That would make data center virtualization a U.S. \$10 billion market. Virtualization of a data center and all its hardware components—including servers, storage, and appliances—isn't a new concept (it dates back to the 1960s). But now, advances in cloud computing, software and other components have made the concept viable and even desirable.

#### Understanding Virtualization of the Data Center-

Understanding what virtualization of a data center means is critical to proper management of that facility. A number of related terms are used with the concept of virtualization—sometimes interchangeably. They may refer to the same thing, they sometimes overlap, and they also can mean something different.

These include:

##### **Server virtualization**

This approach to virtualization abstracts the physical hardware by creating a virtual server, typically running in a cloud infrastructure. This masks server resources, processors and operating systems. Server virtualization uses a hypervisor to coordinate processes and instructions with the central processing unit (CPU). A virtual server can operate on-premises or offsite in a virtual data center.

##### **Big Data virtualization**

This technique of Big Data virtualization produces a virtual framework for big data systems. It transforms logical data assets into virtual assets. This abstraction layer makes it easier to access data, it typically speeds data access, and it simplifies the management of data.

##### **Virtualization in the data center**

This framework, as the name implies, abstracts all physical elements of a data center and creates virtual elements. It can eliminate the need for a physical space to house hardware.

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### *Virtual data center*

This term refers to a pool of cloud-based servers and systems that operate as a single virtualized data center rather than a collection of physical assets.

## **INTRODUCTION TO VIRTUAL MACHINES AND HYPERVISORS**

Virtualization is a constantly evolving process, with new platforms introducing tools every day that are designed to make the process of moving to the cloud simpler.

Regardless of which platform you choose to virtualize your machines and servers, there are some core concepts you'll need to know to get the process of virtualizing your setup underway and see it through to completion.

Given the nature of today's cloud and hybrid environments, it's vital to understand how virtual machines and hypervisors work together to replicate the functions of a traditional computing setup while using fewer resources and equipment.

With knowledge of how a virtual machine (VM) and hypervisor work together, you can help ensure resources are allocated and managed properly upon deployment of a virtual computing network.

## **WHAT IS A VIRTUAL MACHINE?**

A virtual machine is designed to mimic the function of a physical computing device or server using cloud-based parts known as virtual hardware devices.

These virtual hardware devices mimic physical computing components to function as a traditional computer and server setup.

Using virtual RAM, a virtual desktop, and a cloud-based CPU, the virtual machine can perform many of the tasks a traditional machine does without the need for as much physical equipment to power it. The virtual machine is stored within a part of the host computer separately from other resources. The VM software and any apps that run together with it are known as guests.

There can be two types of virtual machines. While process VMs only run a single process at a time, system VMs work to replicate an entire operating system and any required applications to give the same functions as a desktop. Several process VMs may run at once within the system VM setup to make a virtual desktop setup possible.

While many platforms exist to build and run a virtual machine, each with its own features and tools, there are some common traits and characteristics that each virtualization vendor possesses.

These typically include the ability to build and run several virtual machines simultaneously on the same host but keep them apart for the average user's purposes.

These machines are isolated so they run separately, with the users of one virtual machine unable to access or view another running on the same host. This ~~sandbox~~ <sup>ATTESTED</sup> known, allows operating systems and apps to run independently.

One of the best reasons for virtualization within an enterprise can be the ability to add more machines to the same server easily. Deploying and managing a new machine is much simpler

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when using virtual resources than physical ones, as the administrator doesn't need any new equipment.

Resources can simply be reallocated to allow another virtual machine to run on the same server. To create a new virtual machine, most administrators will use a hypervisor. This allows for easy creation and management of multiple virtual machines as needed.

## WHAT IS A HYPERVISOR?

A hypervisor is a mandatory component that makes it possible for the virtual machine to run and is sometimes called a virtual machine monitor. A hypervisor's main job is to decouple the hardware powering the network from the operating system and other software running on the virtual machine.

It isolates each virtual machine, allowing them to run separate operating systems simultaneously and protecting them from potential security issues. It also allows each virtual hardware setup to share the physical resources that power the machines that keep them running by dynamically sharing resources like RAM and bandwidth.

With enough historical data gathered from the system, the software can begin to predict how the need for resources changes through the day and identify patterns, automating the movement of resources to and from the cloud to the VMs that need them. By setting protocols for each operating system to follow, the hypervisor keeps the virtual machine from crashing while this is happening. Proper allocation of resources keeps the virtual machine running and prevents any issues with programs competing for resources like RAM.

The hypervisor keeps each virtual machine separate so that if one crashes or experiences a fatal error, the others continue to run without issue. Through sandboxing, users of a VM can try using new apps or operating systems without fear of them crashing the whole system. With cybercrime being a critical issue for enterprises, this also ensures that if a malware attack is effective on one machine, the others will be protected from the same fate. This separation between virtual machines enforced by the hypervisor provides an extra layer of security by preventing one machine from causing an issue with another one.

Three modules exist within the hypervisor. First, the dispatcher routes the directions of each virtual machine instance to the allocator or the interpreter for execution. With these directions sent, the allocator responds to the dispatcher's commands to determine the resources needed and allocates them. Last, the interpreter module has stored routines that are executed based on the allocator's commands.

There are two types of hypervisors in popular use:

- Type 1, also called native or bare metal. This type of hypervisor runs on the host directly, using simple programming that doesn't require its own operating system to function. With a Type 1 hypervisor running, the host machine must be dedicated to this task.
- Type 2, a hosted hypervisor. This software runs through an app instead of on the host itself by using the host computer's operating system to carry out its commands. A Type 2 hypervisor may function slower than a Type 1, as all of its commands must be filtered through the host computer's operating system, creating a lag time.

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## WHY USE A VIRTUAL MACHINE AND HYPERVISOR?

Moving to virtualization is becoming standard for enterprises that want to stay remote in a post-COVID-19 world. Not only will virtualizing machines and the user desktop give employees more flexibility, but executives can also see lowered operational expenses and better reliability from a virtual setup.

There are several reasons to switch from a conventional setup to a virtual one, including:

### REDUCE OPERATIONAL COST

Cutting operational costs by using computing resources optimally. Underused server space can be cut from the budget as all of your virtual machines can operate on the same virtual server.

Many businesses pay the maintenance costs for an entire server though they only use a fraction of it, or even pay for multiple servers that are only partially used. Combining virtual machines on one server saves on these maintenance costs and reduces the amount of maintenance time needed from your IT team, as they can focus on only one virtual server.

### IMPROVE SERVER RELIABILITY

Increase server reliability and decrease instances of downtime. Automated backups to the cloud through screenshots taken by the virtual server allow you to pinpoint the moment of any disruption in your data collection and restore your data to that point.

Having an easily deployable backup helps prevent you from having to deal with ransomware demands or reconstructing your database from scratch in case of a natural disaster or loss of service.

### SCALE UP AND DOWN MORE EASILY

With a virtual storage setup, any extra resources are stored in a pool in the cloud for easy access. If a virtual machine needs more RAM or computing power, it can easily be reallocated from the cloud to where it is needed. Compare this to a physical setup where the IT professional has to order additional components and wait for them to arrive before the issue can be addressed. Through elastic infrastructure scaling, these resources can automatically be reduced when the virtual machine no longer needs them, eliminating waste and keeping cloud computing costs manageable.

### REDUCE YOUR CARBON FOOTPRINT

The heat generated in a server room when rows of physical machines are present can be significant, with most data centers needing to run air conditioning nonstop to keep the equipment at an optimal temperature. While this may be necessary, it's not the most Earth-friendly approach. If your company wants to decrease its carbon footprint, using one physical server to create a virtual setup that hosts many machines instead of multiple physical servers is a good way to start.

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## Value Added Course Assessment Questions

### MODULE 1

1. Which is the process of creating virtual versions of physical components?

Cloning

Virtualization

Snapshot

Replication

2. Virtual architecture consist of

Virtualizing

Consolidating

Automating

All the above

3. Virtualization allows to add components without rebooting

True

False

4. Which is managed by Vcenter Server

Virtual machine monitor

Hypervisor

Hot spare

5. Which of the following is an example for hosted hypervisor

Esxi server

Zoomla server

VMware workstation

All the above

6. Bare metal hypervisors are installed in a physical machine

With operating system

Without operating system

With compiler

None of the above

7. Data center virtualization is typically performed using bare metal hypervisor

True

False

8. Virtualization breaks the cycle of

Power consumption

Backup

Storage requirement

All the above

9. Which is a set of resource available for assignment to a project tasks

Storage pool

Compute pool

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Resource pool  
None of the above

10. Virtualization allows to quickly upgrade or replace components

True

False

## MODULE 2

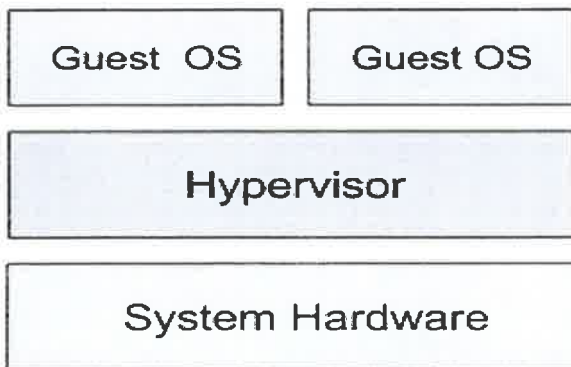
1. Which of the following provide system resource access to virtual machines?

- a) VMM
- b) VMC
- c) VNM
- d) All of the mentioned

2. Which of the following is another name for the system virtual machine?

- a) Hardware virtual machine
- b) Software virtual machine
- c) Real machine
- d) None of the mentioned

3. Which type of Hypervisor is shown in the following figure?



- a) Type 1
- b) Type 2
- c) Type 3
- d) All of the mentioned

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4. Point out the correct statement.

- a) A virtual machine is a computer that is walled off from the physical computer that the virtual machine is running on
- b) Virtual machines provide the capability of running multiple machine instances, each with their own operating system
- c) The downside of virtual machine technologies is that having resources indirectly addressed means there is some level of overhead
- d) All of the mentioned

5. An operating system running on a Type \_\_\_\_\_ VM is full virtualization.

- a) 1
- b) 2
- c) 3
- d) All of the mentioned

6. You are asked you to setup 4 ESXi hosts to evaluate the new vSphere 5 \_\_\_\_\_ release, which is the recommended install method to use in this situation?

- A. Interactive Installation
- B. Scripted Installation
- C. vSphere Auto Deploy Installation
- D. Upgrade via VMware Update Manager

7. Your colleague has accidentally allocated more vRAM than your company are licensed for. What will happen to your virtual machines?

- A. All VM's will be Powered Off
- B. New VM's cannot be Powered On
- C. VMware will be notified
- D. Nothing will happen

8. Which new feature of vSphere 5 is used to collect host core dumps?

- A. vMA 5.0
- B. ESXi Dump Collector
- C. ESXi Syslog Collector
- D. VMware vDR 2.0

9. What are the Automation Levels on a DRS Cluster?

- A. Manual, Partially Automatic, Fully Automatic
- B. Manual, Partially Automated, Fully Automated
- C. Manual, Semi Automated, Fully Automatic

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D. Manual, Semi-Automatic, Automatic

10. You have been asked to provide high availability for your vCenter server. Which product would you use to help achieve this?

A. Fault-Tolerance

B. vCenter Linked-Mode

C. vCenter Heartbeat

D. Microsoft Clustering Services

#### Answers

1	2	3	4	5	6	7	8	9	10
A	A	A	D	A	A	B	B	C	D

#### MODULE 3

1. VMware solution for uninterrupted application usage during hardware failure is?

Fault tolerance  
High availability  
DRS  
VSA

2. VMware solution to minimize the downtime caused by hardware failures is?

Fault tolerance  
High availability  
DRS  
VSA

3. VMware solution to perform hardware maintenance during business hours?

vC Ops  
vMotion  
Hot add  
All the above

4. VMware solution for hardware independent replication is

vSan  
vCloud director  
vSphere Replication  
None of the above

5. VMware solution used to test and restore data in entire server is vSphere data protection

TRUE

FALSE

6. VMware solution for shared storage infrastructure is?

VMs  
Templates  
VSA

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All the above

7. VMware solution for monitoring and reporting performance bottleneck is?

VCLLOUD NFV Open stack

vC Ops

Vcenter

None of the above

8. To efficiently utilize disk space thick provisioning is used

TRUE

FALSE

9. To prioritize network traffic of VMs centralized switches with QoS is used

TRUE

FALSE

10. The need for using data center virtualization is?

Saving money

Improved response and agility

Automation and optimization

All the above

#### MODULE 4

1. What is Cloud Computing replacing?

A. Corporate data centres

B. Expensive personal computer hardware

C. Expensive software upgrades

D. All of the above

2. Which of these companies is not a leader in cloud computing?

A. Google

B. Microsoft

C. Amazon

D. Blackboard

3. Which of these should a company consider before implementing cloud computing technology?

A. Employee satisfaction

B. Potential cost reduction

C. Information sensitivity

D. All of the above

4. "Cloud" in cloud computing represents what?

A. Internet

B. Wireless

C. Hard drives

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- D. People
5. Which is not a major cloud computing platform?
- Google 101
  - IBM Deep blue
  - Microsoft Azure
  - Amazon EC2
6. \_\_\_\_\_ tool is used to create business logic for your application.
- Presentation Builder
  - Business Process Designer
  - Business Objects Build
7. Point out the wrong statement :
- Abstraction enables the key benefit of cloud computing: shared, ubiquitous access
  - Virtualization assigns a logical name for a physical resource and then provides a pointer to that physical resource when a request is made
  - All cloud computing applications combine their resources into pools that can be assigned on demand to users
8. Which of the following type of virtualization is also characteristic of cloud computing?
- Storage
  - Application
  - CPU
  - All of the Above
9. Point out the correct statement:
- A client can request access to a cloud service from any location
  - A cloud has multiple application instances and directs requests to an instance based on conditions
  - Computers can be partitioned into a set of virtual machines with each machine being assigned a workload
  - All of the mentioned
10. Which of the following software can be used to implement load balancing?
- Apache mod\_balancer
  - Apache mod\_proxy\_balancer
  - F6's BigIP

**Answers**

1	2	3	4	5	6	7	8	9	10
D	D	D	A	B	B	C	D	D	C

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**DEPARTMENT OF CSE**

**OUTCOME ASSESSMENT**

Value added course on Introduction to Data Centre Virtualization and Cloud Computing

EXPECTED LEVEL OF ATTAINMENT FOR EACH QUESTIONS : 70%

**TOTAL NUMBER OF STUDENTS : 119**

**CO Attainment**

S.N O	REG NUMBER	NAME	Module 1(100)	Module 2(100)	Module 3(100)	Module 4(100)	TEST SCORE
<b>MARKS TO REACH EXPECTED LEVEL OF ATTAINMENT</b>							
1	E17CSR 001	AANANI D	70	70	70	70	310
2	E17CSR 002	AARTHI K	80	60	90	80	310
3	E17CSR 004	ABINAYA K	90	50	80	90	320
4	E17CSR 005	ABINAYASRI G	80	70	90	80	310
5	E17CSR 006	ABINESHA K	70	80	80	90	330
6	E17CSR 007	ABISHEK J	80	90	70	80	310
7	E17CSR 008	AJITHA J	70	80	80	70	290
8	E17CSR 010	AKASHRAJ M	60	90	70	70	260
9	E17CSR 011	AMRITHA K	50	70	60	80	270
10	E17CSR 012	AMSAVARTHINI R	70	60	70	70	290
11	E17CSR 013	ARTHI P	80	80	70	60	290
12	E17CSR 014	ATCHAYA E	90	90	60	50	340
13	E17CSR 015	BABIN B	100	80	90	70	350
14	E17CSR 016	BHARATH KUMAR R	90	80	100	80	300
15	E17CSR 017	BHAVADHARSHINI B	60	60	90	90	280
16	E17CSR 018	BHUVANESHWARI R	70	70	60	80	300
17	E17CSR 019	BHUVANESHWARI R	80	80	70	70	300
18	E17CSR 021	DEEPA P	90	70	80	60	290
19	E17CSR 022	DEEPIGA G	80	60	60	90	310
20	E17CSR 023	DEVADHARSHINI G	70	80	80	80	300
21	E17CSR 024	DEVIPRIYA R	60	90	80	70	300

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21	E17CSR 025	DHAKSHNASUDHAN R	80	80	80	70	80	310
22	E17CSR 026	DHINESH K	90	80	80	80	80	330
23	E17CSR 027	DIVYABHARATHI S	80	90	90	70	90	330
24	E17CSR 028	DINESH V	70	80	80	60	80	290
25	E17CSR 029	DIVYABHARATHI R	80	70	70	70	70	290
26	E17CSR 030	DURGADEVI R	70	80	80	60	60	270
27	E17CSR 032	ESWARI T	60	70	70	80	70	280
28	E17CSR 033	FAIROSEBANU A	50	60	60	60	60	230
29	E17CSR 034	FATHIMA BEEVI M	60	50	50	70	50	230
30	E17CSR 035	GANGADEVI T	80	70	70	60	70	280
31	E17CSR 036	GAYATHRI S	60	80	80	50	80	270
32	E17CSR 037	GEETHA A	100	90	90	70	90	350
33	E17CSR 038	HARIHARAN E	50	80	80	80	80	290
34	E17CSR 039	HASSIM ASLAM S	60	70	70	80	90	300
35	E17CSR 040	HEMA R	70	60	60	70	80	280
36	E17CSR 041	JAISURYA K	80	90	90	70	70	310
37	E17CSR 042	JAYA DHARANI C	90	80	80	80	80	330
38	E17CSR 043	JEEVANANTHAM S	60	70	70	90	70	290
39	E17CSR 044	JENITHA M	80	80	80	100	60	320
40	E17CSR 045	JINSI S	0	0	0	0	0	0
41	E17CSR 046	KAYATHRI V	80	90	90	60	70	300
42	E17CSR 047	KEEERTHIKA J	70	80	80	70	60	280
43	E17CSR 048	KIRUBAKARAN K	80	70	70	80	90	320
44	E17CSR 049	KISHORE G	50	60	60	90	100	300
45	E17CSR 050	KAMALAN R	60	70	70	80	90	300
46	E17CSR 051	KAMALAN R	50	60	60	80	60	250
47	E17CSR 052	KADHURI D	70	70	70	90	50	280
48	E17CSR 053	MAHESWARI V	80	70	70	80	80	310
49	E17CSR 055	MANOJKUMAR M	90	80	80	70	60	300
50	E17CSR 056	MATHANRAJ C	100	90	90	80	80	350
51	E17CSR 057	MEENAKSHI J	90	80	80	70	80	320

