# MIT Arts, Commerce & Science College

Alandi (D), Pune – 412105

# Department of Computer Application

Academic Year: 2018-19

Date: 20/02/2019

#### **NOTICE**

All the students of BBA(CA) are hereby informed that Department of Computer Application have organized 'Workshop on IOT using Python (Microsoft Certification) by Corecode IT Solutions Pvt Ltd., A Microsoft -AEP(Authorized Education Partner). Students are requested to avail this opportunity.

: - 22/02/2019 & 26/02/2019

Time : - 10:00 AM to 4:00 PM

Venue : - Lab 1,2,3

Prof. Akshada Kulkarni **HOD-Computer Application** 

Dr. B. B. Waphare Principal





### Course Content for 3-Day Workshop on IOT

#### 1. Understanding and Introduction to Raspberry Pi 3 (1Hrs)

- What is SOC?
- Versions of Raspberry Pi & Their Difference
- Raspberry Pi 3
- Basics of Electronics
- Hardware Description
- Pin Configuration

#### 2. OS Installation on SD Card (30Mins)

- Downloading Image
- Study Various Operating Systems Available
- Making SD Card: Formatting and Partitions
- Raspberry Pi SD Installer

#### 3. OS Configuration (30Mins)

- Booting Into Desktop
- GUI Version
- CLI Desktop
- Changing Time zone
- · Other Options
- Raspi-Config
- Test

#### 4. Network Setup (30Mins)

- Setting Up Using GUI
- Setting Up Using Command Line
- Finding Pi's IP Address
- Connecting with Wi-Fi/ LAN/ Data card

#### 5. GPIO (2hrs)

Study GPIO Pins



- Libraries Using Git
- Configuring GPIO Pins

#### 6. Plusing SSH (30Mins)

- Enabling SSH
- Logging in using Putty
- Run Basic Commands
- Use GPIO

#### 7. Linux (5Hrs)

- Understanding Linux
- File Structure
- Linux Commands
- Permissions

#### 8. Using Python (6Hrs)

- Understanding Python
- Interpreted Languages
- Variables, Keywords, Operators and Operands
- Data Types in Python
- Flow Control
- Condition Statement
- Loops
- Importing Libraries
- Functions
- Classes

**Wireless Technologies for IoT :** WPAN Technologies for IoT: IEEE 802.15.4, Zigbee, HART, NFC, Z-Wave, BLE, Bacnet, Modbus.

**IP Based Protocols for IoT**: IPv6, 6LowPAN, RPL, REST, AMPQ, CoAP, MQTT.

Throughout the Workshop following projects will be covered:-

- 1. Weather (Temp and Humidity) Station.
- Build a cloud-ready temperature sensor with the Arduino Uno and the anyloT Platform: This project shows the building of a temperature sensor.
- IoT based Stepper Motor Control with Raspberry Pi:
   The combination of Raspberry Pi and IoT is an exciting one. Raspberry Pi has many general purpose I/O pins and has the ability to control different actuators like



stepper motors. In this project, an internet control of stepper motor using Raspberry Pi computer is developed. The connectivity is divided into server side software and client side software.

- IoT based Web Controlled Home Automation using Raspberry Pl.
- A Simple IoT Project with the ESP8266 WiFi module: Here is a simple project with ESP8266 wi-fi module. This project collects the temperature and is displayed on the network.
- 6. Implement a RFID Based IoT Project

Remark - This syllabus is of Microsoft - MTA designed by Microsoft.

CAPARNA

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COURSE CO-ORDINATOR

PROF. AKSHADA KULKARNI

HOD, COMPUTER APPLICATION

DR. B. B. WAPHARE

PRINCIPAL





Affiliated to Savitribai Phule Pune University & Recognized by Government of Maharashtra (ID No. PU/PN/ASC/289/2007)

#### MEMORENDUM OF UNDERSTANDING

This Memorandum of Understanding is being executed on 14-Feb-2019 between M/s Corecode IT Solutions Pvt. Ltd., A Microsoft — AEP (Authorized Education Partner) having its registered Address: 238, UdyogVihar, Phase-IV, Gurgaon -122001 and represented by Mr.Niranjan Singh (Director Operations), hence for purpose of agreement known as "Delivery Partner" (DP) And MIT Arts Commerce and Science College, Alandi(D), Pune represented by Dr. B. B. Waphare (Principal), hence for purpose of agreement known as "Resource Partner".

