BHAGWAN MAHAVIR COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated To Gujarat Technological University, Ahmedabad)

(Institute ISTE Chapter No: 2559)

REPORT

ON

AICTE-ISTE APPROVED ONE WEEK STTP UNDER INDUCTION/REFRESHER PROGRAMME ON

"IMPLEMENTATION OF INTERNET OF THINGS (IoT) WITH PYTHON PROGRAMMING" (HANDS ON PRACTICE)

Organised by Department of Computer Engineering, Department of Electronics and Department of Electronics & Communication Engineering

(9TH – 13TH JANUARY 2018)

Convener: Dr. Raendra R. Sawant
Co-ordinator: Prof. Pratik Pasiyawala
Co-cordinator: Prof. Rahul Gonawala

BHAGWAN MAHAVIR EDUCATION

FOUNDATION, SURAT

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भारतीय तकनीकी शिक्षा संस्था
INDIAN SOCIETY FOR TECHNICAL EDUCATION
(Under the Societies' Registration Act XXI of 1860)

Prof. Vaidya Vijay Dattatray
Executive Secretary

ISTE/Proceedings/STTP-SF/GUJ-43/2017-18 October 24, 2017

Proceedings of Executive Secretary, ISTE

Sub.: Sanction to conduct full-time AICTE-ISTE Self Financing orientation/refresher programmes for the year 2017-2018.

Please refer to your proposal for conducting STTP on Self Financing Basis. In this regard it is informed that ISTE has signed MoU with AICTE to conduct Orientation and Refresher programs on Self Financing basis. These programs will be jointly certified by ISTE and AICTE. The aims for the conduct of the programmes are: -

- Updating the knowledge improving organizational and pedagogical skills of teachers.
- To update the knowledge providing an opportunity for interaction and mutual exchange of ideas between teachers interested and/or working in particular areas of specialization.
- Providing an opportunity for teachers to familiarize themselves with modern engineering practices, including the latest technological advances adopted by industry keeping in view the National needs and priorities and relevant technologies.
- Opening up before teachers new vistas in technology at the frontiers of knowledge and the challenges and opportunities these provide to the dedicated and hard working.

It is my pleasure to consider your program under this plan. In this connection sanction is hereby accorded to you for the conduct of the programme on self-financing basis under AICTE-ISTE Self Financing orientation/refresher programme.

Name of Institution	:	Bhagwan Mahavir College of Engg. & Tech. Surat – 395 017
Topic	:	Implementation of Internet of Things (IOT) Technology with Python Programming
Name & Address of Coordinators	:	Dr. Rajendra R. S. Professor Mr. Pratik K.P. Asst. Prof.
Duration	:	One Week (Minimum 05 Working Days)
Proposed dates	:	18-12-2017 to 22-12-2017

Terms and Conditions:-

1 The institution offering the Programmes should be approved by AICTE and must be Institutional Member of ISTE. Institutions having ISTE Faculty Chapter and Students Chapter shall be preferred.

2 There will be no financial commitment on the part of ISTE on account of this programme.

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3 ISTE Life membership is necessary to attend SF programmes. However, If any participant is not having life membership he/she may take membership of ISTE before the starting of the course and apply by paying the fee to the course coordinator at the spot before the commencement of the programme.

4 The fee of one proposal is Rs. 1000/- paid by DD in favour of ISTE New Delhi along with proposal.

5 This will be a full-time program and duration of 1 week/2 weeks/4 weeks.

6 A processing and operational charges @Rs.300/- per participants including certificate printing and handling and postage charges is to be paid to ISTE Headquarters after the program along with the final report as mentioned in item 8 below.

7 The registration fee of the participants may be fixed by the host institution.

8 Within 15 days after completion of the Programme the final report including list of participants (with their ISTE Membership Number or filled up application forms/list of non-members with Life Membership fee), detailed schedule of the programme with dates, copy of the course notes, list of resource persons invited with full address, contact details, topics, minimum five photographs and a video CD of selected sessions must be sent to ISTE Headquarters, Delhi along with a combined DD @Rs300/- per participant as mentioned above and membership fee for non-members, if any, in favour of **"ISTE, New Delhi".**

9 The EC/SMC Member of ISTE preferably from nearby area may be invited during the STTP.

10 Participation Certificates will be issued jointly by ISTE Hqs. & AICTE New Delhi to the participants. Course Coordinator to kindly ensure correctness of the names in the list/soft copy of participant's names to enable ISTE to print names exactly the same as appear in the list provided. ISTE HQs Delhi will send participation certificates back to the course coordinator ISTE will ensure that the certificates shall be issued only to those participants who meet the above norms.