52	E17CSR 058	MEERA R	60	90	60	70	280
53	E17CSR 059	MOHAMED SALMAN FASITH S	70	80	50	80	280
54	E17CSR 060	MOHAMED YUSUF M	80	70	70	70	290
55	E17CSR 061	MONISHA P	90	80	80	60	310
56	E17CSR 062	MURUGESWARI V	80	70	90	50	290
57	E17CSR 063	MUTHUKARTHIGA S	80	70	80	60	290
58	E17CSR 064	NANTHINI BHARATHI R	90	70	70	80	310
59	E17CSR 065	NIRMAL T	80	70	60	60	270
60	E17CSR 066	NITHSHKUMAR I	70	60	90	70	290
61	E17CSR 067	NIVEDHITHA D	80	90	80	60	310
62	E17CSR 068	PAVITHRA M.P	70	80	70	50	270
63	E17CSR 069	POONTHAMIZH P	60	90	80	70	300
64	E17CSR 070	PRADEEPA A	50	60	80	80	270
65	E17CSR 071	PRAVINKUMAR M	70	70	90	80	310
66	E17CSR 072	PREETHA S	80	80	80	70	310
67	E17CSR 073	PREETHI V	90	60	70	50	270
68	E17CSR 074	PRINCE SUJA K	80	80	80	60	300
69	E17CSR 075	PRIYADHARSHINI J	70	80	60	80	290
70	E17CSR 076	PRIYADHARSHINI R	60	70	70	60	260
71	E17CSR 077	PRIYADHARSHINI V	90	80	60	70	300
72	E17CSR 078	PRIYANKA R	80	70	50	60	260
73	E17CSR 079	PUNITHA S	70	60	70	50	250
74	E17CSR 080	RAHUL R	80	50	80	70	280
75	E17CSR 081	RAJESHWARI M	80	60	80	80	300
76	E17CSR 082	RAM PRASATH R.K	90	80	70	80	320
77	E17CSR 083	RANJANI DEVI T	80	60	70	80	290
78	E17CSR 084	RAVIKUMAR P	70	70	60	80	280
79	E17CSR 085	RAVINA R	60	60	80	90	290
80	E17CSR 086	SAMEERABANU M	70	50	60	80	260
81	E17CSR 087	SAMUVEL R	60	70	70	70	270
82	E17CSR 089	SANTOSH M	50	80	60	80	270

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83	E17CSR 090	SATHISWARAN M	70	80	50	70	270
84	E17CSR 091	SATHYAPRIYA M	80	70	70	60	280
85	E17CSR 092	SELVAKUMARI R	90	50	80	50	270
86	E17CSR 093	SELVAMUTHUKUMARAN R	80	60	80	70	290
87	E17CSR 094	SHAGARBHAN S	90	80	80	80	330
88	E17CSR 095	SHANMUGARAJAN T	80	60	80	90	310
89	E17CSR 096	SHANTHINI R	70	70	90	80	310
90	E17CSR 097	SHOBANA PRIYA S	80	60	80	70	290
91	E17CSR 098	SHOBIYA J	70	50	70	60	250
92	E17CSR 099	SHRINIDHI B	60	70	80	90	300
93	E17CSR 100	SIVAKAMI S	50	80	70	80	280
94	E17CSR 101	SIVARANJANI I	70	80	60	70	280
95	E17CSR 102	SOCRATES A	60	80	80	80	300
96	E17CSR 103	SOWMIYA R	90	80	70	80	320
97	E17CSR 104	SRIMATHI P	100	90	60	60	310
98	E17CSR 105	SUBASRI K	90	80	70	80	320
99	E17CSR 106	SUBRAJA A	60	70	70	70	270
100	E17CSR 107	SUDHA M	50	80	60	60	250
101	E17CSR 108	SUGAPRIYA K	80	70	90	70	310
102	E17CSR 109	SUNDHARAVEL S	60	60	100	60	280
103	E17CSR 110	SURENDAR D	80	60	90	50	280
104	E17CSR 111	SURIYA PRABHA J	80	80	60	70	290
105	E17CSR 112	SURYA R	70	60	50	80	260
106	E17CSR 113	SUSHMITHA B	80	70	80	90	320
107	E17CSR 114	SUSHMITHA K	70	80	60	80	290
108	E17CSR 115	SWATHI R	60	70	70	90	290
109	E17CSR 116	THAHLEMA BANU S	50	70	60	70	250
110	E17CSR 117	VARATHA MANIKANDAN S	60	80	90	60	290
111	E17CSR 118	VEMBU E	80	50	80	80	290
112	E17CSR 119	VENGATRAMANAN E	60	60	90	90	300
113	E17CSR 120	VIGNESH A	70	60	60	80	270

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Regd. No. E17CSR 119

114	E17CSR 122	VIJAYALAKSHMI N	60	70	70	80	280	
115	E17CSR 123	VINOTHINIR	50	60	80	60	250	
116	E17CSR 124	VINOTHINI V	70	80	80	70	300	
117	E17CSR 125	YAMUNA S	80	70	90	80	320	
118	E17CSR 126	YOHAPRIYA B	80	70	70	70	290	
119	E17CSL 301	ABINAYA K	70	80	70	60	280	
<b>TOTAL</b>			<b>8650</b>	<b>8540</b>	<b>8710</b>	<b>8590</b>		
<70 %			29	27	24	28		
>=70%			71	73	76	72		
Range of attainment : 1 (>60), 2 (>70), 3 (>80)								
Mapping with CO			CO1	CO2	CO3	CO1		
Attainment of each CO			2.1	2.3	2.6	2.2		
Attainment level of each CO			CO1=2.1, CO2=2.3, CO3=2.6					

Mapping with PO : 1,2,3,12

ASSESSMENT TOOL	ATTAINMENT LEVEL OF CO1	ATTAINMENT LEVEL OF CO2	ATTAINMENT LEVEL OF CO3
MODULE 1	2.1		
MODULE 2		2.3	
MODULE 3			2.6
MODULE 4	2.2		
AVERAGE	2.1	2.3	2.6

Overall CO Attainment = 2.3

CO to PO Mapping

Course Outcome	PO1	PO2	PO3	PO12
CO1	1	2	2	2
CO2	2	3	3	3
CO3	3	3	3	3

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**CO to PSO Mapping**

Course Outcome	PSO1	PSO2
CO1	-	1
CO2	2	3
CO3	2	3

**PO Attainment**

Course Outcome	PO1	PO2	PO3	PO12
CO1	0.7	1.4	2.1	1.4
CO2	1.5	2.3	2.3	2.3
CO3	2.6	2.6	2.6	2.6
AVERAGE	1.6	2	2.3	2

**PSO Attainment**

Course Outcome	PSO1	PSO2
CO1	-	2.1
CO2	1.5	2.3
CO3	2.6	2.6
AVERAGE	2	2.6

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HOD/CSE

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**DEPARTMENT OF CSE**  
**F.G.S.P. Engineering College,**  
**Nagapattinam - 611 002**

+ Create

# Introduction to Data Center Virtualization with ...

- 12 Virtualization allows to easily upgrade ...
- 12 Which is a set of resources available for add...
- 12 Virtualization breaks the cycle of
- 12 Data center virtualization typically perform...
- 12 Bare metal hypervisors are installed in a pny.
- 12 Which of the following is not suitable for fib...
- 12 Which is managed by the host server
- 12 Virtualization allows to add components wit...

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Class	Class average	Classroom	People	Quizzes
Classroom	0.00	0.00	0.00	0.00

Class	Class average	Classroom	People	Quizzes
Classroom	0.00	0.00	0.00	0.00

Class	Class average	Classroom	People	Quizzes
Classroom	0.00	0.00	0.00	0.00

Class	Class average	Classroom	People	Quizzes
Classroom	0.00	0.00	0.00	0.00

Class	Class average	Classroom	People	Quizzes
Classroom	0.00	0.00	0.00	0.00

Class	Class average	Classroom	People	Quizzes
Classroom	0.00	0.00	0.00	0.00

Class	Class average	Classroom	People	Quizzes
Classroom	0.00	0.00	0.00	0.00

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*[Signature]*  
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Data Center Virtualization and Cloud Co...

Stream Classroom People Grades

	Stream	Classroom	People	Grades
<input type="checkbox"/>	shriniichi 1704			...
<input type="checkbox"/>	suba 5525			...
<input type="checkbox"/>	subraja a			...
<input type="checkbox"/>	vignesh A			...
<input type="checkbox"/>	Ajitha aji			...
<input type="checkbox"/>	VINO ANJU			...
<input type="checkbox"/>	amari amari			...
<input type="checkbox"/>	Anbarasan Anbarasan			...
<input type="checkbox"/>	S. Hasini Axiyam			...
<input type="checkbox"/>	Omashini Balaguru			...
<input type="checkbox"/>	faizose benu			...

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# E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS)

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Accredited by NAAC with Grade 'A'

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Counseling Code : 3806

Old Nagore Road, Thethi, Nagapattinam - 611002, Tamil Nadu **AIET** Engineering Ranking too **200** in India

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### CERTIFICATE OF COMPLETION

This is to certify that **Prince Suja.K III CSE** has successfully completed the Value Added Course on "Introduction to Data Centre Virtualization and Cloud Computing" Conducted by Department of Computer Science and Engineering, E.G.S Pillay Engineering College(Autonomous), Nagapattinam through online pedagogy on 11/05/2020.

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**Mr. J. Ananthan**,  
Nagapattinam, Tamil Nadu.

Coordinator

Mr. A. Baskar

Coordinator

Dr. M. Chinnadurai

HOD/CSE

Dr. S. Ramabalan

Principal

Certificate ID: RHWUYI-CE0000068

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Accredited by NBA, B.E-CSE, ECE, EEE, Mech, Civil (B.Tech-II)

Affiliated to Anna University, Chennai | Approved by AICTE, New Delhi



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An ISO 9001:2015 Certified Institution | Recognised by UGC 2(F) & 12(B)

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Counseling Centre : 3806

Old Nagore Road, Thethi, Nagapattinam - 611002, Tamil Nadu NKF Engineering Ranking too 200 in India

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING CERTIFICATE OF COMPLETION

This is to certify that **Jenitha.M III CSE** has successfully completed the Value Added Course on "Introduction to Data Centre Virtualization and Cloud Computing" Conducted by Department of Computer Science and Engineering, E.G.S Pillay Engineering College(Autonomous), Nagapattinam through online pedagogy on 11/05/2020.

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**Mr. J. Noorul Ameen**

Coordinator

Mr. A.Baskar

Coordinator

Dr.M.Chinnadurai

HOD/CSE

Dr.S.Ramabalan

Principal

Certificate ID: RHWUYI-CE0000039

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## VALUE ADDED COURSE SUMMARY REPORT

1. Name of Course Developer: **MR.J.NOORULAMEEN**
2. Course Developer Details: **ASSISTANT PROESSOR, CSE**  
**E.G.S. PILLAY ENGINEERING COLLEGE**
3. Date of Course: **from 19/04/2020 to 11/05/2020**
4. Beneficiary Details: **III CSE (UG)**
5. Coordinator: **Mr.J.NoorulAmeen (Asst. Prof.CSE ,EGSPEC)**  
**Mr.A.Baskar(Asst. Prof.CSE ,EGSPEC)**
6. Mode: **Online (Google Classroom)**

### **Title: Introduction to Data Centre Virtualization and Cloud Computing Modules:**

1. Introduction to Data Center Virtualization with VMware vSphere
2. Components of VMware vSphere
3. How does all fits together?
4. Cloud Computing Primer

### **Course Outcome Attainment:**

#### **Attainment through Internal Assessment:**

Attainment level 1: CO Attainment is  $\geq 60\%$

Attainment level 2: CO Attainment is  $\geq 70\%$

Attainment level 3: CO Attainment is  $\geq 80\%$

Here, The CO Attainment is i.e. 2.3

The correlation level in the Internal Assessment is Moderate i.e. 2 (Attainment level 2)

Therefore, Overall Attainment of the Value added Course Introduction to Data Centre Virtualization and Cloud Computing is Moderate.

ATTESTED  
  
**DR. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.C.S. Pillay Engineering College,**  
Thethi, Narava - 611 002,  
Nagapattinam (G) Tamil Nadu.

**E.G.S. Pillay Engineering College (Autonomous),  
Nagapattinam**



**Department Of Computer Science & Engineering**

*Organized*

VALUE ADDED COURSE  
ON  
INTRODUCTION  
TO  
ASP.NET  
FRAMEWORK




**E.G.S.PILLAY ENGINEERING COLLEGE (AUTONOMOUS)**  
**NAGAPATTINAM**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**VALUE ADDED COURSE**  
**ON**  
**“INTRODUCTION TO ASP.NET FRAMEWORK”**

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**ATTESTED**  
  
**DR. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Tiruthi, Nagapattinam - 611 002,  
Nagapattinam (Dt) Tamil Nadu.

  
**HOD/CSE**  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002



**PERMISSION LETTER**

Date: 27.04.2020

From

Mrs.P.Vennila & Mr.A.Rajesh  
Assistant Professor/CSE,  
Department of Computer Science & Engineering,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

To

The Principal,  
E.G.S.Pillay Engineering College,  
Nagapattinam.



Through

The Head of Department,  
Department of Computer Science & Engineering,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

Respected Sir,

Sub: Request to conduct Value Added Course – reg..

We are happy to inform you that we have planned to organize one week value added course titled **“Introduction to ASP.Net Framework”** for Final year CSE Students from 04.05.2020 to 09.05.2020 for Batch I students & 11.05.2020 to 16.05.2020 for Batch II students through online mode. Herewith, I have attached the name list and the session details. Kindly give us permission to conduct the above mentioned value added course.


Thanking you,

yours sincerely,



2

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

  
**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002



HOD CSE <hodcse@egspec.org>

# Permission to conduct Value Added Course - Reg..

2 messages

HOD CSE <hodcse@egspec.org>

Mon, Apr 27, 2020 at 10:00 AM

To: PRINCIPAL EGSPEC <principal@egspec.org>

Respected Sir,

We are happy to inform you that we have planned to conduct an online value added course on title "Introduction to ASP.Net Framework" for final year CSE UG Students from 04.05.2020 to 09.05.2020 for Batch I and 11.05.2020 to 16.05.2020 for Batch II. Herewith, I have attached the Brochure & program schedule details. Kindly give us permission to conduct the above course.

Thanking you

-- with regards,  
**Head of Department**  
**Department of Computer Science and Engineering,**  
**E.G.S. Pillay Engineering College,**  
**Nagapattinam.**  
Mobile: 7373067032  
Email: [hodcse@egspec.org](mailto:hodcse@egspec.org)

### 3 attachments

**Convenor**  
Prof Dr M CHINNADURAI  
Professor & Head / CSE

**Course Coordinator**  
Dr.R MANIVANNAN  
ASSOCIATE PROFESSOR/CSE

**Resource Person**  
M.M.M PRINADAS-THIRU  
ASSISTANT PROFESSOR / CSE

**Industry Person**  
Mrs.S.Rama,  
Sr Database Administrator,  
SRI CHITRAI

**Beneficiaries**  
2018-23 Batch  
UG CSE Students

**Course Duration:**  
32 Hours

**Learning Mode**  
Online

**Top Reasons to Learn Python**

- 1 Easy to learn
- 2 Simple and Mathematical
- 3 Web development
- 4 Finance and trading
- 5 System administration and automation
- 6 Computer graphics
- 7 Game development
- 8 Security and penetration testing

**Getting Started with Python**  
COURSE COORDINATOR

Organized by  
Department of CSE  
DATE:  
28-04-2020 08:31:33

Getting Started with Python1.png  
996K

**ABOUT THE COURSE**

This course is an introduction to programming and the Python language. Students are introduced to core programming concepts like variables, conditionals, loops, functions, and modules. This course includes an overview of the use of all aspects for using programming Python, and provides more quality, flexible, provides hands-on coding exercises using commonly used libraries, using custom features, and reading and writing to files. The course may be more helpful than being able to use Python in various applications.

**ABOUT THE DEPARTMENT**

The Department of Computer Science and Engineering at E.G.S. Pillay Engineering College is one of the leading departments in the college. It is equipped with all the necessary facilities for the teaching and learning of Computer Science and Engineering. The department is headed by Prof. Dr. M. Chinnadurai, Professor and Head of the Department. The department has a strong academic and research background. It is committed to providing quality education and training to its students. The department is also involved in various social and cultural activities. It is a proud member of the Tamil Nadu Engineering Academies (TNEA) and the Tamil Nadu Engineering Council (TNEC). The department is also a member of the Association of Engineering Colleges and Universities (AECU) and the Association of Computer Science and Engineering Institutions (ACEI).

