

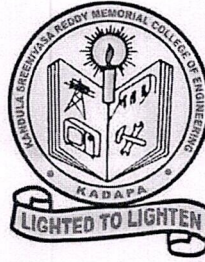
**KANDULA SRINIVASA REDDY MEMORIAL COLLEGE OF ENGINEERING
(AUTONOMOUS)**

KADAPA-516003. AP

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(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING



VALUE ADDED COURSE

ON

“IOT with Python programming”

Resource Persons : Smt. O.Divya, Dept. of AI&ML, Mr. J.Sunil, Dept. of AI&ML KSRMCE

Course Coordinator: Smt. O.Divya, Dept. of AI&ML, KSRMCE

Duration: 19/01/2023 to 04/02/2023

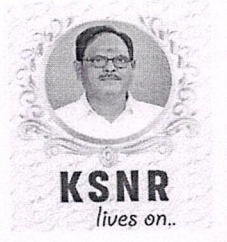


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Lr./KSRMCE/AIML/2022-23/

Date: 10-01-2023

To
The Principal,
KSRMCE,
Kadapa.

Respected Sir,

Sub: Permission to Conduct Value Added Course on "IOT with Python Programming" from 19/01/2023 to 04/02/2023-Req- Reg.

The Department of Artificial Intelligence & Machine Learning is planning to offer a Value-Added Course on "IOT with Python Programming" to B. Tech. students. The course will be conducted from 19/01/2023 to 04/02/2023. In this regard, I kindly request you to grant permission to conduct Value Added Course.

Thanking you sir,

Yours faithfully

(Smt. O. Divya, Asst. Professor in AI&ML)

Submitted to
Principal Sir,
KSRMCE

Permitted
U. S. S. Murthy

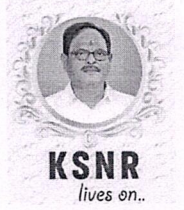


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Cr./KSRMCE/AIML/2022-23/

Date: 11/01/2023

Circular

The Department of Artificial Intelligence & Machine Learning is offering a Value-Added Course on "IOT with Python Programming" from 19/01/2023 to 04/02/2023 to B. Tech students. In this regard, interested students are requested to register their names for the Value-added Course with Course Coordinator.

<https://forms.gle/2TyPdEtvuJk53Rfq9>

For further information contact Course Coordinator.

Course Coordinator: Smt. O. Divya, Assistant Professor, Dept. of AI&ML.-KSRMCE.
Contact No: 9398011747

HOD

Dept. of AIML

Dr. K. SRINIVASA RAO, M.Tech., Ph.D.
Professor & HOD AIML
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Cc to:

IQAC-KSRMCE



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Registration for Value Added Course on MIT App Inventor from 19/01/2023 to 04/02/2023

* Required

1. Name

2. Roll Number *

3. Email *

4. Department *

Mark only one oval.

CSE

AIML

ECE

5. Semester *

Mark only one oval.

- I Sem
- II Sem
- III Sem
- IV Sem
- V Sem
- VI Sem
- VII Sem
- VIII Sem

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KSRM College of Engineering(A), Kadapa
Registered list for VAC on IoT with Python Programming

Timestamp	Name	ROLL NO	DEPARTMENT	College Email
1-10-2023 16:43:59	CHEKKA VENKATA JE	229y5a3901	AIML	229y5a3901@ksrmce.ac.in
1-10-2023 17:12:30	BOJANAPALLI SAI PA	229y5a0503	CSE	229y5a0503@ksrmce.ac.in
1-10-2023 17:39:44	Saad	219y1a3952	Aiml	219y1a3952@ksrmce.ac.in
1-10-2023 18:44:25	A.Rushi kesava Reddy	219y1a0507	Cse	219y1a0507@ksrmce.ac.in
1-10-2023 19:13:12	Santhosh Reddy	219y1a3912	AI ML	219y1a3912@ksrmce.ac.in
1-10-2023 19:26:38	KOTLO DHANUSH	229y5a3903	AI&ML	229y5a3903@ksrmce.ac.in
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1-11-2023 12:23:17	Tamatam Janardhan R	219y1a05h3	Cse	219y1a05h3@ksrmce.ac.in
1-11-2023 13:29:51	Polisetty kalyani	229y5a0513	Cse c	229y5a0513@ksrmce.ac.in
1-11-2023 13:40:03	D.Mahindra	219y1a0536	Cse	219y1a0536@ksrmce.ac.in
1-11-2023 13:43:35	H.V.SIVA KUMAR	219y1a0564	CSE	219y1a0564@ksrmce.ac.in
1-11-2023 13:44:59	G.shanmukha datta rec	219y1a0559	Cse	219y1a0559@ksrmce.ac.in
1-11-2023 13:48:33	P. Rasoolbee	219y1a05c7	Cse	219y1a05c7@ksrmce.ac.in
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1-11-2023 13:52:34	K.KARTHIKEYAN	219y1a0583	CSE	219y1a0583@ksrmce.ac.in
1-11-2023 14:07:43	M.Bindhulatha	219y1a05b2	Cse	219y1a05b2@ksrmce.ac.in
1-11-2023 16:18:59	V.Drakshayini	219y1a05h9	CSE	219y1a05h9@ksrmce.ac.in
1-11-2023 16:32:49	T.shanmukha sai	229y5a0517	CSE	229y5a0517@ksrmce.ac.in
1-11-2023 18:52:43	P. Somalatha	219y1a05d1	Cse	219y1a05d1@ksrmce.ac.in
1-11-2023 19:13:46	M.Venkata Sai Nikhil	219Y1A05A2	CSE	219y1a05a2@ksrmce.ac.in
1-11-2023 20:30:09	Mannaji asif	219Y1A05A8	Cse	219y1a05a8@ksrmce.ac.in
1-11-2023 20:49:59	B.Gowthami	219y1a0517	CSE	219y1a0517@ksrmce.ac.in
1-11-2023 21:46:31	Nalipi Sridhar Reddy	219Y1A3933	AI&ML	219y1a3933@ksrmce.ac.in
1-12-2023 1:35:39	B.jagadeeswarreddy	219y1a0513	Cse A/s	219y1a0513@ksrmce.ac.in
1-12-2023 9:18:59	D.Balaji	219Y1A0533	CSE	219y1a0533@ksrmce.ac.in
1-12-2023 16:29:56	B. Sree Harshitha	219y1a0516@	Cse	219y1a0516@ksrmce.ac.in
1-13-2023 6:30:25	Dileep kasi	229y5a3907	AIML	229y5a3907@ksrmce.ac.in
1-13-2023 8:47:54	BOJANAPALLI SAI PA	229y5a0503	CSE	229y5a0503@ksrmce.ac.in
1-13-2023 19:17:15	A.Bindu Sree	219y1a0504	CSE	219y1a0504@ksrmce.ac.in
1-14-2023 12:20:48	Chennavenkatesh	219y1a3909	AI&ML	219y1a3909@ksrmce.ac.in