- 1. Training will be provided free of cost by Corecode IT Solutions to students who enroll/buy the certification exam.
- 2. Program Details

Sr. No	Certification mapped free Workshop	Certification Exam Cost with two Attempts after discount	Reg Amount	Balance Fees	Program Duration
1	Mapped to Microsoft MTA exam 98-	2690 + 18% GST/- Students will get 2 <sup>nd</sup> attempt sponsored For free	Rs.1000	Rs. 2174/- to be paid when free workshop starts	18-20hrs (3days)
2 Security Fundamentals  Mapped to MTA exam 98-367		2690 + 18% GST  Students will get 2 <sup>nd</sup> attempt sponsored For free	Rs. 1000	Rs. 2174/- to be paid when free workshop starts	18-20hrs (3 days)
3	Web Development using HTML 5 or ASP.net Mapped to MTA exam 98-375/98- 372	2690 + 18% GST  Students will get 2 <sup>nd</sup> attempt sponsored For free	Rs. 1000	Rs. 2174/- to be paid when free workshop starts	18-20 hrs (3 days)

A Commence of the Commence of	CPMA using HTML 5, CSS, Javascript	2690 + 18% GST  Students will get 2 <sup>rd</sup> attempt sponsored For free	fts. 1000	Rs 2174/- to be paid when free workshop starts	18-20 hrs (3 days)
5	Machine Learning using Python Mapped to MTA 98-381	2690 + 18% GST  Students will get 2 <sup>nd</sup> attempt sponsored For free	Rs. 1000	Rs. 2174/- to be paid when free workshop starts	18-20 hrs (3 days)
6	Data Analytics using R Customised Training	2990 + 18% GST  Students will get 2 <sup>nd</sup> attempt sponsored For free	Rs. 1000	Rs. 2528/- to be paid when free workshop starts	20-22 hrs (3-4 days)
7	Advanced Excel  Mapped with  MOS exam  77-420	2690 + 18% GST  Students will get 2 <sup>nd</sup> attempt sponsored For free	Rs. 1000	Rs. 2174/- to be paid when free workshop starts	18-20 hrs (3 days)

- 3. Fees will be directly collected by Corecode In case of the college / institution collects the same, they would transfer it max within 7 days of collecting it.
- 4. The fee charged is against Microsoft Certification exam & all other services are complimentary / bundled free & cannot be linked anywhere with the release of payment to Corecode (Corecode IT Solutions Pvt. Ltd.)
- 5. Resource partner would provide training slots during holidays /weekends within the college premises of min 6-8 hrs. for each session either during regular college or on weekends sat/sun, after due consultation with Delivery Partner and based on the availability of trainer. The duration of the training may increase as per the level of participants & shall not be linked with the release of payments.



- 6. The tenure of the contract would be for a period of three years i.e. from 14th Feb 2019 to 13<sup>th</sup> Feb 2022, once the agreement is signed between Resource Partner & Delivery Partner, the same cannot be terminated for at least one year from the signing of agreement.
- Prices & Contents of the training module(s) may be reviewed & revised at the time of renewal of MOU.
- Delivery Partner would provide a free faculty development program (2 days) for faculties
  of "Resource Partner" and provide exam vouchers equivalent to 10% of students enrolled.
- "Resource Partner" would be Provided10% 'Resource Utilization Fees'against use of infrastructure and other resources for the bundled free training.
- 10. Students would be receiving the Certificates and other materials in e format.
- 11. Internship Opportunities & Student Exchange Programme for Certified Students.
- "Resource Partner" will provide the prerequisite infrastructure like lab(s) with Computers, LCD Projector(s), internet etc. required for training.
- 13. In Case of any dispute or difference whatsoever arising between the parties out of relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach there of shall be settled by arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties. "However, the court of jurisdiction would be New Delhi."
- 14. "Resource Partner" cannot hire any resource or take services from any current exemployee of the Delivery Partner either directly or indirectly for any full time or part time assignment (Only for mentioned modules in agreement/MOU) without the permission of the Delivery Partner for a minimum period of one year that also after the contract with the college has expired.
- 15. "Resource Partner" must follow from time to time rules / regulation & operational protocols laid down by Microsoft /other international vendors for their respective certification.