**ABOUT THE COLLEGE**

E.G.S. Pillay Engineering College was founded in the year 1987. It is a private educational and Charitable Trust. The college has a reputation of being a premier institution in the region. The college is located in the heart of Nagapattinam. It is a member of the Tamil Nadu Engineering Academies (TNEA) and the Tamil Nadu Engineering Council (TNEC). The college is also a member of the Association of Engineering Colleges and Universities (AECU) and the Association of Computer Science and Engineering Institutions (ACEI). The college has a strong academic and research background. It is committed to providing quality education and training to its students. The college is also involved in various social and cultural activities. It is a proud member of the Tamil Nadu Engineering Academies (TNEA) and the Tamil Nadu Engineering Council (TNEC). The college is also a member of the Association of Engineering Colleges and Universities (AECU) and the Association of Computer Science and Engineering Institutions (ACEI).

Getting Started with Python2.png  
996K

Schedule1.docx  
13K

**ATTESTED**

*[Signature]*

**Dr. S. RAMABALAN, M.E., Ph.D.**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002,**  
**Nagapattinam (Dt) Tamil Nadu.**

05/17/20, 7:30 AM

E.G.S. Pillay Engineering College Mail - Permission to conduct Value Added Course - Reg..

**PRINCIPAL EGSPEC** <principal@egspec.org>

Mon, Apr 27, 2020 at 2:10 PM

To: HOD CSE <hodcse@egspec.org>

Good Morning Sir,

Request to conduct the Value added course "Introduction to ASP.Net Framework" via online mode is accepted and permitted.

Regards,

The Principal

E.G.S.Pillay Engineering College,  
Nagapattinam

Mobile: 9894831458

Email: principal@egspec.org

[Quoted text hidden]

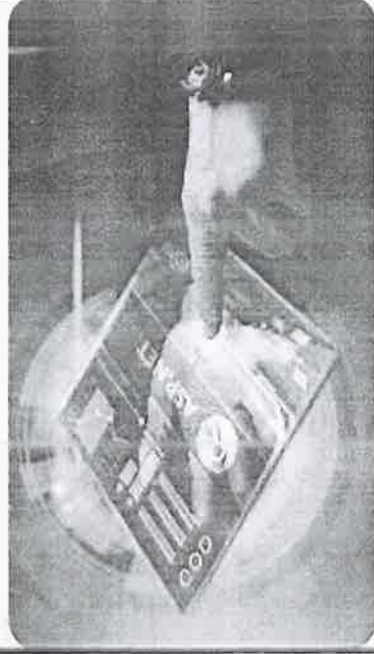
ATTESTED

  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi. Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

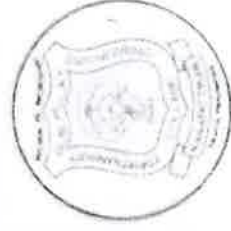
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**ONE WEEK  
VALUE ADDED COURSE  
ON  
INTRODUCTION TO ASP.NET  
FRAMEWORK**

04/05/2020 - 09/05/2020  
&  
11/05/2020 - 16/05/2020



Organized by  
**Department of CSE**



**E.G.S.Pillay Engineering College  
(Autonomous)  
NAGAPATTINAM**

**Convener  
Dr.T.GANESAN  
Professor/ CSE  
EGSPEC**

**Coordinators  
Mrs.P.Vennila  
Assistant Professor/CSE  
EGSPEC**

**&  
Mr.A.Rajesh  
Assistant Professor/CSE  
EGSPEC**

**Resource Person  
Mrs.E.Elakiya  
AP/CSE, EGSPEC**

**ATTESTED  
&  
Mrs. P. Vennila**

**Pr. S. RAMABALAN, M.E., Ph.D., EGSPEC  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Nagapattinam - 611 002.  
Nagapattinam (TN) Tamil Nadu.**

**Duration  
36 Hours**

**Beneficiaries:  
IV CSE Students**

**Course Starting Dates  
Batch I - 04/05/2020  
Batch II - 11/05/2020**

**Course Objectives:**

To enable the students to

- 1.To learn about basic features of ASP.NET and its controls.
- 2.To create an ASP.NET application using standard .NET Controls.
- 3.To learn about connecting data sources using ADO.NET and managing them.



## ABOUT THE DEPARTMENT

Department of Computer Science and Engineering programme was introduced at Edayathangudy G.S.Pillay Engineering College in the Academic Year 1995-1996. The demand for Computer Engineers in software companies, banking sectors and private sectors engaged in developing new trends of software generation is more than the engineers available.

The department has Recognized Research Centre for doing PhD / M.S. (By Research), obtained Permanent Affiliation from Anna University in the year 2014-15. The department has formed student association namely Computer Engineers Association (CEA) to promote talent of the students and their upliftment. The department has highly qualified and experienced faculties. The department has well experienced faculties in the research and more number of publications in reputed Journals and Conferences.

The department has well infrastructure facilities. From 2011 onwards every year, we are conducting International and National Conferences. The B.E (CSE) programme was accredited by NBA in the year 2016 and re-accredited in the year 2019. The department has three years.

**Dr. S. RAMA BALAKRISHNAN**  
Principal  
E.G.S. Pillay Engineering College  
Thiruvananthapuram  
Nagapattinam

## COURSE MODULES

Unit I - ASP.NET Architecture and Controls  
ASP.NET Introduction - First ASP.NET Application - AutoPostBack Property - Event Handler Parameters. Life Cycle of ASP.NET Page - Control Management Events - Event handling in Web Forms - Writing Custom Classes in WebApplication. Dynamically initializing Controls- IsPostBack property of Page class - ListControls -Comparison between HtmlControls and WebControls - Control Properties and Methods - FileUpload Control

Unit II - CSS & Themes  
Working with CSS - Use Themes to Customize a Site -Name Skins within a Theme - Do server-side Styles using Themes - Add contents of a Theme and Skin - Apply themes and Profiles. Redirecting User to Another Page: Redirecting Options- Response. Redirect Server -Transfer - Cross Page Postback -Determine how the pages was invoked - Passing values between pages

Unit III - Master Page and State Management in ASP.NET  
Introduction to MasterPage - ContentPlaceHolder and Content tags - Accessing controls of MasterPage in ContentPage -URL's in MasterPages -UniqueID and ClientID. CACHING :Data Caching, Output caching. Static Members - View State - Hidden Field in Form- Query String- HttpContext - Cookies- Sessions

Unit IV - Web Services & Security  
Creating and consuming Web Services - Introduction of WPF - Introduction of WCF - Introduction of MVC-ASP.NET SECURITY: Authentication, Authorization

Certificate will be issued to all participants on successful completion of this course

## ABOUT THE COLLEGE

EGS Pillay Engineering College was started in the year 1995 under the sponsorship of G. S. Pillay & Sons Educational and Charitable Trust. College has gained the reputation of being most preferred engineering college by the students. College is approved by the AICTE, New Delhi and is affiliated to Anna University from 2002 and the degrees are awarded by Anna University, as per the Government Orders. It is ISO 9001:2008 certified.

The College has earned the reputation of being one of the most preferred colleges by the students and parents all these years. Known for its excellent infrastructure and facilities for learning, the outstanding non-grant engineering college has registered impressive performance consistently. A gateway to success, the college has now set on long-range planning to enlarge and enrich its programs and activities to empower the youth who aspire to become successful Engineers, Scientists and Managers.

**E. G. S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS),  
NAGAPATTINAM.  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

EGSPEC/CSE/UG/VAC/2019-20/03

Date: 29.04.2020

**CIRCULAR**

It is here by informed that Department of Computer Science and Engineering is going to organize a Value Added Course on **“Introduction to ASP.Net Framework”** from 04.05.2020 to 09.05.2020 for Batch I students & 11.05.2020 to 16.05.2020 for Batch II students through online mode for the duration of 36 hours by, **Mrs.E.Elakiya, Assistant Professor** and **Mrs.P.Vennila, Assistant Professor**, Department of Computer Science and Engineering, E.G.S.Pillay Engineering College(Autonomous), Nagapattinam for final year UG CSE Students. All the final year students are instructed to attend the course without fail.

  
CONVENER

  
HOD/CSE

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

ATTESTED  
  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.



**E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS), NAGAPATTINAM**

**DEPARTMENT OF CSE**

**Value Added Course on "Introduction to ASP.Net Framework"**

**PROGRAM SCHEDULE**

**Batch I - Date: 04.05.2020 - 09.05.2020**

**Batch II - Date: 11.05.2020- 16.05.2020**

S.No	Day	Session	Topics
1.	Day 1	ForeNoon	ASP.NET Introduction - First ASP.NET Application - Auto Postback Property - Event Handler Parameters. Life Cycle of ASP.NET Page - Control Management Events - Event handling in Web Forms
		AfterNoon	Writing Custom Classes in WebApplication. Dynamically initializing Controls- IsPostBack property of Page class - ListControls -Comparison between HtmlControls and WebControls
2.	Day 2	ForeNoon	Control Properties and Methods - FileUpload Control. Working with CSS - Use Themes to Customize a Site -Name Skins within a Theme
		AfterNoon	Do server-side Styles using Themes - Add contents of a Theme and Skin - <b>Apply</b> themes and Profiles.
3.	Day 3	ForeNoon	Redirecting User to Another Page: Redirecting Options- <b>Response</b> . Redirect Server -Transfer
		AfterNoon	Cross Page Postback -Determine how the pages was invoked - <b>Passing values between pages</b>
4.	Day 4	ForeNoon	Introduction to MasterPage - ContentPlaceHolder and Content tags - Accessing controls of MasterPage in ContentPage -URL's in <b>MasterPages</b> -UniqueID and ClientID.
		AfterNoon	<b>CACHING</b> :Data Caching, Output caching
5.	Day 5	ForeNoon	Static Members - View State - Hidden Field in Form- Query String
		AfterNoon	<b>HttpContext</b> -Cookies- Sessions
6.	Day 6	ForeNoon	Creating and consuming Web Services - Introduction of WPF - Introduction of WCF - Introduction of MVC.
		AfterNoon	ASP.NET SECURITY: Authentication, Authorization

**Session Timing :** Forenoon - 10am to 1pm & Afternoon - 2pm to 5pm

CONVENOR

**Dr. T.Ganesan, PROF/ CSE**

COORDINATORS

1. Mrs.P.Vennila, AP / CSE
2. Mr.A.Rajesh, AP / CSE

RESOURCE PERSON

1. Mrs.E.Elakiya, AP / CSE
2. Mrs.P.Vennila, AP/CSE

**ATTESTED**

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.


HOD/CSE

**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
**E.G.S.P. Engineering College,**  
**Nagapattinam - 611 002**

## SYLLABUS

		INTRODUCTION TO ASP.NET FRAMEWORK	L	T	P	C
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<b>Course Objectives:</b>						
		1. To learn about basic features of ASP.NET and its controls.				
		2. To create an ASP.NET application using standard .NET Controls.				
		3. To learn about connecting data sources using ADO.NET and managing them.				
<b>Unit I</b>	<b>ASP.NET Architecture and Controls</b>				<b>9 Hours</b>	
ASP.NET Introduction - First ASP.NET Application - Auto Postback Property - Event Handler Parameters. Life Cycle of ASP.NET Page - Control Management Events - Event handling in Web Forms - Writing Custom Classes in Web/Application. Dynamically initializing Controls- IsPostBack property of Page class - ListControls -Comparison between HtmlControls and WebControls - Control Properties and Methods - FileUpload Control						
<b>Unit II</b>	<b>CSS &amp; Themes</b>				<b>9 Hours</b>	
Working with CSS - Use Themes to Customize a Site -Name Skins within a Theme - Do server-side Styles using Themes - Add contents of a Theme and Skin - Apply themes and Profiles. Redirecting User to Another Page: Redirecting Options- Response. Redirect Server -Transfer -Cross Page Postback -Determine how the pages was invoked - Passing values between pages						
<b>Unit III</b>	<b>Master Page and State Management in ASP.NET</b>				<b>9 Hours</b>	
Introduction to MasterPage - ContentPlaceHolder and Content tags - Accessing controls of MasterPage in ContentPage -URL's in MasterPages -UniqueID and ClientID. CACHING :Data Caching, Output caching. Static Members - View State - Hidden Field in Form- Query String- HttpContext -Cookies- Sessions						
<b>Unit IV</b>	<b>Web Sevcies &amp; Security</b>				<b>9 Hours</b>	
Creating and consuming Web Services - Introduction of WPF - Introduction of WCF - Introduction of MVC.ASP.NET SECURITY: Authentication, Authorization						
					<b>Total:</b>	<b>36 Hours</b>
<b>Course Outcomes:</b>						
		After completion of the course, Student will be able to				
CO1	Design web applications using ASP.NET					
CO2	Describe and use ASP.NET controls in web applications					
CO3	Create database driven ASP.NET web applications and web services					
CO 4	Create new websites and add security features to them					
<b>References:</b>						
		1."Professional ASP.NET MVC 5 (WROX)" by Jon Galloway and Brad Wilson				
		2."ASP.NET: The Complete Reference" by Matthew Macdonald				
		3."ASP.NET 4.5 in Simple Steps" by Kogent Learning Solutions Inc				

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

  
**HOD/CSE**  
**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
**E.G.S.P. Engineering College**  
**Nagapattinam - 611 002**

**E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS), NAGAPATTINAM**

**DEPARTMENT OF CSE**

**VALUE ADDED COURSE ON "INTRODUCTION TO ASP.NET FRAMEWORK"**

**ENROLLMENT LIST**

<b>S.NO</b>	<b>REGISTER NUMBER</b>	<b>NAME OF THE STUDENT</b>	<b>BATCH</b>
1.	820816104001	AAKASH A	I
2.	820816104002	AARTHI M	I
3.	820816104003	ABINAYA K	I
4.	820816104004	ABINAYA M D	I
5.	820816104005	AJITH KUMAR S	I
6.	820816104006	ANANTHI S	I
7.	820816104007	ANUSHA S	I
8.	820816104008	ANUSUYA A	I
9.	820816104009	ANUSUYA R	I
10.	820816104010	ARAVINDH N	I
11.	820816104011	ASHWIN G	I
12.	820816104012	ASWINI M	I
13.	820816104013	BALASURYA N	I
14.	820816104014	BAVITHRA R	I
15.	820816104015	BIRUNDHA M	I
16.	820816104016	BISMIL HUDHA S	I
17.	820816104017	DEVI V	I
18.	820816104018	DHARMARAJA S	I
19.	820816104019	DHEEPTHI R	I
20.	820816104020	DHIVANI G	I
21.	820816104021	DHIVYABHARADHI B	I
22.	820816104022	DHIVYADHARSHINI T	I
23.	820816104024	GAYATHRI G	I
24.	820816104025	GAYATHRI M	I
25.	820816104026	GAYATHRI M	I
26.	820816104028	HARINISHRI P	I
27.	820816104029	HEMALATHA G	I
28.	820816104030	ISHWARYA M	I
29.	820816104031	JANARDANI K	I
30.	820816104032	JAYACHANDRAN R	I
31.	820816104033	JAYAKANTH J	I
32.	820816104034	JAYAMUKESH R	I
33.	820816104035	JAYASREE R	I
34.	820816104036	KAMALI S	I
35.	820816104037	KARUTHAMMA P	I

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 001  
Nagapattinam (Dt) Tanj.