1-18-2023 13:51:12	C Sathya Chakradhar	219y1a0520	CSE	219y1a0520@ksrmce.ac.in
1-18-2023 13:54:01	G. Sivashailaja	219y1a0551	Cse	219y1a0551@ksrmce.ac.in
1-18-2023 13:54:21	Bonala Venkateswarlu	219y1a0514	Cse	219y1a0514@ksrmce.ac.in
1-18-2023 15:13:05	V S MANJUNATH	229Y5A3904	AI & ML	229y5a3904@ksrmce.ac.in
1-18-2023 15:13:47	Y DILEEP	229y5a3907	AI & ML	229y5a3907@ksrmce.ac.in
1-18-2023 15:13:53	Y.HEMANTH KUMAR	229y5a3906	AI&ML	229y5a3906@ksrmce.ac.in
1-18-2023 18:00:13	N. Vasavi	219y1a3935	Ai&ml	219y1a3935@ksrmce.ac.in
1-18-2023 18:59:18	E.Suryaprakash	219y1a0545	CSE-A	29y1a0545@ksrmce.ac.in
1-19-2023 8:57:16	Sharath Kumar Reddy	219y1a3902	Ai&ml	219y1a3902@ksrmce.ac.in
1-19-2023 12:54:43	A suneetha	219Y1A0501	Cse	219Y1A0501@ksrmce.ac.in
1-19-2023 15:42:58	S. Hemanth kumar	219y1a3955	AI&ML	219y1a3955@ksrmce.ac.in
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1-19-2023 18:11:58	Chinthaginjala Induvad	219y1a0525	CSE	219y1a0525@ksrmce.ac.in
1-19-2023 19:11:58	Chinthaginjala poojitha	219y1a0526	CSE	219y1a0526@ksrmce.ac.in
1-19-2023 19:11:58	G. Nikhitha	219y1a3914	Aiml	219y1a3914@ksrmce.ac.in
1-19-2023 19:11:58	P.pochamma	219y1a3914	Aiml	219y1a3943@ksrmce.ac.in

O. D. S.
Co-ordinator

KSR

HOD

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Professor & HOD AIML
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Course Syllabus for VAC on IoT with Python Programming

Internet of Things with Python Programming

Course Objectives:

- Learn the basic python programming.
- Understand Raspberry Pi hardware and its relevant software.
- Gain knowledge to verify working of simple sensor circuits with Raspberry Pi.
- Understand the internet of Things.

Course Outcomes:

The students will be able to:

- Learn the python programming language and IDE
- Prototype circuit and connect them to the Raspberry Pi
- Program the Raspberry Pi board to make the circuits work
- Analyze the internet of things

UNIT 1:

Introduction- History, Features, setting up path, working with Python, Basic Syntax, Variable and Data Types. Operator; Conditional Statements-if, If-else, Nested if-else; Looping- For A while. Nested loops; Control Statements-Break, Continue, Pass; String Manipulation- Accessing Strings. Basic Operations, String slices.

UNIT 2:

Function and Methods; lists-Introduction, accessing list, Operations, working with lists, Function and Methods; Tuple-Introduction, Accessing tuples, Operations, Working, Functions and Methods.

UNIT 3:

Dictionaries-Introduction, accessing values in dictionaries, working with dictionaries, Properties, Functions; Function- Defining a function, calling a function, Types of functions, Function Arguments, Anonymous functions, Global and local variables.

UNIT4:

Modules-Importing module, Math module, Random module, different type of Packages, Composition; Input- Output- Printing on screen, reading data from keyboard, Opening and closing file, Reading and writing files. Functions.

UNIT 5: The Raspberry Pi and its uses

Introduction (Video), Raspberry Pi Board (Updated), Raspberry Pi Processor, Raspberry Pi vs. Arduino (Updated), Operating System Benefits, Processors, Raspberry Pi IoT, Raspberry Pi Setup. Raspberry Pi Configuration, Overclocking (Updated)

Introduction (Video), General Purpose IO Pins, Protocol Pins, GPIO Access, General purpose IO Pins. Pulse Width Modulation, Demo of a Blink, Graphic User Interface, Tkinter Library, Interaction.

References:

1. The internet of Things by Samuel Greengard
2. The fourth industrial revolution by Klaus Schwab
3. Getting started with the internet of things by Cuno Pfister



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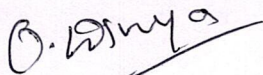
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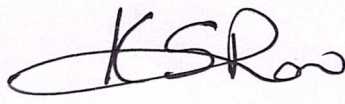


Department of Artificial Intelligence & Machine Learning
Value added Course on IOT with python programming
Schedule

S. No	Date	Time	Resource Person	Topic
1	19/01/2023	4PM to6PM	Smt. O. Divya	Introduction- History, Features, setting up path, working with Python, Basic Syntax, Variable and Data Types
2	20/01/2023	4PM to6PM	Smt. O. Divya	Operator, Conditional Statements-if, If-else, Nested if-else, Looping- For A while. Nested loops, Control Statements-Break, Continue, Pass, String Manipulation- Accessing Strings. Basic Operations, String slices.
3	21/01/2023	4PM to6PM	Smt. O. Divya	Function and Methods; lists-Introduction, accessing list, Operations, working with lists, Function and Methods; Tuple-Introduction
4	23/01/2023	4PM to6PM	Smt. O. Divya	Accessing tuples, Operations, Working, Functions and Methods.
5	24/01/2023	4PM to6PM	Smt. O. Divya	Dictionaries-Introduction, accessing values in dictionaries, working with dictionaries, Properties, Functions
6	25/01/2023	2PM to6PM	Smt. O. Divya	Modules-Importing module, Math module, Random module
7	27/01/2023	2PM to6PM	Smt. O. Divya	Different type of Packages, Composition; Input
8	28/01/2023	4PM to6PM	Smt. O. Divya	Output- Printing on screen, reading data from keyboard, Opening and closing file, Reading and writing files. Functions.
9	30/01/2023	4PM to6PM	Smt. O. Divya	Introduction (Video), Raspberry Pi Board (Updated), Raspberry Pi Processor, Raspberry Pi vs. Arduino (Updated)
10	31/01/2023	3PM to6PM	Smt. O. Divya	Operating System Benefits, Processors,

				Raspberry Pi IoT, Raspberry Pi Setup. Raspberry Pi Configuration, Overclocking (Updated)
11	01/02/2023	4PM to6PM	Mr. J. Sunil	Introduction (Video), General Purpose IO Pins, Protocol Pins, GPIO Access, General purpose IO Pins.
12	02/02/2023	4PM to6PM	Mr. J. Sunil	Pulse Width Modulation, Demo of a Blink
13	03/02/2023	4PM to6PM	Mr. J. Sunil	Graphic User Interface, Tkinter Library, Interaction.
14	04/02/2023	4PM to6PM	Mr. J. Sunil	Demo Projects


Coordinator


HoD/AIML
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 Professor & HOD AIML
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G. Nijma
Coordinator

KSR

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Value Added Course on "Internet of Things with Python Programming"



AI & ML



Python Programming Lab (AI 207)



19-01-2023 to 04-02-2023



4 pm to 6 pm

Resource Persons

Smt. O. Divya & Sri J. Sunil

Coordinator

Smt. O. Divya

Dr. K. Srinivasa Rao
(Professor & Head)

Dr. V.S.S. Murthy
(Principal)

Dr. Kandula Chandra Obul Reddy
(MD, KGI)

Smt. K.Rajeswari
(Correspondent, Secretary, Treasurer)

Sri K. Madan Mohan Reddy
(Vice - Chairman)

Sri K. Raja Mohan Reddy
(Chairman)

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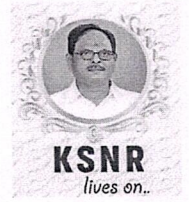


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ACTIVITY REPORT

Value Added Course

On

IOT with Python Programming
19/01/2023 to 04/02/2023

Target Group	:	Students
Details of Participants	:	52 Students
Coordinator	:	Smt. O. Divya Asst. Prof, Dept. of AI&ML
Organizing Department	:	Artificial Intelligence & Machine Learning
Venue	:	Python Programming Lab (AI-207)

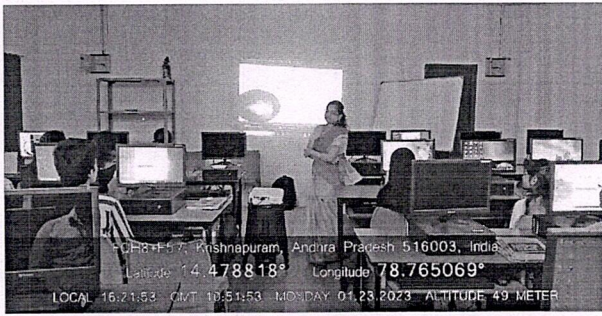
Description:

Value Added course on “IOT with Python Programming” was organized by Dept. of AI&ML from 19/01/2023 to 04/02/2023. Smt. O.Divya acted as Course Coordinator and Resource person. The course is designed to provide complete knowledge of IOT with Python Programming and to enhance the programming skills of the students by giving practical assignments to be done in labs. The Python Programming certification course provides an in-depth knowledge about Python.