11 The Programmes shall be considered for the Career Advancement Scheme of AICTE.

Executive Secretary

To,

Dr. R.R. Sawant
Director
Bhagwan Mahavir College of Engineering & Technology
Sr. No. 149, Nr. Ashriwad Vilia, B/H Heena Bungalows
New City Light Road, Bharthana, Vesu, Surat – 395 017
Gujarat State

Copy to:

Mr. Pratik K. Pasiyawala
Coordinator
Bhagwan Mahavir College of Engineering & Technology
Sr. No. 149, Nr. Ashriwad Villa, B/H Heena Bungalows
New City Light Road, Bharthana, Vesu, Surat – 395 017
Gujarat State

AICTE-ISTE Approved One Week STTP under Induction/Refresher Programme on

"Implementation of Internet of Things (IoT) with Python Programming"

(Hands on Practice)

Date: 9th to 13th Jan 2018

Organised by

Computer, Electronics, Electronics & Communication, Engineering Department

Bhagwan Mahavir College of Engineering & Technology,
BMEF Campus, VIP Road, Bharthana Vesu,
Surat, Gujarat 395017

ABOUT THE INSTITUTE

Bhagwan Mahavir College of Engineering and Technology (BMCET), Surat is one of the leading Institute in Gujarat established in 2008. The true success does not lie in result only; the education with moral and ethical values gives true success in life. Therefore we continuously invite eminent personalities for providing better benchmark to the students and faculty member.

ABOUT DEPARTMENT

Computer, Electronics ,Electronic and Communication Engineering are very vast and emerging branch. All Departments comprise of competent, qualified and devoted staff members who are from various sub streams of parent branch. Department develops with all Infrastructure facilities, Instruments, Laboratories, Department Library etc. Department always connected with technical events.

ABOUT THE STTP

Internet of Things offers advanced connectivity of devices, systems, and services that goes beyond machine-to-machine communications and covers a variety of protocols, domains, and applications. This STTP covers the current Industry Trends in IoT which encompass a wide range of skills that are integral and necessary part of everyday business, day life or work environment. The hands on sessions and lectures are designed with interactive training and workshops which equip its participants with better practical understanding to develop an expertise.

TOPIC TO BE COVERED

1. IoT architecture
2. WiFi Module
3. Raspberry Pi Board
4. Raspberry Pi GPIO
5. Sensors and actuators
6. Python Programming
7. Offline and online servers
8. Case studies of IoT application
8. Node MCU
9. Lua programming

RESOURCE PERSONS

(1) Dr. Y. S. Rao, Professor and Dean (R&D), SPIT, Mumbai

(2) Dr. Shweta Shah, Assistant Professor, Electronics Engineering Dept., SVNIT, Surat.

(3) Dr. Anand D. Darji, Professor, Electronics Engineering Dept., SVNIT, Surat.

(4) Dr. Hiren Mewada, Associate Professor, E.C Engineering Department, CSPIT, Charusat, Changa, Gujarat.

(5) Prof. Jignesh Patoliya, Assistant Professor, E.C Engineering Department, CSPIT, Charusat, Changa, Gujarat.

(6) Mr. Keyur Chauhan, Shreeji Charan Electronics Pvt. Ltd.

(7) Mr. Nandulal Gavali Manager, Aakar Engineering Pvt. Ltd. , Pune.

WHO SHOULD ATTEND

Faculty members, PG students and Research Scholar of Electronics, Electronics and Communication, Electrical, Computer engineering.

Professionals / Engineers from Industries & Government organizations.

REGISTRATION FEE

The registration fees for participants are as follow:

For ISTE member : Rs. 2000/-
For Non-ISTE member: Rs. 2500/-
For Industry Delegates: Rs. 3000/-

The course fee includes registration kit, breakfast, tea/coffee and lunch during training program. No TA/DA will be paid to participants.