36.	820816104038	KAVIYARASAN S	I
37.	820816104039	KAYALVIZHI D	I
38.	820816104040	KAYALVIZHI E	I
39.	820816104041	KEERTHANA B	I
40.	820816104042	KIRUBA S	I
41.	820816104043	KOWSAKI M	I
42.	820816104045	MADHURABASHINI K	I
43.	820816104046	MANIMOZHI D	I
44.	820816104047	MANISHA M	I
45.	820816104048	MANJUPARKAVI P	I
46.	820816104049	MANOSEELAN G	I
47.	820816104050	MATHUMATHI R	I
48.	820816104051	METHANRAJ S	I
49.	820816104052	MOHAMED IBRAHIMSHAIBU MARIKYAR N	I
50.	820816104053	MOHAMED SHAIK ALAWUDEEN A	I
51.	820816104054	MONIKA M	I
52.	820816104055	NANDHINI R	I
53.	820816104056	NAVEENAJAGADESWARI D	I
54.	820816104057	NISHANTHINI G	I
55.	820816104058	NITESH E	I
56.	820816104059	NITHYAPRIYA A	I
57.	820816104060	NITHYAPRIYA R	I
58.	820816104061	NIVETHA B	II
59.	820816104063	PARIMALA S	II
60.	820816104064	PARKAVI S	II
61.	820816104065	PAVITHRA S	II
62.	820816104066	PRAGATHI J	II
63.	820816104067	PRAMILA R	II
64.	820816104068	PRASANTH M	II
65.	820816104069	PREETHINISHA K	II
66.	820816104070	PRIYA A	II
67.	820816104072	PRIYADHARSHINI M	II
68.	820816104074	PRIYADHARSHINI T	II
69.	820816104075	PUSHPALATHA P	II
70.	820816104076	RAJASUNDARI M	II
71.	820816104077	RAJESWARI R	II
72.	820816104078	RAJITHA R	II
73.	820816104079	RAMEEZ THARIQ A	II
74.	820816104080	RAMPRAKASH S	II
75.	820816104081	RAMPRASATH T	II
76.	820816104083	RETHINAKUMARI P	II
77.	820816104084	ROSHINI G	II
78.	820816104085	SALOMIYA R	II
79.	820816104087	SANGEETHA R	II
80.	820816104088	SANTHIYA A	II

**ATTESTED**

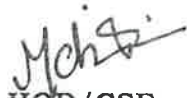
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81.	820816104089	SANTHIYA G	II
82.	820816104091	SATHANA V	II
83.	820816104092	SATHISH S	II
84.	820816104093	SATHYA R	II
85.	820816104094	SHIBA B	II
86.	820816104096	SIVASANGARI K	II
87.	820816104097	SRILEKA M	II
88.	820816104098	STEFFYGRAFF M	II
89.	820816104099	SUBA S	II
90.	820816104100	SUBASHINI R	II
91.	820816104101	SUBASHRI T	II
92.	820816104102	SUBASREE P	II
93.	820816104103	SUBASRI S	II
94.	820816104105	SUGANTHI A	II
95.	820816104106	SUGUNA G	II
96.	820816104107	SUMITHA P	II
97.	820816104109	SURYAPRAKASH T	II
98.	820816104111	TAMIZHMOZHI T	II
99.	820816104114	VAITHEESWARI M	II
100.	820816104116	VARSHA G	II
101.	820816104117	VARSHINI M	II
102.	820816104118	VARSHINI V	II
103.	820816104119	VASUMATHI T	II
104.	820816104120	VENKADESHWARAN S	II
105.	820816104121	VICHITHRA B	II
106.	820816104122	VIJAYASRI P	II
107.	820816104123	VINOLIYA G	II
108.	820816104125	YOGESWARI A	II
109.	820816104126	YUVARAJA P	II
110.	820816104301	ABINASH P	II
111.	820816104302	ARUNKUMAR R	II
112.	820816104309	MAGESHWARI M	II
113.	820816104310	SRIMATHI M	II
114.	820816104701	SINDHUJA R	II
115.	820816104702	THIPAK MANJREKAR K	II
116.	820816104703	RAJESH R	II

  
COURSE COORDINATOR

  
HOD/CSE

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HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
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## COURSE MATERIAL

### **ASP.NET - Introduction**

ASP.NET is a web development platform, which provides a programming model, a comprehensive software infrastructure and various services required to build up robust web applications for PC, as well as mobile devices.

ASP.NET works on top of the HTTP protocol, and uses the HTTP commands and policies to set a browser-to-server bilateral communication and cooperation.

ASP.NET is a part of Microsoft .Net platform. ASP.NET applications are compiled codes, written using the extensible and reusable components or objects present in .Net framework. These codes can use the entire hierarchy of classes in .Net framework.

The ASP.NET application codes can be written in any of the following languages:

- C#
- Visual Basic.Net
- Jscript
- J#

ASP.NET is used to produce interactive, data-driven web applications over the internet. It consists of a large number of controls such as text boxes, buttons, and labels for assembling, configuring, and manipulating code to create HTML pages.

#### ASP.NET Web Forms Model

ASP.NET web forms extend the event-driven model of interaction to the web applications. The browser submits a web form to the web server and the server returns a full markup page or HTML page in response.

All client side user activities are forwarded to the server for stateful processing. The server processes the output of the client actions and triggers the reactions.

Now, HTTP is a stateless protocol. ASP.NET framework helps in storing the information regarding the state of the application, which consists of:

- Page state
- Session state

The page state is the state of the client, i.e., the content of various input fields in the web form. The session state is the collective information obtained from various pages the user visited and worked with, i.e., the overall session state. To clear the concept, let us take an example of a shopping cart.

User adds items to a shopping cart. Items are selected from a page, say the items page, and the total collected items and price are shown on a different page, say the cart page. Only HTTP cannot keep track of all the information coming from various pages. ASP.NET session state and server side infrastructure keeps track of the information collected globally over a session.

The ASP.NET runtime carries the page state to and from the server across page requests while generating ASP.NET runtime codes, and incorporates the state of the server side components in hidden fields.

This way, the server becomes aware of the overall application state and operates in a two-tiered connected way.

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## **The ASP.NET Component Model**

The ASP.NET component model provides various building blocks of ASP.NET pages. Basically it is an object model, which describes:

- Server side counterparts of almost all HTML elements or tags, such as <form> and <input>.
- Server controls, which help in developing complex user-interface. For example, the Calendar control or the Gridview control.

ASP.NET is a technology, which works on the .Net framework that contains all web-related functionalities. The .Net framework is made of an object-oriented hierarchy. An ASP.NET web application is made of pages. When a user requests an ASP.NET page, the IIS delegates the processing of the page to the ASP.NET runtime system.

The ASP.NET runtime transforms the .aspx page into an instance of a class, which inherits from the base class page of the .Net framework. Therefore, each ASP.NET page is an object and all its components i.e., the server-side controls are also objects.

## **Components of .Net Framework 3.5**

Before going to the next session on Visual Studio.Net, let us go through at the various components of the .Net framework 3.5. The following table describes the components of the .Net framework 3.5 and the job they perform:

### **Components and their Description**

#### **(1) Common Language Runtime or CLR**

It performs memory management, exception handling, debugging, security checking, thread execution, code execution, code safety, verification, and compilation. The code that is directly managed by the CLR is called the managed code. When the managed code is compiled, the compiler converts the source code into a CPU independent intermediate language (IL) code. A Just In Time(JIT) compiler compiles the IL code into native code, which is CPU specific.

#### **(2) .Net Framework Class Library**

It contains a huge library of reusable types. classes, interfaces, structures, and enumerated values, which are collectively called types.

#### **(3) Common Language Specification**

It contains the specifications for the .Net supported languages and implementation of language integration.

#### **(4) Common Type System**

It provides guidelines for declaring, using, and managing types at runtime, and cross-language communication.

#### **(5) Metadata and Assemblies**

Metadata is the binary information describing the program, which is either stored in a portable executable file (PE) or in the memory. Assembly is a logical unit consisting of the assembly

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manifest, type metadata, IL code, and a set of resources like image files.

**(6) Windows Forms**

Windows Forms contain the graphical representation of any window displayed in the application.

**(7) ASP.NET and ASP.NET AJAX**

ASP.NET is the web development model and AJAX is an extension of ASP.NET for developing and implementing AJAX functionality. ASP.NET AJAX contains the components that allow the developer to update data on a website without a complete reload of the page.

**(8) ADO.NET**

It is the technology used for working with data and databases. It provides access to data sources like SQL server, OLE DB, XML etc. The ADO.NET allows connection to data sources for retrieving, manipulating, and updating data.

**(9) Windows Workflow Foundation (WF)**

It helps in building workflow-based applications in Windows. It contains activities, workflow runtime, workflow designer, and a rules engine.

**(10) Windows Presentation Foundation**

It provides a separation between the user interface and the business logic. It helps in developing visually stunning interfaces using documents, media, two and three dimensional graphics, animations, and more.

**(11) Windows Communication Foundation (WCF)**

It is the technology used for building and executing connected systems.

**(12) Windows CardSpace**

It provides safety for accessing resources and sharing personal information on the internet.

**(13) LINQ**

It imparts data querying capabilities to .Net languages using a syntax which is similar to the tradition query language SQL.

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**Department of Computer Science and Engineering**

**Value Added Course**

**Introduction to ASP.Net Framework**

**Assessment Test Questions**

**(10\*2=20 Marks)**

**1. Choose the form in which Postback occur**

- A. HTMLForms
- B. Webforms
- C. Winforms

Ans: Webforms

**2. Which of the following object is not an ASP component?**

- A. LinkCounter
- B. Counter
- C. AdRotator
- D. File Access

Ans: LinkCounter

**3. Difference between Response.Write() and Response.Output.Write().**

- A. Response.Output.Write() allows you to buffer output
- B. Response.Output.Write() allows you to write formatted output
- C. Response.Output.Write() allows you to flush output
- D. Response.Output.Write() allows you to stream output

Ans: Response.Output.Write() allows you to write formatted output

**4. What class does the ASP.NET Web Form class inherit from by default?**

- A. System.Web.UI.Page
- B. System.Web.UI.Form
- C. System.Web.GUI.Page
- D. System.Web.Form

Ans: System.Web.UI.Page

**5. Caching type supported by ASP.Net**

- A. Output Caching
- B. DataCaching
- C. a and b
- D. none of the above

Ans: a and b

**6. Which of the following ASP.NET object encapsulates the state of the client?**

- A. Session object
- B. Application object
- C. Response object
- D. Server object

Ans: Session object

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7. \_\_\_\_\_ element in the web.config file to run code using the permissions of a specific user

- A. < credential> element
- B. < authentication> element
- C. < authorization> element
- D. < identity> element

Ans: < identity> element

8. Where do we include the user lists for windows authentication?

- A. < Credential>
- B. < authorization>
- C. < identity>
- D. < authentication>

Ans: < authorization>

9. \_\_\_\_\_ tests make sure that new code does not break existing code.

- A. Regression tests
- B. Integration tests
- C. Unit tests
- D. Load test

Ans: Integration tests

10. Find the term: The .NET framework which provides automatic memory management using a technique called \_\_\_\_\_ ?

- A. Serialization
- B. Garbage Collection
- C. Assemblies
- D. Overriding

Ans: Garbage Collection

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# Introduction to ASP.Net-Test

Register Number \*

820816104036

Name \*

KAMALI S

Class & Branch \*

IV CSE

1. Choose the form in which Postback occur \*

2 points

- A. HTMLForms
- B. Webforms
- C. Winforms

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2. Which of the following object is not an ASP component? \*

2 points

- A. LinkCounter
- B. Counter
- C. AdRotator
- D. File Access

3. Difference between Response.Write() and Response.Output.Write(). \*

2 points

- A. Response.Output.Write() allows you to buffer output
- B. Response.Output.Write() allows you to write formatted output
- C. Response.Output.Write() allows you to flush output
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2 points

- A. System.Web.UI.Page
- B. System.Web.UI.Form
- C. System.Web.GUI.Page
- D. System.Web.Form

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**5. Caching type supported by ASP.Net \***

2 points

- A. Output Caching
- B. DataCaching
- C. a and b
- D. none of the above

**6. Which of the following ASP.NET object encapsulates the state of the client? \***

2 points

- A. Session object
- B. Application object
- C. Response object
- D. Server object

**7. \_\_\_\_\_ element in the web.config file to run code using the permissions of a specific user**

\* 2 points

- A. < credential> element
- B. < authentication> element
- C. < authorization> element
- D. < identity> element

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20

8. Where do we include the user lists for windows authentication? \*

2 points

- A. < Credential>
- B. < authorization>
- C. < identity>
- D. < authentication>

9. \_\_\_\_\_ tests make sure that new code does not break existing code. \*

2 points

- A. Regression tests
- B. Integration tests
- C. Unit tests
- D. Load test

10. Find the term: The .NET framework which provides automatic memory management using a technique called \_\_\_\_\_?

\* 2 points

- A. Serialization
- B. Garbage Collection
- C. Assemblies
- D. Overriding

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**Value Added Course Activity**

**Register No:** 820816104022

**Name :** DHIVYADHARSHINI T

**Course Name:** Introduction to ASP.Net Framework

**Date:** 08.05.2020



**Question:**

Write a program containing the following controls:

- A ListBox
- A Button
- An Image
- A Label

The listbox is used to list items available in a store. When the user clicks on an item in the listbox, its image is displayed in the image control. When the user clicks the button, the cost of the selected item is displayed in the control.

**Answer:**

**Codings:**

```
<html>
<head>
<Script language="c#" runat="Server">
void Calculate(Object sender,EventArgs e) {
if (Store.SelectedIndex > -1){
int i = Store.SelectedIndex;
Cost.Text = "You have chosen " + Store.SelectedItem.Value + " and its cost is Rs.";
if (i==0)
Cost.Text += "40";
else if (i==1)
Cost.Text += "30";
else if (i == 2)
Cost.Text += "26";
else
Cost.Text += "20";
} }
void display(Object sender, EventArgs e) {
int i = Store.SelectedIndex;
if (i==0) {
Img.ImageUrl = "CocoCola.gif";
Img.AlternateText = "CocoCola";
}
else if (i==1) {
Img.ImageUrl = "Red_wine gif";
Img.AlternateText = "Red Wine";
}
else if (i == 2) {
Img.ImageUrl = "Lime.gif";
Img.AlternateText = "Lime Juice";
}
```



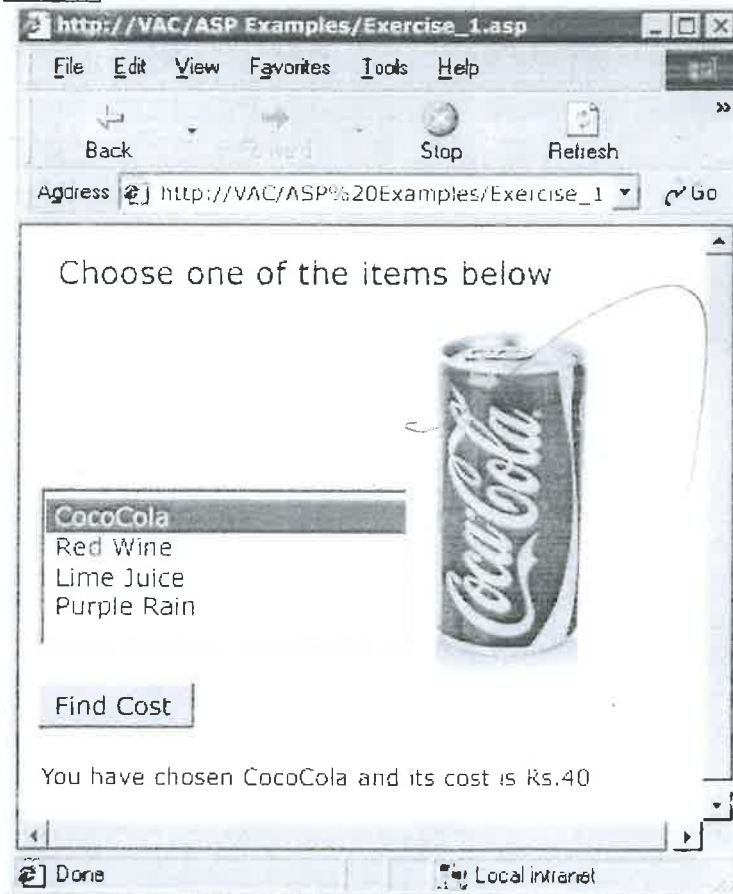
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```