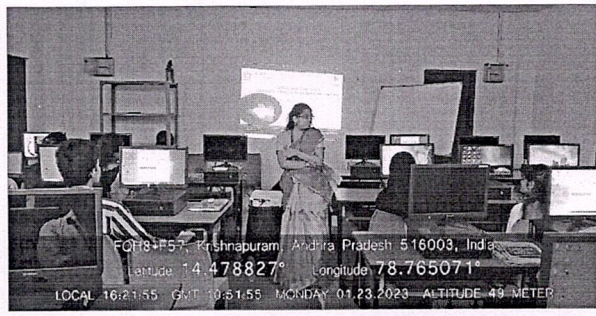
Python is a programming language with a special focus on the concepts of OOPs and their implementation. It has object-oriented features, which allow the programmer to create objects within the code. This makes programming easier, more efficient, and some would even say, more fun.

The course helps acquire a fundamental understanding of the OOPs concepts, input/output data management, functions, classes, objects and much more. The course has been designed with a uniform structured series of modules enumerating various pertinent concepts.

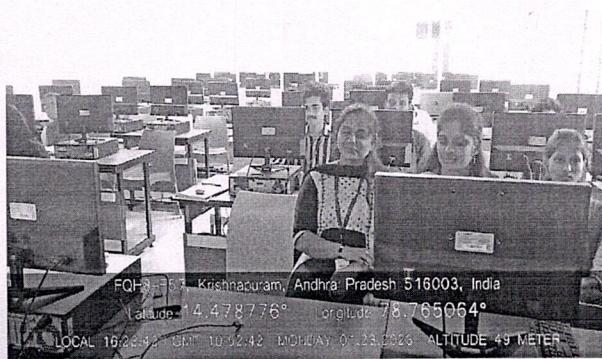
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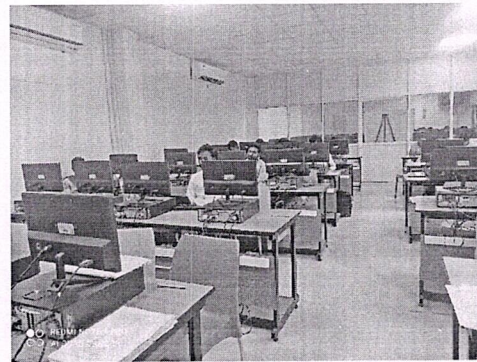
Lecture by Resource Person



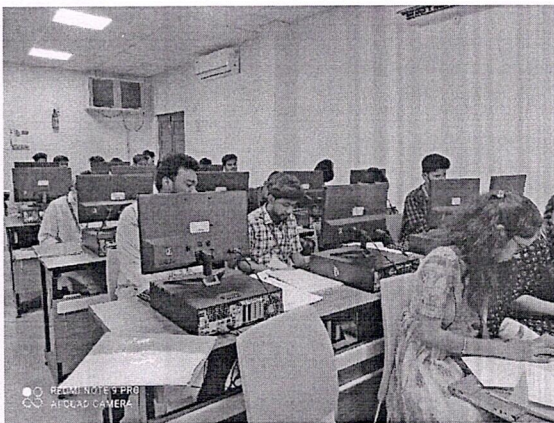
Students attended for the course



Students while Practicing



Students while Practicing



Students while Practicing

O. Ganga
Coordinator

KSRao

HoD
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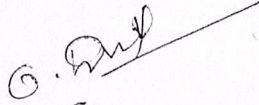
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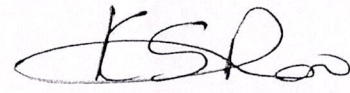


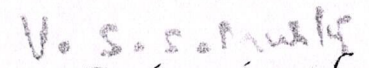
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Certificate of Completion

This to certify that Mr/Mrs. S. Saad Bearing
the Roll Number 219Y1A3952 has Successfully Completed value Added
Course on "IOT with Python Programming" from 19th January 2023 to
04 February 2023 Organized by Department of AI&ML, KSRMCE, Kadapa.


Coordinator


HOD AI&ML


Principal



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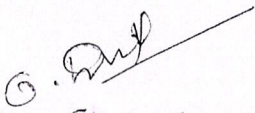
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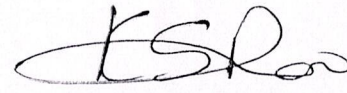


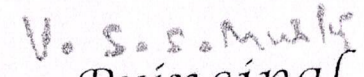
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Certificate of Completion

This to certify that Mr/Mrs. E. Surya prakash Bearing
the Roll Number 21941A0545 has Successfully Completed value Added
Course on "IOT with Python Programming" from 19th January 2023 to
04 February 2023 Organized by Department of AI&ML, KSRMCE, Kadapa.


Coordinator


HOD AI&ML


Principal



K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)

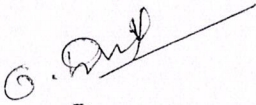
Kadapa, Andhra Pradesh, India- 516 003
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

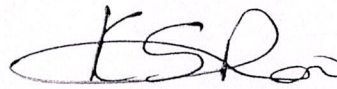



KSNR
lives on.

Certificate of Completion

This to certify that Mr/Mrs. Polisetty Kalyani Bearing
the Roll Number 229Y1A0513 has Successfully Completed value Added
Course on "IOT with Python Programming" from 19th January 2023 to
04 February 2023 Organized by Department of AI&ML, KSRMCE, Kadapa.


Coordinator


HOD AI&ML


Principal

The objectives of the Value Added Course were met (Objective) *

- Excellent
- Good
- Satisfactory
- Poor

The content of the course was organized and easy to follow (Delivery) * *

- Excellent
- Good
- Satisfactory
- Poor

The Resource Persons were well prepared and able to answer any question *
(Interaction)

- Excellent
- Good
- Satisfactory
- Poor

The exercises/role play were helpful and relevant (Syllabus Coverage) * *

- Excellent
- Good
- Satisfactory
- Poor

The Value Added Course satisfy my expectation as a value added Programme *
(Course Satisfaction)

- Excellent
- Good
- Satisfactory
- Poor

Any Issues *

Your answer

Submit

Clear form

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K.S.R.M. COLLEGE OF ENGINEERING

Demartment of Artificial Intelligence & Machine Learning, Feedback report on Value Added Course on IoT with Python Programming