CERTIFICATE

Participation certificates will be issued jointly by ISTE & AICTE New Delhi to Participants.

IMPORTANT DATES

Last date for receiving application
4th January 2018

CONTACT PERSONS

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Mr. Rahul Gonawala
Mobile No: 9879527380
Email: hod_ec.bmcets@bmefcolleges.edu.in

MANAGEMENT COMMITTEE

Patrons
Mr. Anil Jain and Dr. Sanjay Jain
Honourable Trustees, BMEF, Surat

Convener
Dr. (Prof.) Rajendra R. Sawant
Director, BMCET, Surat

Co-ordinator
Mr. Pratik Pasiyawala
Assistant Professsor, Electronics Dept., BMCET, Surat

Co-coordinators
Mr. Rahul Gonawala, Assistant Professor, Electronics & Communication Dept., BMCET, Surat

ORGANIZING COMMITTEE

Prof. Hiral Patel
H.O.D of EC/Elcetronics Engg. Department
BMCET

Prof. Krunal Patel,
H.O.D of Computer Engg. Department
BMCET

Prof. Nitin Patel
Assistant Professor
E.C Engg. Department, BMCET

Prof. Kavindra Patel
Assistant Professor,
Computer Engg. Department, BMCET

ADDRESS FOR CORRESPONDENCE

Bhagwan Mahavir College of Engg. & Tech.
Electronics & Communication Engineering Department
BMEF Campus, VIP Road, Bharthana Vesu, Surat, Gujarat 395017

HOW TO APPLY

The Participant is required to send scan copy of the filled application form along via email at pasiyawala.pratik@bmefcolleges.edu.in and hod_ec.bmcets@bmefcollegs.edu.in on or before 4th January 2018

Number of participants for the course will be limited to 70 only.

MODE OF PAYMENT

Participants can pay registration fees either by DD (Demand Draft) or by internet banking. For DD mode, participant have to make Demand Draft in favour of "**Principal, Bhagwan Mahavir College of Engineering & Technology**" Payable at Surat, Gujarat.

For internet banking, participant have to pay fees in following account. participant must send screenshot or acknowledge receipt which contain transaction number along with STTP application form duly signed by concerned authority on pasiyawala. pratik@bmefcolleges.edu.in

A/C Name: RAJENDRA R SAWANT
Bank Name: State Bank of India
A/C Number: 20377394994
IFSC Code: SBIN0018353

Schedule for One-Week ISTE STTP on Implementation of Internet of Things (IoT) Technology with Python Programming

9th Jan to 13th Jan 2018

Date	Day	Expert	9:30 AM to 11:00 AM	11:15 AM to 12:45 PM	1:45 PM To 3:15 PM	3:30 PM To 5:00 PM
09 Jan, 2018	**Tue**	Dr. Shweta Shah Assistant Professor, SVNIT, Surat	Inauguration, Introduction	IoT Communication Protocols	IoT Communication Protocols	IoT Architecture
10 Jan, 2018	**Wed**	Dr. Hiren Mewada Associate Professor CSPIT, Charusat, Changa,Gujarat	Introduction to Python Programming	Basics of Python Programming	Python Programming (LAB)	Python Programming (LAB)
11 Jan, 2018	**Thu**	Mr. Jignesh Patoliya Associate Professor, CSPIT, Charusat, Changa,Gujarat	Programming of NodeMCU	Expert Lecture on Recent trend in IoT (Dr. Anand Darji Professor, SVNIT, Surat)	Interfacing of Node MCU (LAB)	Interfacing of Node MCU (LAB)
12 Jan, 2018	**Fri**	Mr. Keyur Chauhan Shreeji Charan Electronics Pvt. Ltd.	Expert Lecture on IoT Applications (Mr. Nandulal Gavali, Manager, Aakar Engineering Pvt. Ltd. , Pune)	Raspberry Pi GPIO	Programing of Raspberry Pi using Python Programming (LAB)	Offline server and online server (LAB)

13 Jan, 2018	**Sat**	Dr. Y. S. Rao Professor and Dean(R&D), SPIT,MUmbai	Case Study of IoT	Case Study of IoT	Quiz and Feedback	
11:00 AM to 11:15 AM: Tea and Breakfast Break						
12:45 PM to 1:45 PM: Lunch Break						
3:15 PM to 3:30 PM: Tea Break						