}
else {
  Img.ImageUrl = "Purple_Rain.gif";
  Img.AlternateText = "Purple Rain";
} }
</Script>
</head>
<body>
  <form runat="server">
    <asp:label id = "label1" Text="Choose one of the items below" Font-Name="Verdana" Font-
    Size="18pt" runat="server" />
    <br><br>
    <asp:listbox id="Store" AutoPostBack="True" width="200" runat="server"
    onSelectedIndexChanged="display">
      <asp:listitem>CocoCola</asp:listitem>
      <asp:listitem>Red Wine</asp:listitem>
      <asp:listitem>Lime Juice</asp:listitem>
      <asp:listitem>Purple Rain</asp:listitem>
    </asp:listbox> <asp:Image ID="Img" ImageUrl="" AlternateText="" runat="server" /> <br><br>
    <asp:button id="Find" text="Find Cost" OnClick="Calculate" runat="server"/>
    <br><br>
    <asp:textbox id="Cost" text="0" width=350 runat="server"/>
  </form>
</body>
</html>

```

**Output:**



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*[Signature]*  
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**VALUE ADDED COURSES ON**

**“Introduction to ASP.Net Framework”**

**Assessment Mark Statement**

**Batch : 2016-2020**

S.NO	REGISTER NUMBER	NAME OF THE STUDENT	TEST MARKS (20)	ACTIVITY MARKS (30)
1.	820816104001	AAKASH A	14	27
2.	820816104002	AARTHI M	18	29
3.	820816104003	ABINAYA K	16	29
4.	820816104004	ABINAYA M D	20	29
5.	820816104005	AJITH KUMAR S	20	29
6.	820816104006	ANANTHI S	16	30
7.	820816104007	ANUSHA S	18	25
8.	820816104008	ANUSUYA A	18	27
9.	820816104009	ANUSUYA R	18	30
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11.	820816104011	ASHWIN G	20	29
12.	820816104012	ASWINI M	18	30
13.	820816104013	BALASURYA N	20	29
14.	820816104014	BAVITHRA R	20	28
15.	820816104015	BIRUNDHA M	18	25
16.	820816104016	BISMIL HUDHA S	20	29
17.	820816104017	DEVI V	18	29
18.	820816104018	DHARMARAJA S	20	29
19.	820816104019	DHEEPHI R	18	29
20.	820816104020	DHIVANI G	20	28
21.	820816104021	DHIVYABHARADHI B	20	29
22.	820816104022	DHIVYADHARSHINI T	20	30
23.	820816104024	GAYATHRI G	14	28
24.	820816104025	GAYATHRI M	20	30
25.	820816104026	GAYATHRI M	20	30
26.	820816104028	HARINISHRI P	16	30
27.	820816104029	HEMALATHA G	18	29
28.	820816104030	ISHWARYA M	20	28
29.	820816104031	JANARDANI K	20	30
30.	820816104032	JAYACHANDRAN R	14	28
31.	820816104033	JAYAKANTH J	20	29
32.	820816104034	JAYAMUKESH R	16	28
33.	820816104035	JAYASREE R	20	29
34.	820816104036	KAMALI S	18	30

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35.	820816104037	KARUTHAMMA P	18	29
36.	820816104038	KAVIYARASAN S	20	30
37.	820816104039	KAYALVIZHI D	14	28
38.	820816104040	KAYALVIZHI E	20	29
39.	820816104041	KEERTHANA B	16	29
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42.	820816104045	MADHURABASHINI K	20	30
43.	820816104046	MANIMOZHI D	14	27
44.	820816104047	MANISHA M	20	29
45.	820816104048	MANJUPARKAVI P	20	28
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48.	820816104051	METHANRAJ S	16	26
49.	820816104052	MOHAMED IBRAHIMSHAIBU MARIKYAR N	20	29
50.	820816104053	MOHAMED SHAIK ALAWUDEEN A	18	30
51.	820816104054	MONIKA M	20	28
52.	820816104055	NANDHINI R	20	29
53.	820816104056	NAVEENAJAGADESWARI D	18	28
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56.	820816104059	NITHYAPRIYA A	16	29
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67.	820816104072	PRIYADHARSHINI M	18	28
68.	820816104074	PRIYADHARSHINI T	20	29
69.	820816104075	PUSHPALATHA P	20	29
70.	820816104076	RAJASUNDARI M	16	28
71.	820816104077	RAJESWARI R	20	29
72.	820816104078	RAJITHA R	16	28
73.	820816104079	RAMEEZ THARIQ A	18	29
74.	820816104080	RAMPRAKASH S	20	28
75.	820816104081	RAMPRASATH T	20	30
76.	820816104083	RETHINAKUMARI P	20	29
77.	820816104084	ROSHINI G	20	30
78.	820816104085	SALOMIYA R	18	29

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79.	820816104087	SANGEETHA R	20	29
80.	820816104088	SANTHIYA A	18	28
81.	820816104089	SANTHIYA G	14	27
82.	820816104091	SATHANA V	20	29
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101.	820816104117	VARSHINI M	18	30
102.	820816104118	VARSHINI V	18	30
103.	820816104119	VASUMATHI T	18	29
104.	820816104120	VENKADESHWARAN S	20	30
105.	820816104121	VICHITHRA B	18	29
106.	820816104122	VIJAYASRI P	20	30
107.	820816104123	VINOLIYA G	20	29
108.	820816104125	YOGESWARI A	20	27
109.	820816104126	YUVARAJA P	18	27
110.	820816104301	ABINASH P	20	30
111.	820816104302	ARUNKUMAR R	18	27
112.	820816104309	MAGESHWARI M	20	29
113.	820816104310	SRIMATHI M	18	30
114.	820816104701	SINDHUJA R	20	28
115.	820816104702	THIPAK MANJREKAR K	16	29
116.	820816104703	RAJESH R	20	30

  
Course Coordinator

ATTESTED

  
**Dr. S. RAMARAJAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

  
HOD/CSE

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S. Pillay Engineering College,  
Nagapattinam - 611 002

**E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS) – NAGAPATTINAM**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**VALUE ADDED COURSES ON**

**“Introduction to ASP.Net Framework”**

**ANALYSIS REPORT**

S.No.	Reg No	Student Name	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Activity(30)
1.	820816104001	AAKASH A	2	2	0	2	0	2	2	2	0	2	27
2.	820816104002	AARTHI M	2	0	2	2	2	2	2	2	2	2	29
3.	820816104003	ABINAYA K	2	2	2	2	0	2	2	2	0	2	29
4.	820816104004	ABINAYA M D	2	2	2	2	2	2	2	2	2	2	29
5.	820816104005	AJITH KUMAR S	2	2	2	2	2	2	2	2	2	2	29
6.	820816104006	ANANTHI S	2	2	0	2	2	2	2	0	2	2	30
7.	820816104007	ANUSHA S	2	2	2	0	2	2	2	2	2	2	25
8.	820816104008	ANUSUYA A	2	2	2	2	2	2	2	0	2	2	27
9.	820816104009	ANUSUYA R	2	2	0	2	2	2	2	2	2	2	30
10.	820816104010	ARAVINDH N	2	2	2	2	2	2	2	2	2	2	26
11.	820816104011	ASHWIN G	2	2	2	2	2	2	2	2	2	2	29
12.	820816104012	ASWINI M	2	0	2	2	2	2	2	2	2	2	30
13.	820816104013	BALASURYA N	2	2	2	2	2	2	2	2	2	2	29
14.	820816104014	BAVITHRA R	2	2	2	2	2	2	2	2	2	2	28
15.	820816104015	BIRUNDHA M	2	2	2	2	0	2	2	2	2	2	25
16.	820816104016	BISMIL HUDHA S	2	2	2	2	2	2	2	2	2	2	29
17.	820816104017	DEVI V	2	0	2	2	2	2	2	2	2	2	29
18.	820816104018	DHARMARAJA S	2	2	2	2	2	2	2	2	2	2	29
19.	820816104019	DHEEPTHI R	2	2	2	2	2	0	2	2	2	2	29
20.	820816104020	DHIVANI G	2	2	2	2	2	2	2	2	2	2	28
21.	820816104021	DHIVYABHARADHI B	2	2	2	2	2	2	2	2	2	2	29
22.	820816104022	DHIVYADHARSHINI T	2	2	2	2	2	2	2	2	2	2	30
23.	820816104024	GAYATHRI G	2	2	2	2	2	0	2	0	2	0	28
24.	820816104025	GAYATHRI M	2	2	2	2	2	2	2	2	2	2	30
25.	820816104026	GAYATHRI M	2	2	2	2	2	2	2	2	2	2	30
26.	820816104028	HARINISHRI P	2	2	2	2	2	0	2	2	2	0	30
27.	820816104029	HEMALATHA G	2	2	0	2	2	2	2	2	2	2	29
28.	820816104030	ISHWARYA M	2	2	2	2	2	2	2	2	2	2	28
29.	820816104031	JAYARDANI K	2	2	2	2	2	2	2	2	2	2	30
30.	820816104032	JAYACHANDRAN R	2	0	2	2	2	0	2	2	2	2	28
31.	820816104033	JAYAKANTH J	2	2	2	2	2	2	2	2	2	2	29
32.	820816104034	JAYAMUKESH R	2	2	2	0	2	2	2	2	0	2	28
33.	820816104035	JAYASREE R	2	2	2	2	2	2	2	2	2	2	29
34.	820816104036	KAMALI S	2	2	2	2	2	2	0	2	2	2	30
35.	820816104037	KARUTHAMMA P	2	0	2	2	2	2	2	2	2	2	29
36.	820816104038	KAVIYARASAN S	2	2	2	2	2	2	2	2	2	2	30
37.	820816104039	KAYALVIZHI D	2	2	0	2	2	2	2	0	0	2	28
38.	820816104040	KAYALVIZHI E	2	2	2	2	2	2	2	2	2	2	29
39.	820816104041	KEERTHANA B	2	2	0	2	2	2	0	2	2	2	29
40.	820816104042	KIRUBA S	2	2	2	2	2	2	2	2	2	2	30
41.	820816104043	KOWSAKI M	2	2	2	2	2	2	2	2	2	2	26
42.	820816104045	MADHURABASHINI K	2	2	2	2	2	2	2	2	2	2	30

**ATTENDED**  
**DR.S.RAMABALAYAN M.E., Ph.D.,**  
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**E.G.S. Pillay Engineering College,**  
**Thethi, Nagapattinam - 626002**  
**Nagapattinam (TN) Tamil Nadu**



43.	820816104046	MANIMOZHI D	2	2	0	2	2	0	2	2	2	2	0	2	2	2	0	2	27
44.	820816104047	MANISHA M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
45.	820816104048	MANJUPARKAVI P	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
46.	820816104049	MAYOSEELAN G	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
47.	820816104050	MATHUMATHI R	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	29
48.	820816104051	METHANRAJ S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	26
49.	820816104052	MOHAMED IBRAHIMSHAIBU MARIKYAR N	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
50.	820816104053	MOHAMED SHAIK ALAUDDIN A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
51.	820816104054	MONIKA M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
52.	820816104055	NAVDHINI R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
53.	820816104056	NAVEENAJAGADESWARI D	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	28
54.	820816104057	NISHANTHINI G	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
55.	820816104058	NITHESH E	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	27
56.	820816104059	NITHYAPRIYA A	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	29
57.	820816104060	NITHYAPRIYA R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
58.	820816104061	NIVETHA B	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
59.	820816104063	PARIMALA S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
60.	820816104064	PARKAVI S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
61.	820816104065	PAVITHRA S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	26
62.	820816104066	PRAGATHI J	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
63.	820816104067	PRAMILA R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
64.	820816104068	PRASANTH M	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	30
65.	820816104069	PREETHINISHA K	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	29
66.	820816104070	PRIYA A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
67.	820816104072	PRIYADHARSHINI M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
68.	820816104074	PRIYADHARSHINI T	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
69.	820816104075	PUSHPALATHA P	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
70.	820816104076	RAJASUNDARI M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
71.	820816104077	RAJESWARI R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
72.	820816104078	RAJITHA R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
73.	820816104079	RAMEEZ THARIQ A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
74.	820816104080	RAMPRAKASH S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
75.	820816104081	RAMPRASATH T	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
76.	820816104083	RETHINAKUMARI P	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
77.	820816104084	ROSHINI G	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
78.	820816104085	SALOMIYA R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
79.	820816104087	SANGEETHA R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
80.	820816104088	SANTHIYA A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
81.	820816104089	SANTHIYA G	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	27
82.	820816104091	SATHANA V	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
83.	820816104092	SATHISH S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
84.	820816104093	SATHYA R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
85.	820816104094	SHIBA B	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
86.	820816104096	SIVASANGARI K	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	27
87.	820816104097	SRILEKA M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
88.	820816104098	STEFFYGRAFF M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
89.	820816104099	SUBA S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
90.	820816104100	SUBASHINI R	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
91.	820816104101	SUBASHRI T	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
92.	820816104102	SUBASREE P	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
93.	820816104103	SUBASRI S	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	29
94.	820816104104	SUGANTHI A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
95.	820816104105	SUGUNA G	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28
96.	820816104106	SUMITHA P	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
97.	820816104107	SURVAPRAKASH T	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	27
98.	820816104111	TAMIZHMOZHI T	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29
99.	820816104114	VAITHESWARI M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28

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**Br. S. RAMABALAN, M.E., Ph.D.**  
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**Thethi, Nagore - 611 007**  
**Nagapattinam (TN) Tamil Nadu.**



### Mapping of Course Outcomes Vs Program Outcomes

CO Number	Competency	Cognitive level
CO1	Design web applications using ASP.NET	Understand
CO2	Describe and use ASP.NET controls in web applications	Apply
CO3	Create database driven ASP.NET web applications and web services	Apply
CO4	Create new websites and add security features to them	Apply

#### CO to PO Mapping

Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	3	3	3	-	3	-	-	-	-	-	2	1
CO2	3	2	3	-	3	-	-	-	-	-	1	2
CO3	3	3	3	-	3	-	-	-	-	-	1	3
CO4	3	3	3	-	3	-	-	-	-	-	2	3

#### CO to PSO Mapping

Course Outcome	PSO 1	PSO 2
CO1	3	1
CO2	2	3
CO3	3	3
CO4	3	3

1. Slight(Low)    2. Moderate(Medium)    3.Substantial(High)    “-“ No Correlation

*M. Chitra*  
HOD/CSE

HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

ATTESTED

*[Signature]*  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.



# Student Feedback Form for Value Added Course

Introduction to ASP.Net Framework

Register Number \*

820816104039

Name \*

Kayalvizhi D

Class \*

IV CSE

1. Were Objectives of the course clear to you \*

Yes

No

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PRINCIPAL

E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

## 2. The Course contents met with your expectations \*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

## 3. The lecture sequence was well planned \*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

## 4. The Contents were illustrated with \*

- Too few examples
- adequate examples

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DR. S. RAMABALAN, M.E., Ph.D.  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thechi, Nagore - 511 002.  
Nagapattinam, (Dist) Tamil Nadu.

5. The course exposed you to new knowledge and practices \*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Any other comments/suggestions \*

This course was very helpful

---

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**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thattai Nuzvid - 511 002,**  
**Nagarjuna (Dt) Tamil Nadu.**

# Student Feedback Form for Value Added Course

Introduction to ASP.Net Framework

Register Number \*

820816104120

Name \*

VENKADESHWARAN S

Class \*

IV CSE

1. Were Objectives of the course clear to you \*

Yes

No

ATTESTED

  
Dr. S. RAMANI AN, M.E., Ph.D.,  
PRINCIPAL

E.G.S. Pillai Engineering College,  
Thekkumbharam - 577 502  
Nagar

2. The Course contents met with your expectations \*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

3. The lecture sequence was well planned \*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

4. The Contents were illustrated with \*

- Too few examples
- adequate examples

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu**



5. The course exposed you to new knowledge and practices \*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Any other comments/suggestions \*

Very interesting during handson sessions

---

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**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

## COURSE SUMMARY REPORT

1. Title: Introduction to ASP.Net Framework
2. Name of Speaker:
  1. Mrs.E.Elakiya
  2. Mrs.P.Vennila
3. Speaker Details:
  1. Assistant Professor, CSE Department, EGSPEC.
  2. Assistant Professor, CSE Department, EGSPEC.
4. Date of speaker's presentation:  
04/05/2020-09/05/2020 & 11/05/2020-16/05/2020
5. Duration : 36 Hours
6. Beneficiary Details:  
IV YEAR B.E.CSE Students
7. Coordinators:
  1. Mrs.P.Vennila (Asst. Prof., CSE., EGSSPEC)
  2. Mr.A.Rajesh (Asst. Prof., CSE,EGSPEC)

### More about this Course:

The value added course on "Introduction to ASP.Net Framework" will prepare students to write web applications using the ASP.NET framework. The topics will include basic components, web technologies, data controls, server controls, master pages, and state conditions, components for accessing data in a database, data sources, security, and deployment. The student will learn the various techniques to harden the web application into a secure application suitable for industry using proper data handling, security, and authentication.

Upon completion of the course, the student will be able to write web applications that include the following ASP.NET components: basic components, web technologies, data controls, server controls, master pages, and state conditions, components for accessing data in a database, data sources, security, and deployment.

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**Thethi, Nagore - 611 002,**  
**Nagapattinam (Dt) Tamil Nadu.**

# E.G.S.PILLAY ENGINEERING COLLEGE (AUTONOMOUS)

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

(Accredited by NAAC with 'A' Grade & NBA)

Old Nagore Road, Thethi, Nagapattinam - 611002, Tamil Nadu, India

## Department of Computer Science and Engineering

### *Certificate of Completion*

This is to certify that

**Mr./Ms. Nishanthini G**

has successfully completed the online value added course on "Introduction to ASP.Net Framework" conducted by Department of Computer Science and Engineering, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam from 04/05/2020 to 09/05/2020.

ATTESTED

**DR. S. RAMABALAN, M.E., PH.D.**  
PRINCIPAL

E.G.S. Pillay Engineering College  
Thethi, Nagore - 611 002.  
Nagapattinam (TN) Tamil N.

*Nishanthini G*

COORDINATORS  
**MRS.P.VENNILA**  
**MR.A.RAJESH**

HOD/CSE  
**DR.M.CHINNADURAI**

PRINCIPAL  
**DR.S.RAMABALAN**

# E.G.S.PILLAY ENGINEERING COLLEGE (AUTONOMOUS)

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

(Accredited by NAAC with 'A' Grade & NBA)

Old Nagore Road, Thethi, Nagapattinam - 611002, Tamil Nadu, India

## Department of Computer Science and Engineering

### *Certificate of Completion*

This is to certify that

**Mr./Ms. Surya Prakash T**

has successfully completed the online value added course on "Introduction to ASP.Net Framework" conducted by Department of Computer Science and Engineering, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam from 11/05/2020 to 16/05/2020.

ATTESTED

**Dr. S. RAMABALAN, P.E. Ph.D.,**  
PRINCIPAL

E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002  
Nagapattinam (Dt) Tamil Nadu.

**MRS. P. VENNILA**

**MR. A. RAJESH**


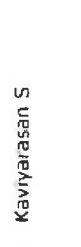







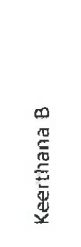

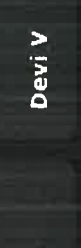

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**DR. M. CHINNADURAI**

PRINCIPAL

**DR. S. RAMABALAN**

You have extensions installed that may affect the quality of your call  
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 <b>G</b> G.Ashwin	 <b>S</b> S.Kiruba	 <b>D</b> Devi V	 <b>K</b> Kavayarasan S
 <b>E</b> Elakiya E	 <b>N</b> Nithesh E	 <b>r</b> rajesh A	 <b>V</b> Vennila CSE
 <b>K J</b> 43 others		 <b>K</b> Kayalvizhi E	 <b>A</b> Ananthi S
 <b>M</b> Methanraj S		 <b>D</b> Devi V	 <b>B</b> Birundha M

*Dr. S. RAMIADRI*  
**Dr. S. RAMIADRI**  
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E.G.S. Pillay Engineering College,  
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Nagapattinam (Dt) Tamil Nadu.



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	Roshini G	Subasri s
P		
V		

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- T Tamizhmozhi T
  - V Vennila CSE
  - S Subasri S
  - R Roshini G
  - V Varsha G
  - S Sumitha P
  - S Santhiya A
  - R Rajesh A
  - N Nivetha B

... 1

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s presenting

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# Configuration User-defined Settings

- Create web . config in appropriate folder

```
<configuration>
<appSettings>
  <add key="CxnString" value="localhost;uid=sa;pwd=:Database=foo" />
</appSettings>
</configuration>
```

Retrieve settings at run-time