Timestamp	Name	ROLL NO	DEPARTM	College Email	The content of the course was organized and easy to follow (Delivery) *	The Resource Persons were well prepared and able to answer any question (Interaction)	The exercises/role play were helpful and relevant (Syllabus Coverage) *	The value Added Course satisfy my expectation as a value added Programme (Course Satisfaction)	Analyses
1-10-2023 16:43:59	CHEKKA VENKATA	229y5a3901	AIML	229y5a3901@ksrmce	Good	Satisfactory	Good	Good	No
1-10-2023 17:10:39	BOJANAPALLI SAI R	229y5a0503	CSE	229y5a0503@ksrmce	Satisfactory	Good	Excellent	Excellent	
1-10-2023 17:39:44	Saad	219y1a3952	Aiml	219y1a3952@ksrmce	Good	Excellent	Good	Good	
1-10-2023 18:44:25	A.Rushi kesava Redd	219y1a0507	Cse	219y1a0507@ksrmce	Good	Excellent	Excellent	Good	
1-10-2023 19:13:13	Santhosh Reddy	219y1a3912	AI ML	219y1a3912@ksrmce	Good	Excellent	Good	Good	
1-10-2023 19:26:38	KOTLO DHANUSH	229y5a3903	AI&ML	229y5a3903ksrmce.ac	Excellent	Good	Satisfactory	Good	
1-11-2023 10:16:32	Y.DILEEP KASI	229y5a3907	AI&ML	229y5a3907@ksrmce	Satisfactory	Good	Excellent	Satisfactory	
1-11-2023 12:23:18	Tamatam Janardhan	219y1a05h3	Cse	219y1a05h3@ksrmce	Satisfactory	Excellent	Excellent	Satisfactory	
1-11-2023 13:29:52	Polisetty kalyani	229y5a0513	Cse c	229y5a0513	Good	Satisfactory	Good	Satisfactory	
1-11-2023 13:40:04	D.Mahindra	219y1a0536	Cse	219y1a0536@ksrmce	Good	Satisfactory	Good	Good	
1-11-2023 13:43:35	H.V.SIVA KUMAR	219y1a0564	CSE	219y1a0564@ksrmce	Good	Good	Excellent	Good	
1-11-2023 13:45:00	G.shanmukha datta r	219y1a0559	Cse	219y1a0559@ksrmce	Good	Satisfactory	Excellent	Excellent	
1-11-2023 13:48:34	P. Rasoolbee	219y1a05c7	Cse	219y1a05c7@ksrmce	Good	Satisfactory	Good	Good	
1-11-2023 13:51:07	P.babjan	219y1a05c8	CSE	219y1a05c8@ksrmce	Satisfactory	Good	Good	Good	
1-11-2023 13:51:14	N.Reddamma	219y1a05c4	Cse	219y1a05c4@ksrmce	Excellent	Good	Excellent	Good	
1-11-2023 13:52:34	K.KARTHIKEYAN	219y1a0583	CSE	219y1a0583@ksrmce	Good	Satisfactory	Satisfactory	Good	
1-11-2023 14:07:43	M.Bindhulatha	219y1a05b2	Cse	219y1a05b2@ksrmce	Good	Excellent	Excellent	Excellent	
1-11-2023 16:19:00	V.Drakshayini	219y1a05h9	CSE	219y1a05h9@ksrmce	Good	Satisfactory	Excellent	Excellent	
1-11-2023 16:32:49	T.shanmukha sai	229y5a0517	CSE	229y5a0517@ksrmce.a	Good	Good	Good	Satisfactory	
1-11-2023 18:52:44	P. Somalatha	219y1a05d1	Cse	219y1a05d1@ksrmce	Good	Good	Excellent	Satisfactory	
1-11-2023 19:13:47	M.Venkata Sai Nikhil	219Y1A05A	CSE	219y1a05a2@ksrmce	Good	Satisfactory	Excellent	Good	
1-11-2023 20:30:09	Mannaji asif	219Y1A05A	Cse	219y1a05a8@ksrmce	Satisfactory	Good		Good	

1-11-2023 20:49:59	B.Gowthami	219y1a0517	CSE	219y1a0517@ksrmce	Good	Good	Good	Good
1-11-2023 21:46:32	Nalipi Sridhar Reddy	219Y1A3933	AI&ML	219y1a3933@ksrmce	Excellent	Good	Good	Good
1-12-2023 1:35:40	B.jagadeeswarreddy	219y1a0513	Cse A/s	219y1a0513@ksrmce	Good	Good	Satisfactory	Good
1-12-2023 9:19:00	D.Balaji	219Y1A0533	CSE	219y1a0533@ksrmce	Good	Satisfactory	Good	Satisfactory
1-12-2023 16:29:56	B. Sree Harshitha	219y1a0516	Cse	219y1a0516@ksrmce	Excellent	Excellent	Satisfactory	Excellent
1-13-2023 6:30:25	Dileep kasi	229y5a3907	AIML	229y5a3907@ksrmce	Excellent	Excellent	Good	Good
1-13-2023 8:47:54	BOJANAPALLI SAI P	229y5a0503	CSE	229y5a0503@ksrmce	Good	Good	Satisfactory	Good
1-13-2023 19:17:59	A.Bindu sree	219y1a0504	CSE	219y1a0504@ksrmce	Good	Good	Good	Excellent
1-14-2023 12:20:49	Chennavenkatesh	219y1a3909	AI&ML	219y1a3909@ksrmce	Good	Good	Satisfactory	Excellent
1-18-2023 13:51:12	C Sathya Chakradha	219y1a0520	CSE	219y1a0520@ksrmce	Good	Excellent	Good	Good
1-18-2023 13:54:01	G. Sivashailaja	219y1a0551	Cse	219y1a0551@ksrmce	Good	Excellent	Satisfactory	Excellent
1-18-2023 13:54:21	Bonala Venkateswar	219y1a0514	Cse	219y1a0514@ksrmce	Satisfactory	Excellent	Satisfactory	Excellent
1-18-2023 15:13:05	V S MANJUNATH	229Y5A3904	AI & ML	229y5a3904@ksrmce	Satisfactory	Excellent	Satisfactory	Good
1-18-2023 15:13:47	Y DILEEP	229y5a3907	AI & ML	229y5a3907@ksrmce	Excellent	Good	Good	Excellent
1-18-2023 15:13:54	Y.HEMANTH KUMAR	229y5a3906	AI&ML	229y5a3906@ksrmce	Good	Good	Excellent	Good
1-18-2023 18:00:13	N. Vasavi	219y1a3935	Ai&ml	219y1a3935@ksrmce	Good	Good	Good	Good
1-18-2023 18:59:18	E.Suryaprakash	219y1a0545	CSE-A	29y1a0545@ksrmce.a	Good	Excellent	Excellent	Good
1-19-2023 8:57:17	Sharath Kumar Redd	219y1a3902	Ai&ml	219y1a3902@ksrmce	Excellent	Excellent	Satisfactory	Good
1-19-2023 12:54:44	A suneetha	219Y1A0501	Cse	219Y1A0501@ksrmce	Excellent	Excellent	Excellent	Excellent
1-19-2023 15:42:59	S. Hemanth kumar	219y1a3955	AI&ML	219y1a3955@ksrmce	Satisfactory	Good	Good	Good
1-19-2023 17:11:59	C.Devendra prasad	219y1a0523	CSE	219y1a0523@ksrmce	Good	Excellent	Good	Excellent
1-20-2023 13:31:38	M.hemalathq	219y1a05b0	Cse	219y1a05b0@ksrmce	Good	Satisfactory	Good	Good
1-21-2023 16:03:59	YERRA HEMANTH K	229y5a3906	AI&ML	229y5a3906@ksrmce	Good	Good	Good	Good
1-21-2023 16:06:31	Y.DILEEP KASI	229y5a3907	AI&ML	229y5a3907@ksrmce	Good	Excellent	Good	Good
1-22-2023 22:12:02	CHEKKA VENKATA	229y5a3901	AIML	229y5a3901@ksrmce	Satisfactory	Good	Good	Good
1-23-2023 16:07:24	D.pavithra	219Y1A0534	CSE	219Y1A0534@ksrmce	Excellent	Good	Satisfactory	Good
1-23-2023 20:25:21	Chinthaginjala Induva	219y1a0525	CSE	219y1a0525@ksrmce	Excellent	Good	Good	Excellent
1-23-2023 20:33:08	Chinthaginjala poojith	219y1a0526	CSE	219y1a0526@ksrmce	excellent	Good	Good	Excellent
1-24-2023 15:48:53	G. Nikhitha	219y1a3914	Aiml	219y1a3914@ksrmce	Good	Excellent	Satisfactory	Good
1-24-2023 15:52:06	P.pochamma	219y1a3914	Aiml	219y1a3943@ksrmce	Excellent	Satisfactory	Good	Satisfactory

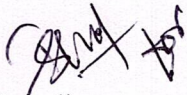
O. Dine
Coordinator

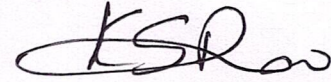
Dr. K. SRINIVAS RAO, M.Tech., Ph.D.
Professor & HOD AIML
K.S.R.M. College of Engineering
(Autonomous)
KADAPA- 516 005. (A.P.)