16. "Resource Partner" must issue a letter of successful completion once the program is completed on college letter head.

Sign. of College Authority

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Corecode IT Solutions Pvt. Ltd.

MIT Arts Commerce & Science College

Principal
MIT Arts, Commerce & Science College
Alandi, Pune - 412 105.

## list of Students Rgistered For Microsoft Certification Course of IOT using Python

1	s.no	Name Of Students	Class	Mobile No.
-	1	Karan Mehta	TY BCA-'A'	7719911587
-	2	Ankita Kokate	TY BCA-'A'	7020685723
-	3	Peeyush Kumar	SY BCA-'B'	7744890867
1	4	Akash Gauri Shankar	TY BCA-'A'	8446642710 - 2774
-	5-	Kiran Bari	SY BCA-'A'	9049790966
-	6	Jyoti Shinde	SY BCA-'A'	9421990583
1	7	Rutiya Gosavi	SY BCA-'A'	7447673558
	8	Mihir Wagle	SY BCA-'A'	9404311412
1	9	Mrunali Suryawanshi	SY BCA-'A'	9527345658
1	10	Akhilesh Verma	SY BCA-'A'	8208007159
1	11	Pranalee Solaskar	SY BCA-'A'	9130107486
	1.2	Vaibhav Vishwam	SY BCA-'B'	7277875530
	13	Abhishek Ramesh	SY BCA-'B'	9767975629
P	14	Samrendra Singh	SY BCA-'B'	7028327830 26/2
-	15	Niraj P. Wadgare	SY BCA-'B'	7028327830-26/2 7875169465 -> zer gerwedgurc
1	(16	Abhiram S. Borwankar	SY BCA-'B'	9834405501
	27	Shubham A. Manjekar	SY BCA-'B'	8830118213
	18	✓ Praneet Sarkar	SY BCA-'B'	7218734037
	19	Vidya Borhade	SY BCA-'A'	7057785207
	20-	Abhinav Saxena	TY BCA-'B'	7261973113
	121	Chetan Kumar	TY BCA-'B'	9146513191 - 26 2114
	22	Swapnil Karajanagi	SY BCA-'A'	9665822770 ~ 2012
	23	Varun Kumar	SY BCA-'A'	7218852791
	V24	Aniket Walunj	SY BCA-'A'	9860634643 + ~ ~ ~ ~ ~ ~ ~ ~ ~
	25	Aishwarya Bhosale	SY BCA-'A'	8087415090
	26	Khushbu Sisodiya	SY BCA-'A'	
	. 27	Sourabh Gore	SY BCA-'A'	
	28	Syed Aman Ahmed	SY BCA-'A'	
	- 29	Mansi Upadhyay	SY BCA-'A'	
1	30	Mohammad Danish	TY BCA-'B'	1/82951820 1 > 1 P CU.