```
string cxnstr = configurationSettings
.AppSettings["CxnString"];
```

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 S. Pilla Engineering College  
 Thethi, Agapattinam - 611 003  
 Agapattinam (D) Tamil Nadu

## People

- K** Kaviyarasan S
- V** Vennila CSE
- K** Keerthana B
- S** S.Kiruba
- K** Kayalvizhi E
- M** Methanraj S
- D** Devi.V
- B** Birundha M
- A** Ananthi S

Vennila CSE

49 others

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**EGS PILLAY ENGINEERING COLLEGE-(AUTONOMOUS)  
NAGAPATTINAM**

**Department of Computer Science and Engineering**

**Value Added Course**

**2019-2020**

**STUDYING MACHINE LEARNING TECHNIQUES  
USING  
MATLAB 9.7 R2019B**

**Duration**

**01/06/2020 - 06/06/2020**

**40 hours**

<b><u>Coordinator</u></b>	<b><u>Convener</u></b>
<b>Mrs.K.Kalaivani Associate Professor Department of CSE EGSPEC</b>	<b>Dr.M.Chinnadurai Professor / HOD Department of CSE EGSPEC</b>

E.G.S.PILLAY ENGINEERING COLLEGE (AUTONOMOUS), NAGAPATTINAM

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VALUE ADDED COURSE

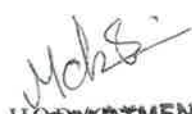
ON

STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B

TABLE OF CONTENT

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Dr. S. RAMABALAN, M.E., Ph.D.,  
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Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

**PERMISSION LETTER**

Date: 25.05.2020

From

Mrs.K.Kalaivani,  
Associate Professor/CSE,  
Department of CSE,  
E.G.S.Pillay Engineering College,  
Nagapattinam.

To

The Principal,  
E.G.S.Pillay Engineering College,  
Nagapattinam.



Through

The Head of Department,  
Department of CSE,  
E.G.S.Pillay Engineering College,  
Nagapattinam.


Respected Sir,

Sub: Request to conduct Value Added Course – Reg


We are happy to inform you that we have planned to organize one week value added course titled “**Studying Machine Learning Techniques Using MATLAB 9.7 R2019b**” for PG CSE Students from 01.06.2020 to 06.06.2020 through online mode. Herewith, I have enclosed name list and session details. Kindly give permission for conducting value added course.

Thanking you,

yours faithfully,



**HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002**

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.Ds. [Kalaivani]  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.**





HOD CSE <hodcse@egspec.org>

### Permission to conduct Value Added Course - Reg..

2 messages

HOD CSE <hodcse@egspec.org>

Mon, May 25, 2020 at 1:02 PM

To: PRINCIPAL EGSPEC <principal@egspec.org>

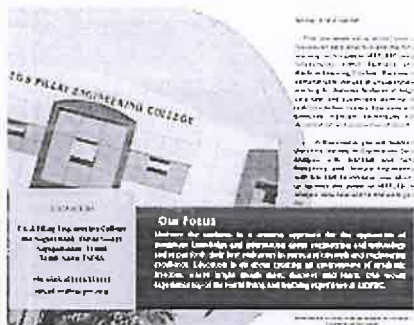
Respected Sir,

We are happy to inform you that we have planned to organize one week value added course titled **"Studying Machine Learning Techniques Using MATLAB 9.7 R2019b"** via online mode for PG CSE Students from 01.06.2020 to 06.06.2020. Herewith, I enclosed the Brochure & session details. Kindly give permission for conducting the value added course.

Thanking you

-- with regards,  
**Head of Department**  
**Department of Computer Science and Engineering,**  
**E.G.S. Pillay Engineering College,**  
**Nagapattinam.**  
Mobile: 7373067032  
Email: [hodcse@egspec.org](mailto:hodcse@egspec.org)

### 3 attachments



MLT - Brochure 2.png  
1124K



MLT - Brochure 1.png  
1463K

program schedule.docx  
13K

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**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thoothi, Nagapattinam - 611 002.**  
**Nagapattinam - 611 002.**

06/07/20, 1:08 PM

E.G.S. Pillay Engineering College Mail - Permission to conduct Value Added Course - Reg..

**PRINCIPAL EGSPEC** <principal@egspec.org>

Mon, May 25, 2020 at 4:10 PM

To: HOD CSE <hodcse@egspec.org>

Good Morning Sir,

I accepted the request and was permitted to conduct the value added course.

Regards,

**The Principal**

E.G.S.Pillay Engineering College,

Nagapattinam

Mobile: 9894831458

Email: principal@egspec.org

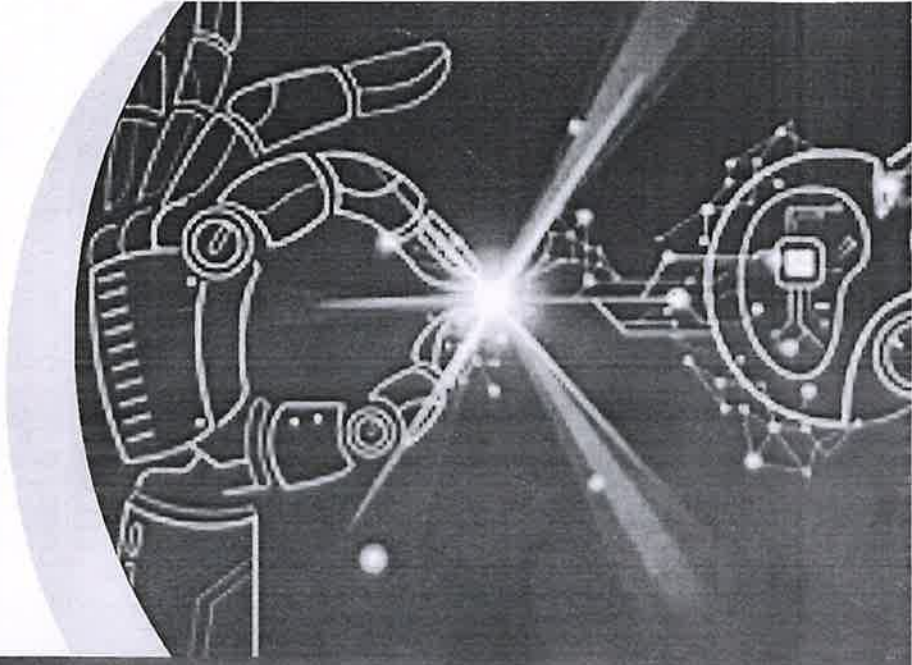
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PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu

**6 Days  
Value Added Course**

**ON  
"Studying Machine  
Learning Techniques  
using MATLAB 9.7  
R2019b"**

**01/06/20 - 06/06/20**



**Convenor:**

**Prof.Dr.M.CHINNADURAI  
Professor & Head  
CSE**

**Course Coordinator:**

**Mrs.K.KALAIVANI  
Associate Professor  
CSE**

**Resource Person:**

**Mr.M.NUTHALSRINIVASAN  
Assistant Professor  
ECE**

**Beneficiaries:**

**PG CSE Students**

**Course Duration :40 Hours**

**Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL**

**E.G.S. Pillay Engineering College  
Thirupur Nagore - 611 002.**

**K.G. Gobalavaram (420), Tirumil Nakudi.**

**Department of CSE**

**Venue**

**E. G. S. Pillay Engineering College  
Nagapattinam**



## About the Course

This one week value added course focuses on data analytics and machine learning techniques in MATLAB® using functionality within Statistics and Machine Learning Toolbox. The course demonstrates the use of unsupervised learning to discover features in large data sets and supervised learning to build predictive models. Examples and exercises highlight techniques for visualization and evaluation of results.

In this course, you will build on the skills learned in Exploratory Data Analysis with MATLAB and Data Processing and Feature Engineering with MATLAB to increase your ability to harness the power of MATLAB to analyze data relevant to the work you do.

## Our Focus

Motivate the students in a creative approach for the application of maximum knowledge and information about engineering and technology and to put forth their best endeavors in pursuit of triumph and engineering excellence. Education is all about creating an environment of academic freedom, where bright minds meet, discover and learn. One would experience top of the world living and learning experience at EGSPEC.

## Contact us

E.G.S Pillay Engineering College  
Old Nagore Road, Thethi Village  
Nagapattinam - 611002  
Tamil Nadu, INDIA

**ATTESTED**

+91 4365 251112/251114

**DR.S. RAMAKRISHNAN, M.E., Ph.D.,**

Principal, [princ@egspec.org](mailto:princ@egspec.org)

E.G.S. Pillay Engineering College;

Thethi, Nagore - 611 002.

Nagapattinam, Tamil Nadu

Certificate will be issued to all participants on successful completion of this course

**E. G. S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS), NAGAPATTINAM.  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**EGSPEC/CSE/PG/VAC/2019-20/01**

**Date: 28.05.2020**

**CIRCULAR**

It is here by informed that Department of CSE is going to organize a Value Added Course on "Studying Machine Learning Techniques using MATLAB 9.7 R2019b" from 01.06.2020 to 06.06.2020 (9.00 am to 5.00 pm) through online mode (gmeet) by, **Mr.M.Nuthal Srinivasan N, Assistant Professor, Department of Electronics and Communication Engineering, EGSPEC** for the benefit of final year PG CSE Students. All the PG final year students are instructed to attend the course without fail.

*Mchs*  
**CONVENER**

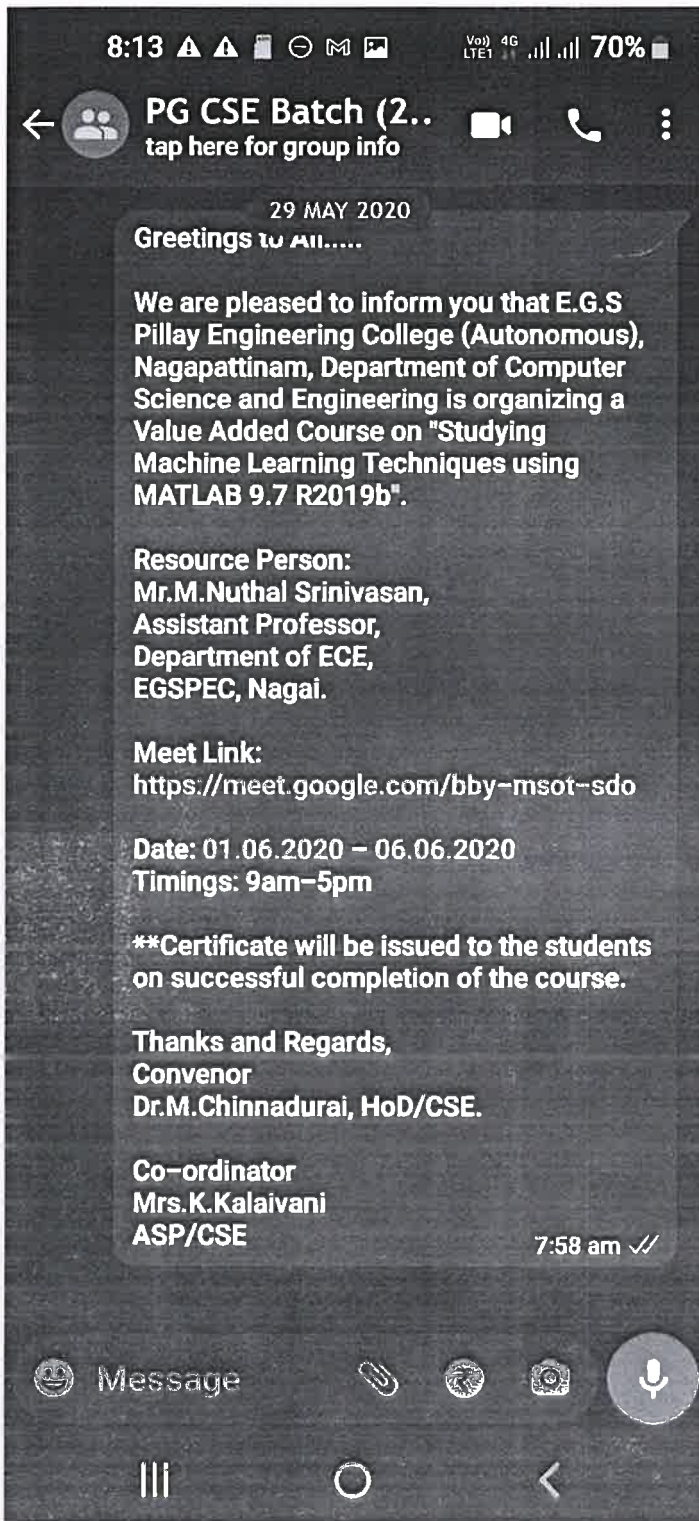
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Nagapattinam - 611 002**

*Mchs*  
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**HEAD OF THE DEPARTMENT  
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Nagapattinam - 611 002**

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*[Signature]*  
**Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.**



**ATTESTED**  
*[Signature]*  
**DR. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagarcovv - 611102,**  
**Nagapattinam - (Dt) Tamil Nadu.**



E.G.S. PILLAY ENGINEERING COLLEGE (Autonomous) NAGAPATTINAM

DEPARTMENT OF CSE

Value Added Course on

"STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B"

**PROGRAM SCHEDULE**

Date: 01.06.2020 - 06.06.2020

S.NO	DATE	MODULE	MATLAB APPS AND FUNCTIONS
1	01/06/2020	Classification to predict categorical responses	Use the Classification Learner app to automatically train a selection of models and help you choose the best. You can generate MATLAB code to work with scripts.
2	02/06/2020	Regression to predict continuous responses	Use the Regression Learner app to automatically train a selection of models and help you choose the best. You can generate MATLAB code to work with scripts and other function options.
3	03/06/2020	Clustering	Use cluster analysis functions.
4	04/06/2020	Computational finance tasks such as credit scoring	Use tools for modeling credit risk analysis.
5	05/06/2020	Deep learning for classification and regression	Classification of deep learning
6	06/06/2020	Deep learning with neural networks	Use pretrained networks and functions to train convolutional neural networks. Assessment Test

Session Timings:

FN: 9:00 am to 1:00 pm

AN: 2:00 pm to 5:00 pm

  
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**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
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Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.


HEAD OF THE DEPARTMENT  
DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002




## SYLLABUS

<b>VALUE ADDED COURSE ON STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B</b>		
<b>COURSE OBJECTIVES:</b>		
	<ol style="list-style-type: none"> <li>1. To introduce students to the basic concepts and techniques of Machine Learning.</li> <li>2. To develop skills of using recent machine learning software for solving practical problems.</li> <li>3. To gain experience of doing independent study and research.</li> </ol>	
<b>MODULE1</b>	<b>CLASSIFICATION TO PREDICT CATEGORICAL RESPONSES</b>	<b>8 Hours</b>
Classification Learner App-Classification Trees-Discriminant Analysis--Support Vector Machine Classification-Classification Ensembles-Generalized Additive Model-Semi-Supervised Learning for Classification-Fairness in Binary Classification-Interpretability-Model Building and Assessment		
<b>MODULE2</b>	<b>REGRESSION TO PREDICT CONTINUOUS RESPONSES</b>	<b>8 Hours</b>
Automated Regression Model Training-Manual Regression Model Training-Parallel Regression Model Training-Compare and Improve Regression Models.		
<b>MODULE3</b>	<b>CLUSTERING</b>	<b>8 Hours</b>
Hierarchical Clustering-k-Means and k-Medoids Clustering-Density-Based Spatial Clustering of Applications with Noise-Anomaly Detection-Cluster Visualization and Evaluation.		
<b>MODULE 4</b>	<b>COMPUTATIONAL FINANCE TASKS SUCH AS CREDIT SCORING</b>	<b>8 Hours</b>
Estimate Transition Probabilities-Determine Credit Quality Thresholds>Create Credit Scorecards-Credit Default Swaps-Bootstrap Default Probabilities from Bonds-Counterparty Credit Risk		
<b>MODULE 5</b>	<b>DEEP LEARNING WITH NEURAL NETWORKS FOR CLASSIFICATION AND REGRESSION</b>	<b>8 Hours</b>
Train Classifiers Using Features Extracted from Pretrained Networks-Deep Learning with Big Data on CPUs, GPUs, in Parallel, and on the Cloud-Deep Learning Using Simulink-Deep Learning Interpretability-Deep Learning Customization-Deep Learning Import and Export		
<b>Total:</b>		<b>40 Hours</b>
<b>COURSE OUTCOMES:</b>		
	After completion of the course, Student will be able to	
CO1	Understand a wide variety of learning algorithms.	
CO2	Understand how to evaluate models generated from data.	
CO3	Analyse and suggest the appropriate machine learning approach for the various types of problem	
CO4	Design and make modifications to existing machine learning algorithms to suit an individual application	
CO5	Provide useful case studies on the advanced machine learning algorithms	
<b>REFERENCES:</b>		
1. Tom M. Mitchell, –Machine Learning  , McGraw-Hill Education (India) Private Limited, 2013.		
2. Ethem Alpaydin, –Introduction to Machine Learning (Adaptive Computation and Machine Learning)  , The MIT Press 2004.		

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**Dr. S. RAMARAJAN, M.E., Ph.D.,**  
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Nagapattinam (Dt) Tamil Nadu.

  
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E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS), NAGAPATTINAM

DEPARTMENT OF CSE

Value Added Course

"STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B"