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF ARTIFICIAL INTELIGENCE & MACHINE LEARNING
VALUE ADDED COURSE ON
IoT USING PYTHON PROGRAMMING FROM 19/01/2023 TO 04/02/2023
AWARD LIST

S.No	Name	ROLL NO	Marks Obtained
1	CHEKKA VENKATA JEEVAN KUMAR	229y5a3901	15
2	BOJANAPALLI SAI PAVAN	229y5a0503	19
3	Saad	219y1a3952	20
4	A.Rushi kesava Reddy	219y1a0507	20
5	Santhosh Reddy	219y1a3912	19
6	KOTLO DHANUSH	229y5a3903	15
7	Y.DILEEP KASI	229y5a3907	14
8	Tamatam Janardhan Reddy	219y1a05h3	20
9	Polisetty kalyani	229y5a0513	19
10	D.Mahindra	219y1a0536	18
11	H.V.SIVA KUMAR	219y1a0564	20
12	G.shanmukha datta reddy	219y1a0559	20
13	P. Rasoolbee	219y1a05c7	17
14	P.babjan	219y1a05c8	08
15	N.Reddamma	219y1a05c4	10
16	K.KARTHIKEYAN	219y1a0583	07
17	M.Bindhulatha	219y1a05b2	19
18	V.Drakshayini	219y1a05h9	17
19	T.shanmukha sai	229y5a0517	14
20	P. Somalatha	219y1a05d1	19
21	M.Venkata Sai Nikhil	219Y1A05A2	20
22	Mannaji asif	219Y1A05A8	20
23	B.Gowthami	219y1a0517	20
24	Nalipi Sridhar Reddy	219Y1A3933	19
25	B.jagadeeswarreddy	219y1a0513	20
26	D.Balaji	219Y1A0533	18
27	B. Sree Harshitha	219y1a0516	16
28	Dileep kasi	229y5a3907	17
29	BOJANAPALLI SAI PAVAN	229y5a0503	02
30	A.Bindu sree	219y1a0504	15
31	Chennavenkatesh	219y1a3909	14
32	C Sathya Chakradhar	219y1a0520	11
33	G. Sivashailaja	219y1a0551	19
34	Bonala Venkateswarlu	219y1a0514	20
35	V S MANJUNATH	229Y5A3904	20
36	Y DILEEP	229y5a3907	14
37	Y.HEMANTH KUMAR	229y5a3906	17
38	N. Vasavi	219y1a3935	20
39	E.Suryaprakash	219y1a0545	20
40	Sharath Kumar Reddy Annem	219y1a3902	20
41	A suneetha	219Y1A0501	20
42	S. Hemanth kumar	219y1a3955	19
43	C.Devendra prasad	219y1a0523	18
44	M.hemalathq	219y1a05b0	17
45	YERRA HEMANTH KUMAR	229y5a3906	20
46	Y.DILEEP KASI	229y5a3907	14

47	CHEKKA VENKATA JEEVAN KUMAR	229y5a3901	15
48	D.pavithra	219Y1A0534	20
49	Chinthaginjala Induvadana	219y1a0525	19
50	Chinthaginjala poojitha	219y1a0526	19
51	G. Nikhitha	219y1a3914	20
52	P.pochamma	219y1a3914	20


Coordinator



HoD
Dr. K. SRINIVASA RAO, M.Tech., Ph.D.
Professor & HOD AIML
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KADAPA- 516 005. (A.P.)

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING
VALUE ADDED COURSE ON

IoT using Python Programming FROM 19/01/2023 TO 04/02/2023

ASSESSMENT TEST

Roll Number: _____ **Name of the Student:** _____

Time: 20 Min

(Objective Questions)

Max.Marks: 20

Note: Answer the following Questions and each question carries **one** mark.

1. **IoT stands for:** []
 - a) Internet of Tech
 - b) Incorporation of Things
 - c) Internet of Things
 - d) Incorporation of Technology
2. **Which of the following cannot be considered an IoT device?** []
 - a. Smartwatch
 - b. Andriod Phone
 - c. Laptop
 - d. Tubelight
3. **Which is not an IoT platform?** []
 - a. Xiaomi Cloud
 - b. GoogleCloud
 - c. Myntra
 - d. AWS(Amazon Web Services)
4. **Which of the following can not be considered an IoT device?** []
 - a. Smartwatch
 - b. Andriod Phone
 - c. Laptop
 - d. Tubelight
5. **IoT is based on _____ technology.** []
 - a. Hardware
 - b. Software
 - c. None
 - d. Both of these
6. **What is considered the standard length for a MAC Address?** []
 - a. 8 bits
 - b. 32 bits
 - c. 48 bits
 - d. None of these

7. **What is an IoT network?** []
- a. a collection of networked devices
 - b. a collection of Interconnected devices
 - c. a collection of signalled devices
 - d. None of the above
8. **What is the java extension file used in IoT?** []
- a. .jar
 - b. .obj
 - c. .cpp
 - d. .exe
9. **Which one out of these is not a Data Link Layer Technology?** []
- a. Bluetooth
 - b. Wifi
 - c. **HTTP**
 - d. Mobile Hotspot
10. **What is the standard form of LLN?** []
- a. Lower Lossy Network
 - b. **Low Power Lossy Network**
 - c. Lossy Low Power Network
 - d. Low Lossy Powered Network
11. **What type of interface is used by fingerprint sensors to collect data?** []
- a. IPI interface
 - b. **UART interface**
 - c. I2P interface
 - d. None
12. **How many wires does the SPI protocol use?** []
- a. 3
 - b. **4**
 - c. 2
 - d. More than 4
13. **Amongst which of the following is / are the Numeric Types of Data Types?** []
- a. int
 - b. float
 - c. complex
 - d. **All of the mentioned above**

14. list, tuple, and range are the ___ of Data Types. []
- a. Sequence Types
 - b. Binary Types
 - c. Boolean Types
 - d. None of the mentioned above
15. Float type of data type is represented by the float class. []
- a. True
 - b. False
16. bytes, bytearray, memoryview are type of the ___ data type. []
- a. Mapping Type
 - b. Boolean Type
 - c. Binary Types
 - d. None of the mentioned above
17. The type() function can be used to get the data type of any object. []
- a. True
 - b. False
18. 11. Amongst which of the following is / are the logical operators in Python? []
- a. and
 - b. or
 - c. not
 - d. All of the mentioned above
19. Is Python supports exception handling? []
- a. Yes
 - b. No
20. What is the name of the operator ** in Python? []
- a. Exponentiation
 - b. Modulus
 - c. Floor division
 - d. None of the mentioned above

S. Hemanth Kumar - 219Y1A3955

19

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING
VALUE ADDED COURSE ON**

IoT using Python Programming FROM 19/01/2023 TO 04/02/2023

ASSESSMENT TEST

Roll Number: 219Y1A3955 Name of the Student: S. Hemanth Kumar

19
20
Sey

Time: 20 Min

(Objective Questions)

Max.Marks: 20

Note: Answer the following Questions and each question carries **one** mark.