Expert faculty/Researcher/ Industry person

(1) Prof. (Dr.) Shweta shah (PhD, M. Tech. (Communication System), B.E. (Electronics Engineering))

Assistant Professor,
Research Interests: Wireless Communication, Mobile Communication and Standards, Digital Video Broadcast and Standards, Cognitive Radio, NavIC/IRNSS.
Department of Electronics Engineering,
S.V. National Institute of Technology, Surat, Gujarat.
Email: snshah@eced.svnit.ac.in, shahshweta13@gmail.com

(2) Prof. (Dr.) Hiren Mewada (B.E(EC), M.Tech.(C.S.E.)., Ph.D.)

Associate Professor,
Research Interests: Signal, Image Processing with FPGA.
Department of Electronics & Communication,
Chandubhai S. Patel Institute of Technology, CSPIT, Charusat, Changa, Gujarat.
Email: hirenmewada.ec@charusat.ac.in
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(3) Mr. Jignesh Patoliya (B.E (E.C), M.E (C.S.E), Ph.D. (Pursuing))

Assistant Professor,
Research Interests: Embedded systems, 8051 Micro controller, Microprocessors, Advanced Microprocessors, RISC Microcontrollers, Digital Electronics, RTOS, Real Time system, embedded software and implementation, IOT
Department of Electronics & Communication,
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(4) Prof. (Dr.) Anand Darji (B.E (Electronics) M.Tech (Electronics Systems), IIT Bombay Ph.D. (Microelectronics), IIT Bombay)

Assistant Professor,
Research Interests: VLSI Design, FPGA-based systems design
Device modelling, VLSI DSP architecture, Embedded System Design
Electronics Instrumentation, Signal Processing, Bio-medical Signal/image processing
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S.V. National Institute of Technology, Surat, and Gujarat.
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(5) Mr.Nandulal Gavali (B.E. , M.Tech Power Electronics, IIT Powai)
Manager at Aakar Engineering.Pvt.Ltd,
Pune, Maharashtra.

(6) Prof. (Dr.) Y.S.Rao (B.E. Electronics Engineering, M.E. Electronics Engineering, Ph.D (IIT Bombay))
Vice Principal, Professor & Head of Department
Research Interests: Embedded System, Digital Power Electronics, VLSI Design, Wireless Sensor Networks
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List of Participants & Registration Detail

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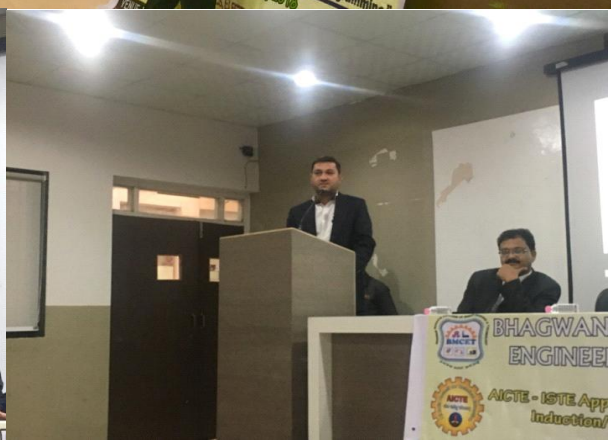
Session wise Details

Objective of STTP on “Implementation of Internet of Things with Python Programming” is to study architecture and protocols of IoT, to study basics of python programming with hands on, Selection of IoT devices according to applications. To study architecture of NodeMCU, NodeMCU interfacing using python programming ,To study raspberry pi 3 architecture and GPIO. Interfacing of raspberry pi 3 using python programming, Upload and access data from cloud using NodeMCU and raspberry pi 3,Implement online and offline server using NodeMCU and raspberry pi 3.

One week short term training programme on “Implementation Of Internet Of Things with Python Programming” sponsored by BHAGWAN MAHAVIR COLLEGE OF ENGINEERING & TECHNOLOGY, Surat was held at Computer Engineering Department, BMEF Surat, during 9th January to 13th January. There were 73 participants who participated in the STTP. The participants were from different faculties like Electronics, E&C, Computer Technology.