ENROLLMENT LIST


S.NO	REGISTER NUMBER	NAME OF THE STUDENT
1.	E18CPF002	Balachitra B
2.	E18CPF003	Bavani S
3.	E18CPF005	Kalaivani M
4.	E18CPF006	Kalaivani V
5.	E18CPF009	Rama G
6.	E18CPF010	Sairam Shalini R
7.	E18CPF011	Sharmila S
8.	E18CPF012	Subhashini S
9.	E18CPF013	Suganya S
10.	E18CPF014	Thenmozhi V R
11.	E18CPF015	Toufiq Nisha H
12.	E18CPF016	Udhaya Veena A
13.	E19CPF001	Akilandeswari R
14.	E19CPF004	Gobinath R
15.	E19CPF005	Mathivanan M
16.	E19CPF006	Nithya M
17.	E19CPF007	Pradeepan S
18.	E19CPF008	Pragadeeshwaran S
19.	E19CPF009	Priyadarshini M
20.	E19CPF013	Roja S
21.	E19CPF014	Sajee C
22.	E19CPF015	Sindhu G.K
23.	E19CPF016	Shobiya K
24.	E19CPF017	Sri Dhanalakshmi A.M

  
Course Coordinator

  
HOD/CSE

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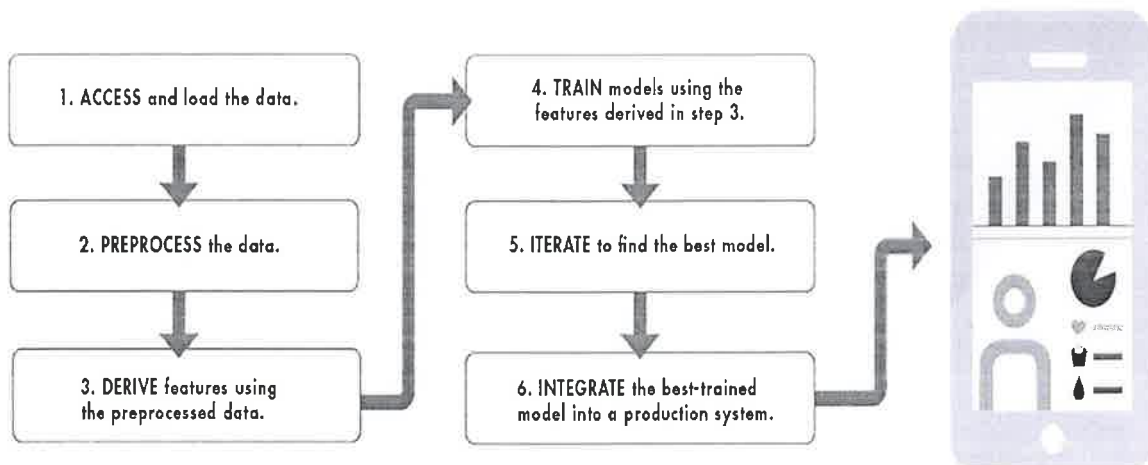
  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Nagapattinam - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

## STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B

### MATERIALS

#### Module1: CLASSIFICATION TO PREDICT CATEGORICAL RESPONSES

Systematic machine learning workflow can help you tackle machine learning challenges. You can complete the entire workflow in matlab.



To integrate the best trained model into a production system, you can deploy Statistics and Machine Learning Toolbox machine learning models using MATLAB Compiler. For many models, you can generate C-code for prediction using MATLAB Coder.

#### Train Classification Models in Classification Learner App

Use the Classification Learner app to train models to classify data using supervised machine learning. The app lets you explore supervised machine learning interactively using various classifiers.

- ✓ Automatically train a selection of models to help you choose the best model. Model types include decision trees, discriminant analysis, support vector machines, logistic regression, nearest neighbors, naive Bayes, kernel approximation, ensemble, and neural network classifiers.
- ✓ Explore your data, specify validation schemes, select features, and visualize results. By default, the app protects against overfitting by applying cross-validation. Alternatively, you can select holdout validation. Validation results help you choose the best model for your data. Plots and performance measures reflect the validated model results.

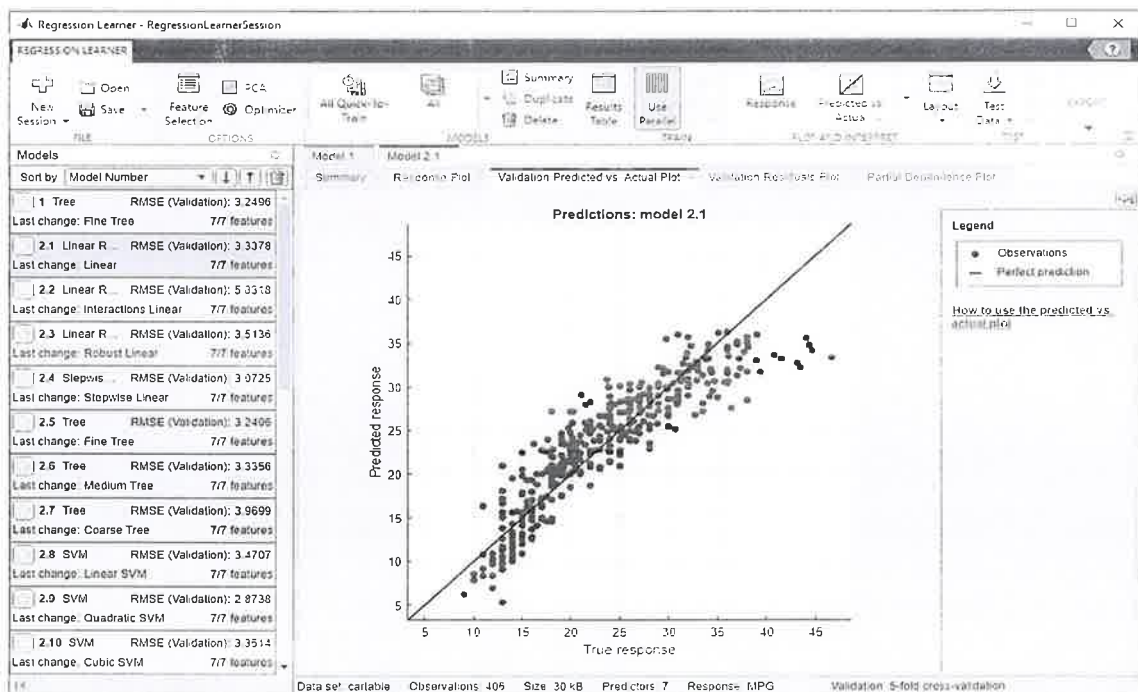
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*[Signature]*  
Dr. S. RAMABALAN, M.E., Ph.D.  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Muthi Nagar - 611102,  
Nagapattinam (T), Tamil Nadu.

- ✓ Export models to the workspace to make predictions with new data. The app always trains a model on full data in addition to a model with the specified validation scheme, and the full model is the model you export.

## MODULE2: TO PREDICT CONTINUOUS RESPONSES

Use the Regression Learner app to train models to predict continuous data using supervised machine learning. The app lets you explore supervised machine learning interactively using various regression models.

- ✓ Automatically train a selection of models to help you choose the best model. Model types include linear regression models, regression trees, Gaussian process regression models, support vector machines, kernel approximation models, ensembles of regression trees, and neural network regression models.
- ✓ Explore your data, select features, and visualize results. Similar to Classification Learner, the Regression Learner applies cross-validation by default. The results and visualizations reflect the validated model. Use the results to choose the best model for your data.
- ✓ Export models to the workspace to make predictions with new data. The app always trains a model on full data in addition to a model with the specified validation scheme, and the full model is the model you export.

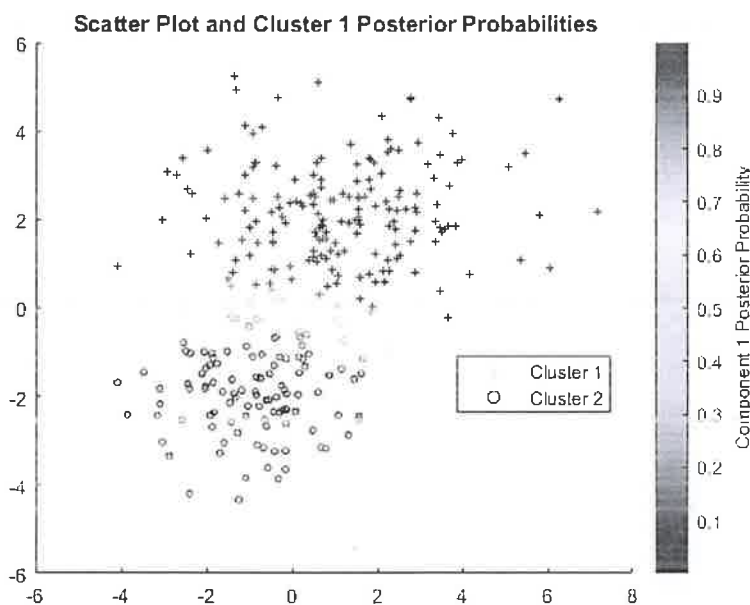


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**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College**  
 Thiruvananthapuram  
 Nagapattinam



### MODULE3: CLUSTERING

*Cluster analysis*, also called segmentation analysis or taxonomy analysis, partitions sample data into groups, or *clusters*. Clusters are formed such that objects in the same cluster are similar, and objects in different clusters are distinct. Statistics and Machine Learning Toolbox. Provides several clustering techniques and measures of similarity (also called *distance metrics*) to create the clusters. Additionally, *cluster evaluation* determines the optimal number of clusters for the data using different evaluation criteria. *Cluster visualization* options include dendrograms and silhouette plots. The toolbox also provides several *anomaly detection* features to identify outliers and novelties.



### MODULE 4: COMPUTATIONAL FINANCE TASKS SUCH AS CREDIT SCORING

Credit risk refers to the risk that a borrower may default on any type of debt by failing to make required payments. This toolbox provides a collection of tools for modeling credit risk analysis. These include modeling transition probabilities from credit rating data, converting transition probabilities to credit quality thresholds, and credit scorecard modeling.

#### Credit Risk

- ✓ Estimate Transition Probabilities
- ✓ Determine Credit Quality Thresholds

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**Thethi, Nagercoil - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

- ✓ Create Credit Scorecards
- ✓ Credit Default Swaps
- ✓ Bootstrap Default Probabilities from Bonds
- ✓ Counterparty Credit Risk

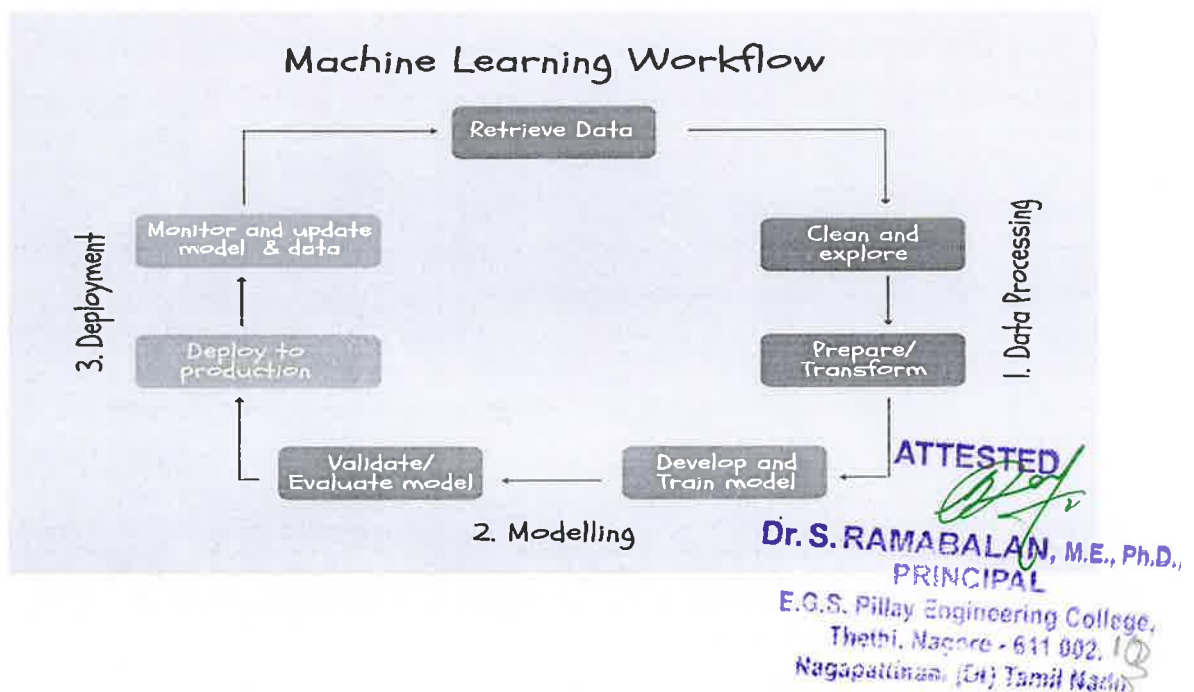
## MODULE5: DEEP LEARNING WITH NEURAL NETWORKS FOR CLASSIFICATION AND REGRESSION

### What Is Deep Learning

*Deep learning* is a branch of machine learning that teaches computers to do what comes naturally to humans: learn from experience. Deep learning uses neural networks to learn useful representations of features directly from data. Neural networks combine multiple nonlinear processing layers, using simple elements operating in parallel and inspired by biological nervous systems. Deep Learning Toolbox provides simple MATLAB® commands for creating and interconnecting the layers of a deep neural network. Examples and pre trained networks make it easy to use MATLAB for deep learning, even without knowledge of advanced computer vision algorithms or neural networks.

### Start Deep Learning Faster Using Transfer Learning

Transfer learning is commonly used in deep learning applications. You can take a pre trained network and use it as a starting point to learn a new task. Fine-tuning a network with transfer learning is much faster and easier than training from scratch. You can quickly make the network learn a new task using a smaller number of training images. The advantage of transfer learning is that the pretrained network has already learned a rich set of features that can be applied to a wide range of other similar tasks



# STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B - ASSESSMENT TEST

\* Indicates required question

1. REGISTER NUMBER \*

\_\_\_\_\_

2. NAME \*

\_\_\_\_\_

3. CLASS \*

*Mark only one oval.*

I YEAR

II  
YEAR

4. 1. The action 'STACK(A, B)' of a robot arm specify to \_\_\_\_\_\* 2 points

*Mark only one oval.*

- a) Place block B on Block A
- b) Place blocks A, B on the table in that order
- c) Place blocks B, A on the table in that order
- d) Place block A on block B

ATTESTED

*[Signature]*  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL  
S. Pillay Engineering College,  
Thiruv. Nagar - 601100.  
Vagapattanam (2A), Vanni North

5. 2. Among the following which is not a horn clause? \* 2 points

*Mark only one oval.*

- a) p  
 b)  $\emptyset p \vee q$   
 c)  $p \rightarrow q$   
 d)  $p \rightarrow \emptyset q$

6. 3. The action \_\_\_\_\_ of a robot arm specify to Place block A on block B. \* 2 points

*Mark only one oval.*

- a) STACK(A,B)  
 b) LIST(A,B)  
 c) QUEUE(A,B)  
 d) ARRAY(A,B)

7. 4. When performing regression or classification, which of the following is the correct way to preprocess the data? \* 2 points

*Mark only one oval.*

- a) Normalize the data -> PCA -> training  
 b) PCA -> normalize PCA output -> training  
 c) Normalize the data -> PCA -> normalize PCA output -> training  
 d) None of the above

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 511 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

8. 5. In which of the following cases will K-means clustering fail to give good results? \* 2 points

- 1) Data points with outliers
- 2) Data points with different densities
- 3) Data points with nonconvex shapes

Mark only one oval.

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

9. 6. Which of the following is a reasonable way to select the number of principal components "k"? \* 2 points

Mark only one oval.

- a) Choose k to be the smallest value so that at least 99% of the variance is retained.
- b) Choose k to be 99% of m ( $k = 0.99 * m$ , rounded to the nearest integer).
- c) Choose k to be the largest value so that 99% of the variance is retained.
- d) Use the elbow method.

10. 7. We can define this probability as  $p(A|B) = p(A,B)/p(B)$  if  $p(B) > 0$  \* 2 points

Mark only one oval.

- a) Conditional probability
- b) Marginal probability
- c) Bayes probability
- d) Normal probability

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Nagapattinam (TN) Tamil Nadu



11. 8. When you find many noises in data, which of the following options would you consider in kNN? \* 2 points

*Mark only one oval.*

- a) Increase the value of k
- b) Decrease the value of k
- c) Noise does not depend on k
- d)  $k = 0$

12. 9. The association between the number of years an employee has been with a firm and the person's pay is 0.75. What can be stated regarding employee pay and years of service? \* 2 points

*Mark only one oval.*

- a) There is no relationship between salary and years worked
- b) Individuals that have worked for the company the longest have higher salaries
- c) Individuals that have worked for the company the longest have lower salaries
- d) The majority of employees have been with the company a long time

13. 10. Out of 200 emails, a classification model correctly predicted 150 spam emails and 30 ham emails. What is the accuracy of the model? \* 2 points

*Mark only one oval.*

- a) 10%
- b) 90%
- c) 80%
- d) none of the above

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(Nagapattinam) Tamil Nadu

# STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B - ASSESSMENT TEST

REGISTER NUMBER \*

E18CPF012

NAME \*

Subashini.S

CLASS \*

I YEAR

II

**ATTESTED**

  
**Dr. S. RAMABALAN, MIE., PH.D.,**  
PRINCIPAL  
S.G.S. Pillay Engineering College,  
Thattai, Bangalore 561 002.  
E: srathinam101@yahoo.com

48

1. The action 'STACK(A, B)' of a robot arm specify to \_\_\_\_\_ \*

2 points

- a) Place block B on Block A
- b) Place blocks A, B on the table in that order
- c) Place blocks B, A on the table in that order
- d) Place block A on block B

2. Among the following which is not a horn clause? \*

2 points

- a) p
- b)  $\emptyset p \vee q$
- c)  $p \rightarrow q$
- d)  $p \rightarrow \emptyset q$

3. The action \_\_\_\_\_ of a robot arm specify to Place block A on block B. \*

2 points

- a) STACK(A,B  
)
- b) LIST(A,B)
- c) QUEUE(A,B  
)
- d) \_\_\_\_\_

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

4. When performing regression or classification, which of the following is the correct way to preprocess the data? \* 2 points

- a) Normalize the data -> PCA -> training
- b) PCA -> normalize PCA output -> training
- c) Normalize the data -> PCA -> normalize PCA output -> training
- d) None of the above

5. In which of the following cases will K-means clustering fail to give good results? \* 2 points

- 1) Data points with outliers
- 2) Data points with different densities
- 3) Data points with nonconvex shapes

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

ATTESTED

  
Dr. S. RAMABALAN, M.E., Ph.D.,  
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E.G.S. Pillay Engineering College  