1. **IoT stands for:**

[c]

- a) Internet of Tech
- b) Incorporation of Things
- c) Internet of Things
- d) Incorporation of Technology

2. **Which of the following cannot be considered an IoT device?**

[a]

- a. Smartwatch
- b. Andriod Phone
- c. Laptop
- d. Tubelight

3. **Which is not an IoT platform?**

[d]

- a. Xiaomi Cloud
- b. GoogleCloud
- c. Myntra
- d. AWS(Amazon Web Services)

4. **Which of the following can not be considered an IoT device?**

[d]

- a. Smartwatch
- b. Andriod Phone
- c. Laptop
- d. Tubelight

5. **IoT is based on _____ technology.**

[d]

- a. Hardware
- b. Software
- c. None
- d. Both of these

6. **What is considered the standard length for a MAC Address?**

[b]

- a. 8 bits
- b. 32 bits
- c. 48 bits
- d. None of these

7. What is an IoT network?

- a. a collection of networked devices
- b. a collection of Interconnected devices
- c. a collection of signalled devices
- d. None of the above

[c]

8. What is the java extension file used in IoT?

- a. .jar
- b. .obj
- c. .cpp
- d. .exe

[a]

9. Which one out of these is not a Data Link Layer Technology?

- a. Bluetooth
- b. Wifi
- c. HTTP
- d. Mobile Hotspot

[c]

10. What is the standard form of LLN?

- a. Lower Lossy Network
- b. Low Power Lossy Network
- c. Lossy Low Power Network
- d. Low Lossy Powered Network

[b]

11. What type of interface is used by fingerprint sensors to collect data? [b]

- a. IPI interface
- b. UART interface
- c. I2P interface
- d. None

f

12. How many wires does the SPI protocol use?

- a. 3
- b. 4
- c. 2
- d. More than 4

[b]

13. Amongst which of the following is / are the Numeric Types of Data Types? [d]

- a. int
- b. float
- c. complex
- d. All of the mentioned above

[d]

14. list, tuple, and range are the ___ of Data Types. [a]
- a. Sequence Types
 - b. Binary Types
 - c. Boolean Types
 - d. None of the mentioned above
15. Float type of data type is represented by the float class. [c]
- a. True
 - b. False
16. bytes, bytearray, memoryview are type of the ___ data type. [c]
- a. Mapping Type
 - b. Boolean Type
 - c. Binary Types
 - d. None of the mentioned above
17. The type() function can be used to get the data type of any object. [a]
- a. True
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18. 11. Amongst which of the following is / are the logical operators in Python? [d]
- a. and
 - b. or
 - c. not
 - d. All of the mentioned above
19. Is Python supports exception handling? [a]
- a. Yes
 - b. No
20. What is the name of the operator ** in Python? [c]
- a. Exponentiation
 - b. Modulus
 - c. Floor division
 - d. None of the mentioned above

V S manjunath - 22945A3904

20

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING
VALUE ADDED COURSE ON

IoT using Python Programming FROM 19/01/2023 TO 04/02/2023

ASSESSMENT TEST

Roll Number: 22945A3904 Name of the Student: V S manjunath

20
20

20

Time: 20 Min

(Objective Questions)

Max.Marks: 20

Note: Answer the following Questions and each question carries **one** mark.

1. **IoT stands for:**

[c]

- a) Internet of Tech
- b) Incorporation of Things
- c) Internet of Things
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- a. Smartwatch
- b. Andriod Phone
- c. Laptop
- d. Tubelight

3. **Which is not an IoT platform?**

[d]

- a. Xiaomi Cloud
- b. GoogleCloud
- c. Myntra
- d. AWS(Amazon Web Services)

4. **Which of the following can not be considered an IoT device?**

[d]

- a. Smartwatch
- b. Andriod Phone
- c. Laptop
- d. Tubelight

5. **IoT is based on _____ technology.**

[d]

- a. Hardware
- b. Software
- c. None
- d. Both of these

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[b]

- a. 8 bits
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- c. 48 bits
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7. What is an IoT network?

[a]

- a. a collection of networked devices
- b. a collection of Interconnected devices
- c. a collection of signalled devices
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8. What is the java extension file used in IoT?

[a]

- a. .jar
- b. .obj
- c. .cpp
- d. .exe

9. Which one out of these is not a Data Link Layer Technology?

[c]

- a. Bluetooth
- b. Wifi
- c. HTTP
- d. Mobile Hotspot

10. What is the standard form of LLN?

[b]

- a. Lower Lossy Network
- b. Low Power Lossy Network
- c. Lossy Low Power Network
- d. Low Lossy Powered Network

11. What type of interface is used by fingerprint sensors to collect data?

[b]

- a. IPI interface
- b. UART interface
- c. I2P interface
- d. None

12. How many wires does the SPI protocol use?

[b]

- a. 3
- b. 4
- c. 2
- d. More than 4

13. Amongst which of the following is / are the Numeric Types of Data Types? [d]

- a. int
- b. float
- c. complex
- d. All of the mentioned above

14. list, tuple, and range are the ___ of Data Types. [a]
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 - c. Boolean Types
 - d. None of the mentioned above
15. Float type of data type is represented by the float class. [a]
- a. True
 - b. False
16. bytes, bytearray, memoryview are type of the ___ data type. [c]
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 - d. None of the mentioned above
17. The type() function can be used to get the data type of any object. [a]
- a. True
 - b. False
18. 11. Amongst which of the following is / are the logical operators in Python? [d]
- a. and
 - b. or
 - c. not
 - d. All of the mentioned above
19. Is Python supports exception handling? [a]
- a. Yes
 - b. No
20. What is the name of the operator ** in Python? [c]
- a. Exponentiation
 - b. Modulus
 - c. Floor division
 - d. None of the mentioned above

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING
VALUE ADDED COURSE ON

IoT using Python Programming FROM 19/01/2023 TO 04/02/2023

Roll Number: 21941A0564 ASSESSMENT TEST
Name of the Student: H.V Sai Kumar

20
/ 20

Time: 20 Min | (Objective Questions) Max.Marks: 20

Note: Answer the following Questions and each question carries one mark.

1. IoT stands for:

- a) Internet of Tech
- b) Incorporation of Things
- c) Internet of Things
- d) Incorporation of Technology

[C] ✓

2. Which of the following cannot be considered an IoT device?

- a. Smartwatch
- b. Andriod Phone
- c. Laptop
- d. Tubelight

[D] ✓

3. Which is not an IoT platform?

- a. Xiaomi Cloud
- b. GoogleCloud
- c. Myntra
- d. AWS(Amazon Web Services)

[D] ✓

4. Which of the following can not be considered an IoT device?

- a. Smartwatch
- b. Andriod Phone
- c. Laptop
- d. Tubelight

[D] ✓

5. IoT is based on _____ technology.

- a. Hardware
- b. Software
- c. None
- d. Both of these

[D] ✓

6. What is considered the standard length for a MAC Address?

- a. 8 bits
- b. 32 bits
- c. 48 bits
- d. None of these

[C] ✓

7. What is an IoT network?

- a. a collection of networked devices
- b. a collection of Interconnected devices
- c. a collection of signalled devices
- d. None of the above

[01]

8. What is the java extension file used in IoT?

- a. .jar
- b. .obj
- c. .cpp
- d. .exe

[01]

9. Which one out of these is not a Data Link Layer Technology?

- a. Bluetooth
- b. Wifi
- c. HTTP
- d. Mobile Hotspot

[1]

10. What is the standard form of LLN?

- a. Lower Lossy Network
- b. Low Power Lossy Network
- c. Lossy Low Power Network
- d. Low Lossy Powered Network

[b]

11. What type of interface is used by fingerprint sensors to collect data?

- a. IPI interface
- b. UART interface
- c. I2P interface
- d. None

[b]

12. How many wires does the SPI protocol use?

- a. 3
- b. 4
- c. 2
- d. More than 4

[b]

13. Amongst which of the following is / are the Numeric Types of Data Types?

- a. int
- b. float
- c. complex
- d. All of the mentioned above

[d]

14. list, tuple, and range are the ___ of Data Types.