The short term training programme started on 9th January with welcome address by Hon. Director of Bhagwan Mahavir College of Engineering & Technology Prof. (Dr.) Rajendra R. Sawant, Shri Amish jain, Campus facilitator of BMEF, Hon. Director of MS Polytechnic (Dr.) Hitesh Joshi They express the importance of Technology and the different tools along with it in our life, about the security of demerits of Technology; they also appreciate our initiative to make the value addition in our faculties and students.

Some Glimpses of Inaugural Function (9th January)



Day 1 (9th January)

Lecture session:

The first lecture session of the STTP was delivered by **Prof.(Dr.) Shweta shah (Assistant Professor,Ph.D.,Department of Electronics Engineering, S.V. National Institute of Technology, Surat, Gujarat)** who Introduced " **IoT Communication Protocols**" she discussed about History of IoT, Definition of IoT, IoT Application, IoT Reference Model. She also discussed IoT applications which are going to be implemented in near by future. She explain the best IoT example in which network can be created in under sea water to keep track of movement of any ships as well as to get data of water. She also explained the importance of designing of small sensors which consumed very less power for such kind of IoT applications. She explained cloud computing in detail by taking example of real time application of temperature sensor. According to her cloud computing does not mean to get and upload data on server, it means analysis of data which are to be uploaded on server continuously. The big job is to analyse data as we are getting a large amount of data in cloud based IoT application. If we have large amount of data but we did not analyse it and did not take any action according to received data then it there is no meaning of IoT application.

After lunch she continued on "**IOT Communication Protocols**" she discussed about challenges of IoT, Variety of IoT, Sensor Technology, What is IoT and WSN, Privacy in IoT, IoT Trends, future research scope, explained the difference in between IoT & Cloud after Tea break Explained about "**IoT Architecture**". She explained different IoT protocols like Wifi, Xbee, Bluetooth etc.. . As there are so many protocols for IoT applications, she explained how to select the best communication protocol for our IoT application. Different IoT protocol required different power requirement. So she suggest to use IoT protocol which consume less power , for those application in which we install our sensor module once, then we can not change battery of that sensor. She also explained how frequency range of IoT protocol affect the range of area. At the last participants asks some question based on sessions.

Day 2 (10th January)

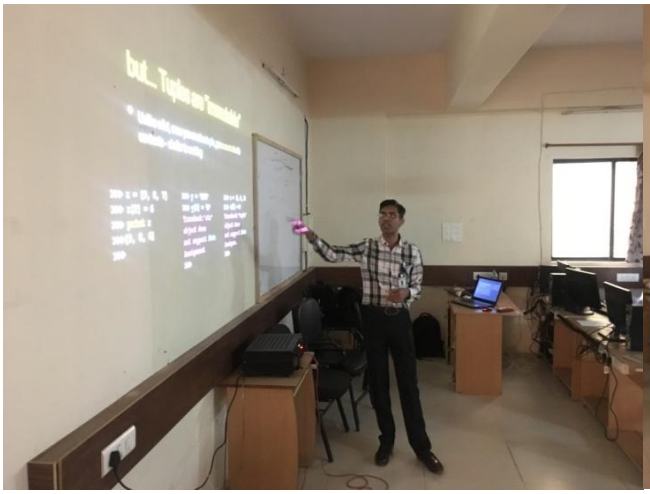
Lecture session:

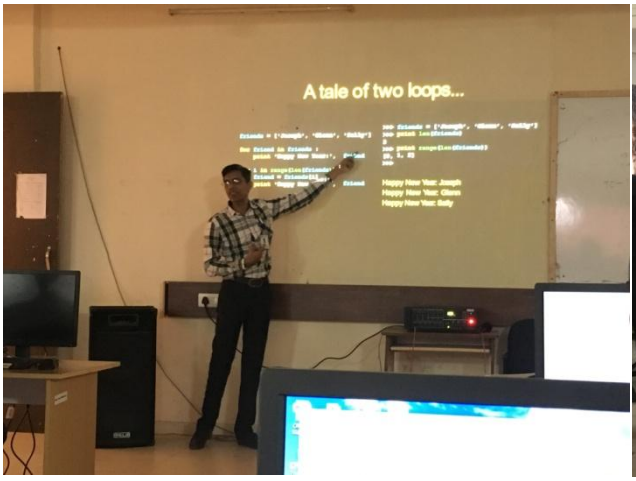
On Second day of STTP, Lecture session was started by **Prof.(Dr.) Hiren Mewada (Associate Professor,CSPIT,Charusat,Changa,Gujarat),**he discussed all steps of Python Installation. He explained importance of different packages supported by python. There are so many packages for python, but he suggest to install only numpy, scipy and matplotlibpy packages as these are basic packeges and by using there three packages all the basic practical or scientific calculation, 2D plot are possible. The he started with the comparison of python with different languages like C, FORTAN, C++. He explained that python is most powerful language as we can use it for different IoT platform like nodeMCU and raspberry pi. Then he explained difference between compiler , cross compiler and importance of compiler for any language. He discussed application of Python programming and Python variants. He explained the difference between python 2.0 and python 3.0 as both have different syntax to perform same operation. He explained importance of python terminal window and python editor window. A single command can be directly executed in terminal window whereas whole program can written in editor window and then we can run it by just pressing on run button.

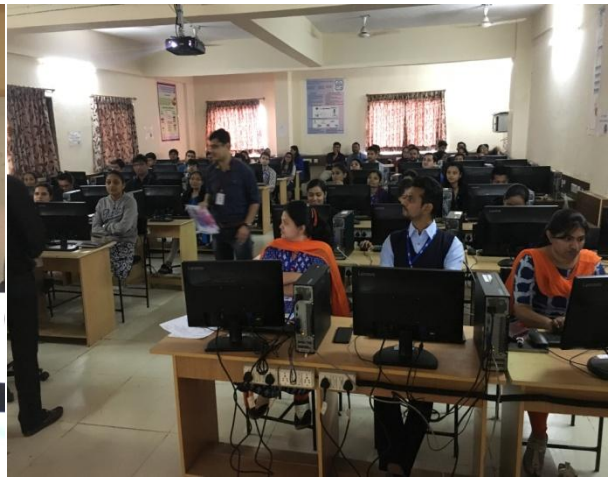
Lab session:

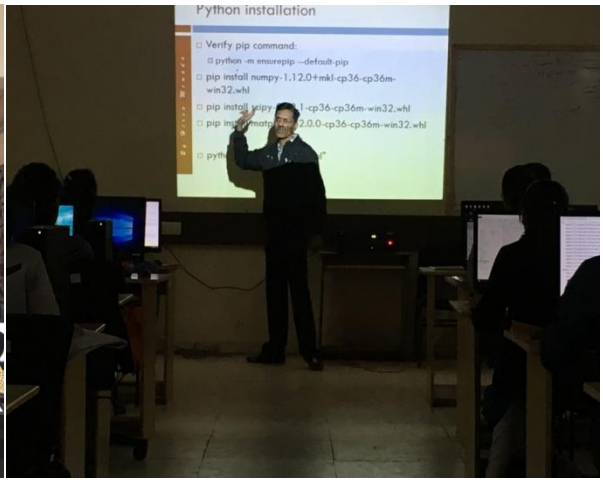
After the lunch break lab session started and **Prof.(Dr.) Hiren Mewada** sir has explained almost all the topics on Python Programming, syntax, slicing the strings, program using logical operator ,string comparison, search and replace, parsing and extracting, condition execution, nested if else, extending a List, list in ordered sequence, built in function and lists, Tuples, Buggy, Function without or with arguments, Doc strings, function as argument, inner functions, alias, module search path, packages, hierarchical modules, etc. All participants have performed practicals related to topics as mentioned above. He explain how to write a simple function in python, as well as how to call a function, how to pass value in function and how to return value in function. He also explain difference between mutable and non-mutable. He also explain for loop, while loop, if , if…else, nested if else loop in detail with examples. He also gave some problems to participants to solve by coding in python.