Tiruchennai, Nagore - 611 002.  
Nagapattinam (Dist) Tamil Nadu.

6. Which of the following is a reasonable way to select the number of principal components "k"? \* 2 points

- a) Choose k to be the smallest value so that at least 99% of the variance is retained.
- b) Choose k to be 99% of m ( $k = 0.99 * m$ , rounded to the nearest integer).
- c) Choose k to be the largest value so that 99% of the variance is retained.
- d) Use the elbow method.

7. We can define this probability as  $p(A|B) = p(A,B)/p(B)$  if  $p(B) > 0$  \*

2 points

- a) Conditional probability
- b) Marginal probability
- c) Bayes probability
- d) Normal probability

8. When you find many noises in data, which of the following options would you consider in KNN? \* 2 points

- a) Increase the value of k
- b) Decrease the value of k
- c) Noise does not depend on k
- d)  $k = 0$

**ATTESTED**  
  
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Thethi, Nagore- 601102.  
Nagapattinam (Dt) Tamil Nadu.



9. The association between the number of years an employee has been with a firm and the person's pay is 0.75. What can be stated regarding employee pay and years of service? \* 2 points

- a) There is no relationship between salary and years worked
- b) Individuals that have worked for the company the longest have higher salaries
- c) Individuals that have worked for the company the longest have lower salaries
- d) The majority of employees have been with the company a long time

10. Out of 200 emails, a classification model correctly predicted 150 spam emails and 30 ham emails. What is the accuracy of the model? \* 2 points

- a) 10%
- b) 90%
- c) 80%
- d) none of the above

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**E.G.S. PILLAY ENGINEERING COLLEGE (Autonomous) – NAGAPATTINAM  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**VALUE ADDED COURSES ON**


**“STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B”**

**PG CSE**

**Assessment Mark Statement**

S.NO	REGISTER NUMBER	NAME OF THE STUDENT	Marks
1.	E18CPF002	Balachitra B	18
2.	E18CPF003	Bavani S	20
3.	E18CPF005	Kalaivani M	18
4.	E18CPF006	Kalaivani V	16
5.	E18CPF009	Rama G	16
6.	E18CPF010	Sairam Shalini R	20
7.	E18CPF011	Sharmila S	20
8.	E18CPF012	Subhashini S	18
9.	E18CPF013	Suganya S	20
10.	E18CPF014	Thenmozhi V R	18
11.	E18CPF015	Toufiq Nisha H	16
12.	E18CPF016	Udhaya Veena A	18
13.	E19CPF001	Akilandeswari R	14
14.	E19CPF004	Gobinath R	18
15.	E19CPF005	Mathivanan M	18
16.	E19CPF006	Nithya M	20
17.	E19CPF007	Pradeepan S	18
18.	E19CPF008	Pragadeeshwaran S	18
19.	E19CPF009	Priyadarshini M	16
20.	E19CPF013	Roja S	16
21.	E19CPF014	Sajee C	20
22.	E19CPF015	Sindhu G.K	16
23.	E19CPF016	Shobiya K	16
24.	E19CPF017	Sri Dhanalakshmi A.M	20

  
Course Coordinator

  
HOD/CSE

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E.G.S.P. Engineering College,  
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**E.G.S. PILLAY ENGINEERING COLLEGE (Autonomous) – NAGAPATTINAM**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**VALUE ADDED COURSES ON**

**“STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B”**

**PG CSE**

**ASSESSMENT ANALYSIS REPORT**

S.NO	REGISTER NUMBER	NAME OF STUDENT	Q1 (2)	Q2 (2)	Q3 (2)	Q4 (2)	Q5 (2)	Q6 (2)	Q7 (2)	Q8 (2)	Q9 (2)	Q10 (2)
1.	E18CPF002	Balachitra B	2	2	2	2	2	2	2	2	0	2
2.	E18CPF003	Bavani S	2	2	2	2	2	2	2	2	2	2
3.	E18CPF005	Kalaivani M	2	2	2	0	2	2	2	2	2	2
4.	E18CPF006	Kalaivani V	0	2	2	2	2	2	2	2	2	0
5.	E18CPF009	Rama G	2	0	2	2	2	2	2	2	0	2
6.	E18CPF010	Sairam Shalini R	2	2	2	2	2	2	2	2	2	2
7.	E18CPF011	Sharmila S	2	2	2	2	2	2	2	2	2	2
8.	E18CPF012	Subhashini S	2	2	2	2	2	2	2	2	2	0
9.	E18CPF013	Suganya S	2	2	2	2	2	2	2	2	2	2
10.	E18CPF014	Thenmozhi V R	0	2	2	2	2	2	2	2	2	2
11.	E18CPF015	Toufiq Nisha H	2	2	0	2	2	2	2	2	2	0
12.	E18CPF016	Udhaya Veena A	2	2	2	2	2	2	2	2	0	2
13.	E19CPF001	Akilandeswari R	0	2	2	2	0	2	2	2	2	0
14.	E19CPF004	Gobinath R	2	2	2	2	2	0	2	2	2	2
15.	E19CPF005	Mathivanan M	2	0	2	2	2	2	2	2	2	2
16.	E19CPF006	Nithya M	2	2	2	2	2	2	2	2	2	2
17.	E19CPF007	Pradeepan S	2	2	2	2	2	2	2	2	2	0
18.	E19CPF008	Pragadeeshwaran S	2	2	0	2	2	2	2	2	2	2
19.	E19CPF009	Priyadarshini M	2	2	2	0	2	2	0	2	2	2
20.	E19CPF013	Roja S	0	0	2	2	2	2	2	2	2	2
21.	E19CPF014	Sajee C	2	2	2	2	2	2	2	2	2	2
22.	E19CPF015	Sindhu G.K	2	2	2	2	0	2	2	2	2	0
23.	E19CPF016	Shobiya K	0	2	2	0	2	2	2	2	2	2
24.	E19CPF017	Sri Dhanalakshmi A.M	2	2	2	2	2	2	2	2	2	2
<b>Total</b>			<b>38</b>	<b>42</b>	<b>44</b>	<b>42</b>	<b>44</b>	<b>46</b>	<b>46</b>	<b>48</b>	<b>42</b>	<b>36</b>
<b>Attainment</b>			<b>79.2</b>	<b>87.5</b>	<b>91.7</b>	<b>87.5</b>	<b>91.7</b>	<b>95.8</b>	<b>95.8</b>	<b>100.0</b>	<b>87.5</b>	<b>75.0</b>
<b>Level of Attainment</b>			<b>1(L)</b>	<b>2(M)</b>	<b>3(S)</b>	<b>2(M)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>3(S)</b>	<b>2(M)</b>	<b>1(L)</b>

Attainment level calculation	
>=70%-79%	1 (L)
>=80%-89%	2 (M)
>=90%	3 (S)

*Jhs*  
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**HEAD OF THE DEPARTMENT**  
**DEPARTMENT OF CSE**  
**E.G.S.P. Engineering College,**  
**Nayapattinam - 611 002**

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Th-01, Nagore- 611002.**  
**Nayapattinam, Tamil Nadu.**

27


### Mapping of Course Outcomes Vs Program Outcomes

Comp.	Competency	Cognitive level
C01	Understand a wide variety of learning algorithms.	Understand
C02	Understand how to evaluate models generated from data.	Understand
C03	Analyse and suggest the appropriate machine learning approach for the various types of problem	Analyze
C04	Design and make modifications to existing machine learning algorithms to suit an individual application	Apply
C05	Provide useful case studies on the advanced machine learning algorithms	Apply

### CO Vs PO, PSO MAPPING

Course outcomes	Program Outcomes												Program Specific Outcomes	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2
C01	3	3	-	3	3	-	-	-	-	-	-	-	-	3
C02	2	1	3	3	3	-	-	-	-	-	-	-	-	3
C03	2	2	-	-	2	-	-	-	-	-	-	-	-	2
C04	-	1	-	-	2	-	-	-	-	-	-	2	-	3
C05	3	-	2	-	2	-	-	-	-	-	-	-	-	3

1. Slight(Low) 2. Moderate(Medium) 3.Substantial(High) “-“ No Correlation

  
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DEPARTMENT OF CSE  
E.G.S.P. Engineering College,  
Nagapattinam - 611 002

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Thethi, Nagore - 611002.  
Nagapattinam (Dt) Tamil Nadu.

# Feedback Form for Value Added Course

\* Indicates required question

1. Register Number \*

\_\_\_\_\_

2. Name \*

\_\_\_\_\_

3. Department \*

\_\_\_\_\_

4. Class \*

*Mark only one oval.*

I year

II year

5. Name of the Course \*

\_\_\_\_\_

**ATTESTED**

**Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL**

**E.C.S. Pillay Engineering College,  
Thekkai Mangalam - 611 002,  
Nagapattinam (dist) Tamil Nadu.**



6. 1. Value added course objectives were stated clearly and met \*

*Mark only one oval.*

- Strongly disagree Disagree
- Neutral Agree
- Strongly agree
- 

7. 2. Value added course was well organized \*

*Mark only one oval.*

- Strongly disagree Disagree
- Neutral Agree
- Strongly Agree
- 

8. 3. This Value added course increased my knowledge and skills \*

*Mark only one oval.*

- Strongly disagree Disagree
- Neutral Agree
- Strongly Agree
- 

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**Thethi, Nagore - 611 002.**  
**Nagapattinam, (DT) Tamil Nadu.**

24

9. 4. Coverage of syllabus was satisfied \*

*Mark only one oval.*

- Strongly disagree Disagree
- Neutral Agree
- Strongly Agree
- 

10. Any Other Suggestions \*

---

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**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**N. Pattanam (Dt) Tamil Nadu.**

25

# Feedback Form for Value Added Course

Register Number \*

E18CPF009

Name \*

G.Rama

Department \*

Computer Science and Engineering

Class \*

I year

II year

Name of the Course \*

STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B

**ATTESTED**

  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

1. Value added course objectives were stated clearly and met \*

- Strongly disagree
- Disagree
- Neutral Agree
- Strongly agree
- 

2. Value added course was well organized \*

- Strongly disagree
- Disagree
- Neutral Agree
- Strongly Agree
- 

3. This Value added course increased my knowledge and skills \*

- Strongly disagree
- Disagree
- Neutral Agree
- Strongly Agree
- 

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL,**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002,**  
**Nagapattinam, (DT) Tamil Nadu.**

4. Coverage of syllabus was satisfied \*

- Strongly disagree
- Disagree
- Neutral/Agree
- Strongly Agree
- 

Any Other Suggestions \*

This course was very interesting and was useful

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**Dr. S. RAMABALAN, M.E., Ph.D.,**  
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**E.G.S. Pillay Engineering College,**  
Methi, Narsimha - 611 002,  
N. Jayangudi (dt), Tamil Nadu.



## VALUE ADDED COURSE SUMMARY REPORT

1. Title : **STUDYING MACHINE LEARNING TECHNIQUES USING MATLAB 9.7 R2019B**
2. Name of Speaker: **MR.M.NUTHAL SRINIVASAN**
3. Speaker Details: **ASSISTANT PROFESSOR, E.G.S. PILLAY ENGINEERING COLLEGE**
4. Date of speaker's presentation: **FROM 01/06/2020 TO 06/06/2020**
5. Beneficiary Details: **PG CSE STUDENTS**
6. Coordinator: **Mrs. K.KALAIVANI (Asso. Professor/CSE ,EGSPEC)**

### COURSE CONTENT

This six-day course focuses on machine learning techniques in MATLAB using functionality within Statistics and Machine Learning Toolbox. The course demonstrates the use of unsupervised learning to discover features in large data sets and supervised learning to build predictive models. Examples and exercises highlight techniques for visualization and evaluation of results. These skills are valuable for those who have domain knowledge and some exposure to computational tools, but no programming background. To be successful in this course, you should have some background in basic statistics (histograms, averages, standard deviation, curve fitting, interpolation).

By the end of this course, you will use MATLAB to identify the best machine learning model for obtaining answers from your data. You will prepare your data, train a predictive model, evaluate and improve your model, and understand how to get the most out of your models.

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**Dr. S. RAMABALAN, M.E., Ph.D.,**  
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**E.G.S. Pillay Engineering College,**  
Pondicherry - 605 002.  
K. J. Somaiyasa (21) Tamil Nadu.

# E.G.S.PILLAY ENGINEERING COLLEGE (AUTONOMOUS)

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

(Accredited by NAAC with 'A' Grade & NBA)

Old Nagore Road, Thethi, Nagapattinam - 611002, Tamil Nadu, India



Department of Computer Science & Engineering

## *Certificate of Completion*

This is to certify that Mr./Ms. BAVANI S has successfully completed Value Added Course on "Studying Machine Learning Techniques using MATLAB 9.7 R2019b" conducted by Department of Computer Science and Engineering, E.G.S.Pillay Engineering College(Autonomous), Nagapattinam from 01.06.2020 to 06.06.2020.

ATTESTED

Dr. S. RAMABALAN, M.E., Ph.D.  
PRINCIPAL

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Thethi, Nagapattinam - 611002,  
Nagapattinam (Dt) Tamil Nadu.

COORDINATOR

HOD/CSE

PRINCIPAL

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Department of Computer Science & Engineering

## *Certificate of Completion*

This is to certify that Mr./Ms. GOPINATH R has successfully completed Value Added Course on "Studying Machine Learning Techniques using MATLAB 9.7 R2019b" conducted by Department of Computer Science and Engineering, E.G.S.Pillay Engineering College (Autonomous), Nagapattinam from 01.06.2020 to 06.06.2020.

**Dr. S. RAMABALAN, M.E., Ph.D.**

PRINCIPAL

E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.

Nagapattinam (Dt) Tamil Nadu.

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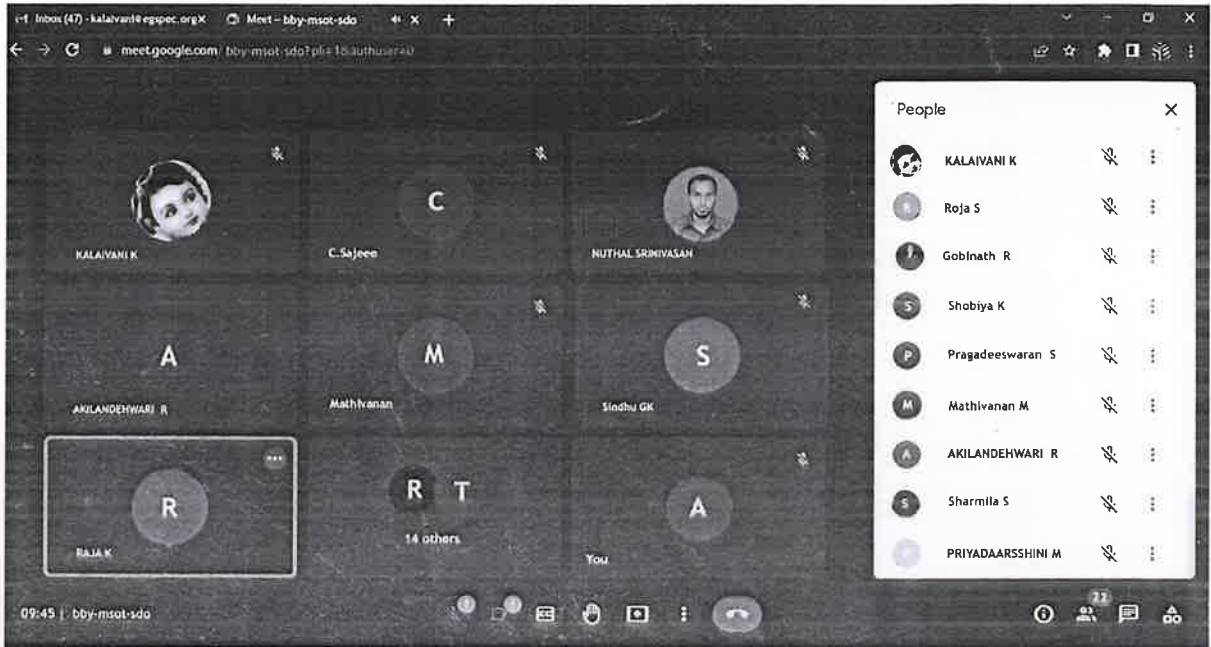
PRINCIPAL

ATTESTED

COORDINATOR



# Meeting Screenshots



**ATTESTED**  
*[Signature]*  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**