[a]

- a. Sequence Types
- b. Binary Types
- c. Boolean Types
- d. None of the mentioned above

15. Float type of data type is represented by the float class.

[a]

- a. True
- b. False

16. bytes, bytearray, memoryview are type of the ___ data type.

[c]

- a. Mapping Type
- b. Boolean Type
- c. Binary Types
- d. None of the mentioned above

17. The type() function can be used to get the data type of any object.

[a]

- a. True
- b. False

18. 11. Amongst which of the following is / are the logical operators in Python? [d]

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K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING
VALUE ADDED COURSE ON

IoT using Python Programming FROM 19/01/2023 TO 04/02/2023

ASSESSMENT TEST

Roll Number: 22945A3906 Name of the Student: y. Hemanth Kumar

17
20
SM

Time: 20 Min

(Objective Questions)

Max.Marks: 20

Note: Answer the following Questions and each question carries **one** mark.

1. **IoT stands for:** [c]
a) Internet of Tech
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c) Internet of Things
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2. **Which of the following cannot be considered an IoT device?** [a]
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c. Laptop
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3. **Which is not an IoT platform?** [d]
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5. **IoT is based on _____ technology.** [d]
a. Hardware
b. Software
c. None
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6. **What is considered the standard length for a MAC Address?** [b]
a. 8 bits
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c. 48 bits
d. None of these

7. What is an IoT network?

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- d. None of the above

[b]

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- a. .jar
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- c. .cpp
- d. .exe

[a]

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- c. HTTP
- d. Mobile Hotspot

[c]

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[a]

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- b. Binary Types
- c. Boolean Types
- d. None of the mentioned above

15. Float type of data type is represented by the float class.

[c]

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[a]

- a. Yes
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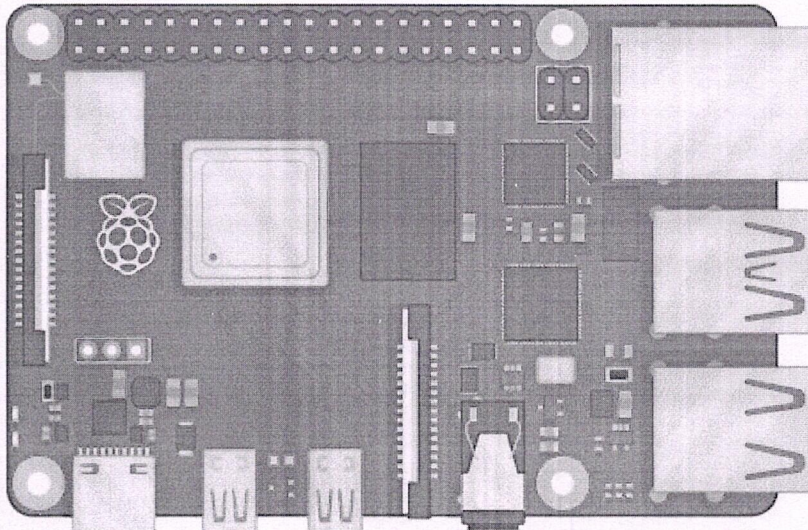
20. What is the name of the operator ** in Python?

[c]

- a. Exponentiation
- b. Modulus
- c. Floor division
- d. None of the mentioned above

Raspberry Pi

Raspberry Pi is a tiny (about 9x6cm), low-cost (\$35+), single-board computer that supports embedded Linux operating systems [2]. The recommended Operating System is called Raspberry Pi OS (Linux based). Figure 1.1 shows the Raspberry Pi.



The Raspberry Pi is a small computer that can do lots of things. It has a small footprint (about 9x6cm) and it is cheap (\$35+). You plug it into a monitor and attach a keyboard and mouse. It has so-called GPIO pins (General Purpose Input/Output) for connection sensors and other electronic components like LEDs, etc.

Raspberry Pi is as well suited for prototyping, datalogging and different electronics projects, a media center, etc. It can be used to learn programming, it and other technical skills, etc. RP has limited power (CPU, RAM, etc.) so it cannot normally replace a desktop computer or laptop for ordinary use. For more information about the Raspberry Pi, see: <https://www.raspberrypi.org>

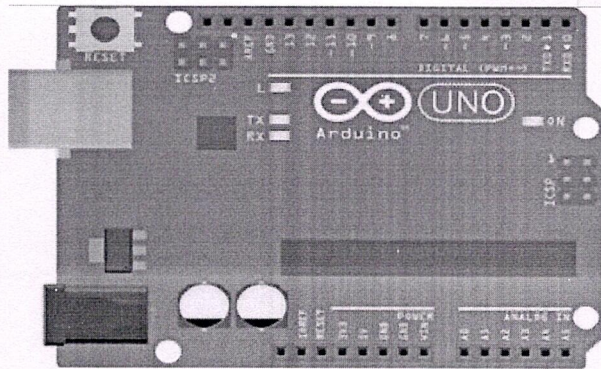
Raspberry Pi vs Arduino

You have probably already heard of Arduino? So what's the difference between Raspberry Pi and Arduino.

Figure 1.2 shows the Arduino Uno, which is the most popular Arduino device.

Here are the main differences: Raspberry Pi

- Raspberry Pi is a Microcomputer
- It has an ordinary Operating System (OS)
- You can connect USB devices, Keyboard, Mouse, Monitors, etc.
- It has a "hard-drive" in form of a microSD card
- RP has Bluetooth, Wi-Fi, and Ethernet connection



RP has basically all the features an ordinary computer has but in a much smaller package

- Uptill 8 Gb RAM
- RP runs Linux applications Arduino:
- Arduino is a Microcontroller
- Arduino has a Bootloader and not an ordinary operating system
- Arduino is NOT a computer, only a small controller, whose purpose is to control things
- No Bluetooth, Wi-Fi (some models have), and Ethernet (but can be provided as so-called Shields)
- Very little RAM (a few Kb)
- Inexpensive

Getting Started with Raspberry Pi

What do you typically need to get started with Raspberry Pi?

- Raspberry Pi
- microSD Card (+ Adapter)
- Power Supply
- microHDMI to HDMI Cable
- Monitor
- Mouse
- Keyboard

Raspberry Pi OS

In order make your Raspberry Pi up and running you need to install an Operating System (OS). The OS for Raspberry Pi is called "Raspberry Pi OS" (previously known as Raspbian). Raspberry Pi runs a version of an operating system called Linux (Windows and macOS are other operating systems). To install the necessary OS, you need a microSD card. Then you use the "Raspberry Pi Imager" in order to download the OS to the microSD card.