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Akshada Kulkarni

**Head Computer Application** 

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6) Abhinar Saxena	1.	90
7) Varun Kumar	Varia	89
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3) Aishwarya Bhosale Bi) Mrunali Suryawanshi <sup>o</sup>	Arherali	83
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28] Mahash Tombde 86 29) Akhilesh Varma 30) Aniket Walunj Author

## MIT Arts, Commerce & Science College, AlandiD), Pune-412105 Department of Computer Application

#### Microsoft Certification Exam

Course: IOT using Python

**Attendance Record** 

Date: 15/04/2019 Time: 10:00 AM to 12:00 Noon

Sr. No.	Name	Class	Mobile Number	Email Id	Sign
1	AKash Gauri Shankal	TYBCA	8446642710	akashqo710@gmaij.com	Acash.
2	Abhinau Saxena	TYBCA	7261973113	abhinavs 162@gmail.com	Way.
3	Chetan Kumar	TYBCA	9146513/9/	whicheten @ gmail.com	Children
4	Mninali Suryawash.	SYBCA	3527345658	mmalismyawans hi@gm	
5	Reeyish Rumay.	34 BCK	9028876191	Kperyush 6@quail.igm	ON.
6	Syed Aman Ahmed	STBCA	9423805192	amanahmed 00 70 rediffmile	ر اس
7	Abhiran Borwankar	SYBBA(CH)	9834405501	abhiramboxuunkar@gmail.com	_
8	Vidga Bostade	SYBBA CA)	9766615207	Vidyabor hade 810 @ grail	
9	Mansi Wadhyay	SYBBA(CA)	7752875251		
10	Swapnil Karajanagi	SY BBA(CA)	9665822770	mansi ubadhyay 9794(a) g mail·com Swapmil Karajanagi 120 cogmail	\$
11	Mohammad Danish	SYBBA((A)	9511935021	dmohammad 469@gmill	
12	Ankita Kokate	TYBBA (CA)	9923801081	ankukoKate00@gmail-com	
13	Aniket Walunj	SYBBA (CA)	7.3090760	ence water water it agrail	Auturi
14	Varun Kumar	SYBBA (CA)	72188527	Vary 106 rail 998 Ognail	com Varu
15	Abhishek Ramesh	SY BBA (UA)	9767975629	athished. namesh 22145 00 gra	Abbert

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CORECODE IT SOLUTIONS Pvt. Ltd.

### **INVOICE**

CUM (DEBIT / CREDIT MEMO)

TO DATE: 26<sup>th</sup> February ,2019 PAN NO:- AAECC8030H Corecode IT Solutions Pvt. Ltd.

MIT Arts Commerce & Science College (MIT ACSC) - Alandi, Pune, Maharashtra 412105

Invoice No: Corecode/MITACSC/2018-2019/655 Course: IOT Using Python

	S.NO	Cr.no	Program Name	Number of Students	day (b)	Rate	Amount
	001	Cc:1655	IOT Using Python	Total Registrations: Workshop = 1	30	2690	Rs.80,700
				18% GST on Rs.2690	30	484	Rs.14,520
			3. p	TOTAL	30	3174	Rs.95,220
-			2-1	() RUF @ 10 % on base price Rs.2690	30	269	Rs.8,070
			, ,	(Paid to MITACSC)			
	Sevent		n words (INR): usand Six hundred y. /-	Final Amount Need to Receive from MITACSC ,Pune After deduction @ 10 % RUF from Base Amount	30		Rs.72,63

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WE LOOK FORWARD TO YOUR CONTINUED PATRONAGE @ CORECODE IT SOLUTIONS PVT. LTD.





# Arts, Commerce & Science College

Alandi (D), Pune – 412105

## Department Of Computer Application

Academic Year: 2018-19

Report On "Workshop on IOT using Python (Microsoft Certification)"

#### Objective of Activity:

Internet of Things is rapidly growing and most demanding Technology in Computer Field. The aim of this workshop was to make students understand about internet of things technology, & encourage them to make use of python technology.

#### Activity Details:

The workshop was organized from 22<sup>nd</sup> February to 26<sup>th</sup> February, 2019. As per the MOU signed with Corecode IT solutions Pvt Ltd., A Microsoft -AEP(Authorized Education Partner) Workshop was conducted. Various Programming techniques were taught using Python programming language. Finally, the participants were able to make programs by their own.

#### Outcome:

We received a sound response for this workshop. Total 30 students enrolled for the same. Students got the Microsoft Certification for the above said workshop and they were motivated to learn new technologies.

Prof. Akshada Kulkarni

HOD, Computer Application

Principal