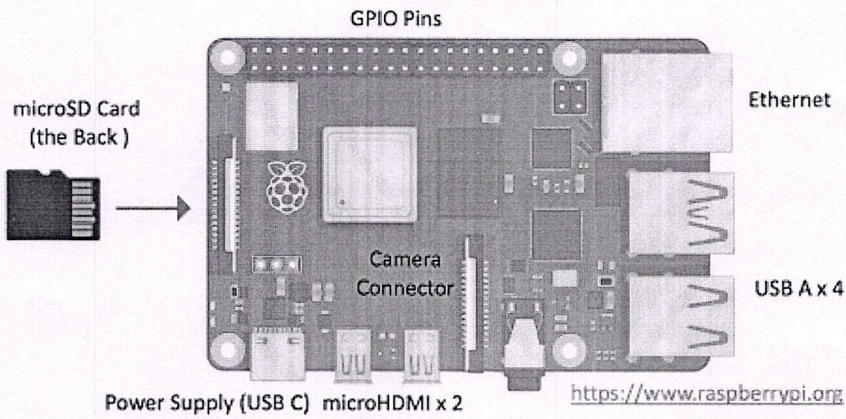


Figure 1.3: Raspberry Pi Connectors

1.5 Tools

1.6 Python Programming

Figure 1.6 shows Thonny.

Figure 1.6 shows Thonny Manage Packages.

1.7 GPIO Figure ?? shows the GPIO connector.

1.7.1 LED Figure 1.9 shows LED wiring.

Figure 1.10 shows LED wiring.

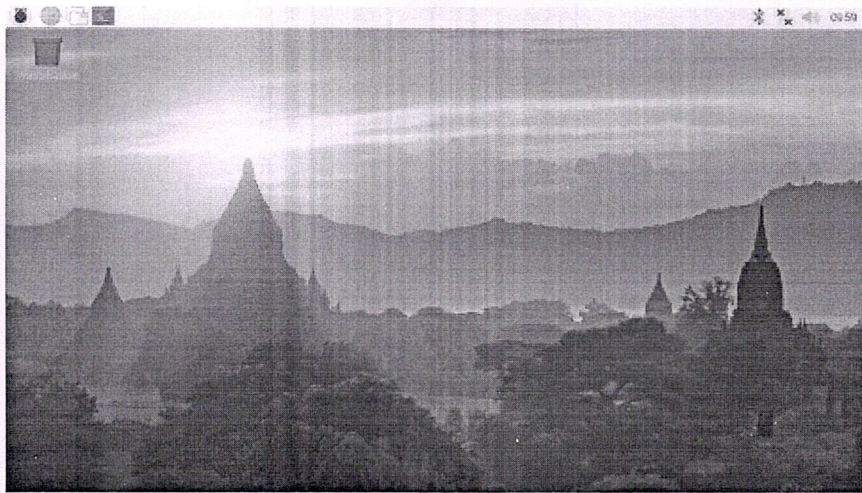


Figure 1.4: Raspberry Pi OS

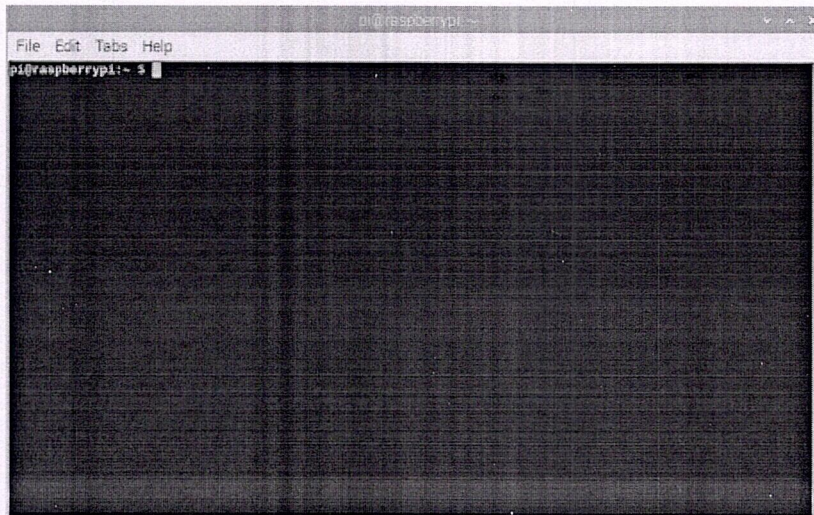


Figure 1.5: Tee Terminal

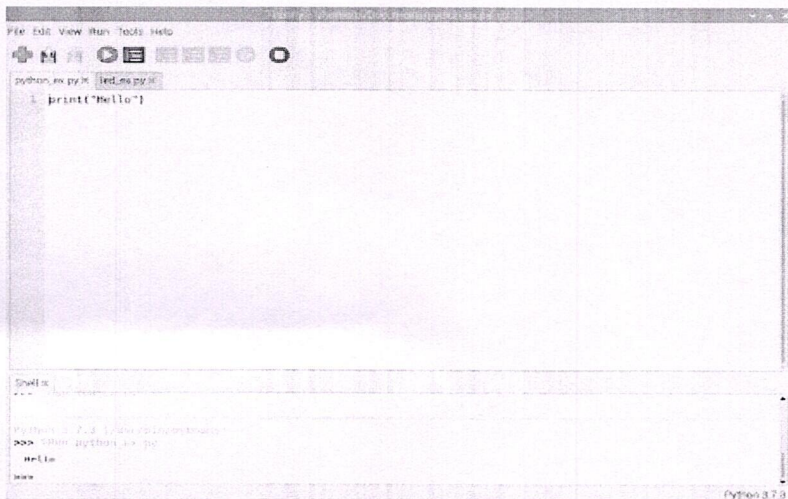


Figure 1.6: Thonny

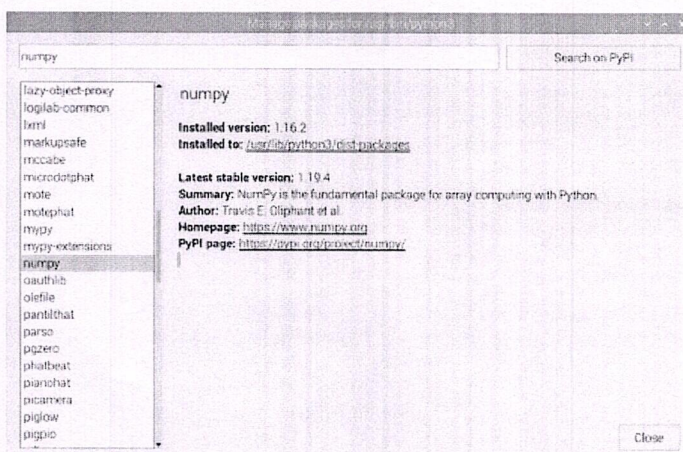


Figure 1.7: Thonny Manage Packages

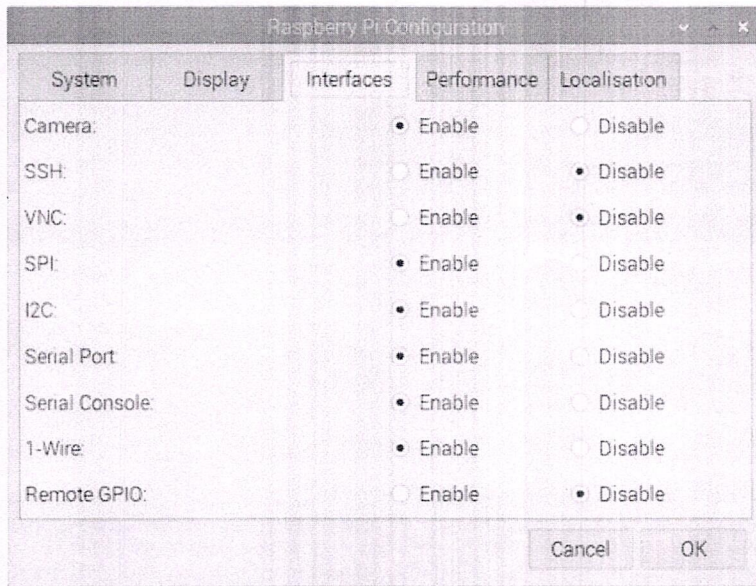


Figure 1.11: Enable/Disable Raspberry Pi Hardware Interfaces