Glimpse of Second Day (10th January)









Day 3 (11th January)

Lecture session:

On the third day, session was started by lecture of ,**Mr. Jignesh Patoliya (Assistant Professor ,CSPIT,Charusat,Changa,Gujarat)**. He explained basics of IoT , IoT architecture and IoT layers. He discussed Importance of IoT in our daily life. He classified IoT platform basically in four categories like microprocessor, microcontroller, SOC(system on chip),FGPA (Field Programmable Gate Array). He also discussed how to select best IoT platform according to our application as above mentioned platform have different range in price. Then he explained most popular IoT devices like arduino Yun and NodeMCU in detail with all pinout and other requirements. He also explained about Arduino shield which is very useful to convert simple Arduino uno device in to IoT device. He suggest to use raspberry pi as IoT platform , in those application in which we require computation power more. Whereas he suggest to use NodeMCU where we need to control only some devices. At the last he also explained most poputer wifi module ESP8266 and world most chipset computer. He Also explained different types of sensors which can be used to develop IoT application.

He also discussed basic programming knowledge required for NodeMCU programming. He also gave the brief detail idea about development of IoT applications and IoT services using NodeMCU.

After tea break **Prof. (Dr.) Anand Darji (Assistant Professor, Department Of Electronics Engineering, SVNIT, Surat, and Gujarat)** has delivered the expert lecture on recent trends on IoT. He discussed basic structure of IoT technology. He also gave brief introduction of IoT communication protocols which are used in recent technologies. He discussed IoT application in field of transportation, medical and defence. He also explained new discovery board of TI which can be used to develop IoT application. He also discussed security issues in IoT and recent challenges in development of secure network for IoT.

Glimpse of third day (11th January)

Lab session:

And after lunch break session was continued by **Mr.Jignesh Patoliya**. During this hands on session, he explained how to install basic software which are required for NodeMCU. He also explained how to configure or upgrade firm ware of nodemcu with computer software. He explained the programming syntax differences than other programming language, explained importance of Python programming with NodeMCU, after another tea break the session was continued and discussion about free cloud service, discussed about thinkspeak, how to data transfer from sensor to web portal, web portal to sensing device, what the difference, how to configure etc. participants developed cloud based IoT applications in which data from device was continuously uploaded over the cloud. Participants also done interfacing of LED, LCD, switches and buzzer with nodemcu using micro-python programming.

Day 4 (12th January)

Lecture session:

Day 4 session was started by **Mr.Keyur Chauhan (Shreeji charan electronics. Pvt. Ltd, Anand) and his two team members Mr. Bhargav Patel and Rakshita Patel .** The session was about IoT Applications, which microcontroller Industry uses now a days, Digital Humidity Temperature sensors, Importance of Cloud computing, Analytics , Programming languages used in IoT in recent times. He explained importance of Python Programming in IoT Prototyping. He explained how to download Raspbian operating system in microsd card, and how to get IP address of raspberry pi to start coding on it. Then he explain Raspberry Pi board layout and GPIO. He also explained different mode available in raspberry pi for GPIO programming.

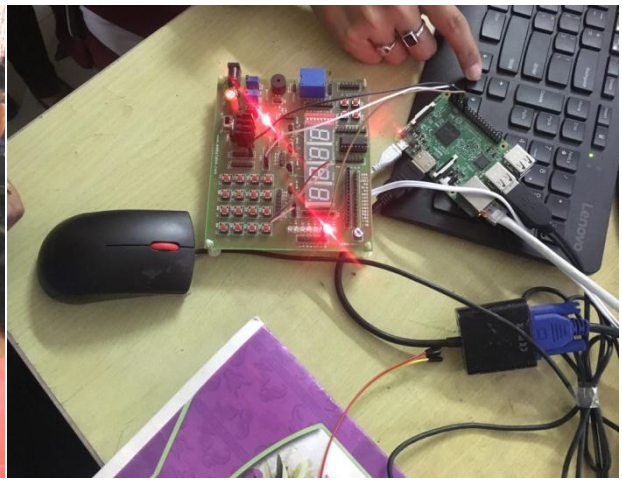
Lab session:

After lunch break, Hands on session was started by **Mr.Keyur chauhan and his two team members.** They explained Node Red, installation of Node Red, configuration of Raspberry Pi kit with keyboard mouse display, how to install OS on Raspberry Pi, and that Lab session was continued after small tea break. All participants have done interfacing of LED, switch, LCD , buzzer and Temperature sensor with raspberry pi. All participants also developed IoT application in which data from sensors was collected and uploaded on server.

Glimpse of fourth day (12th January)





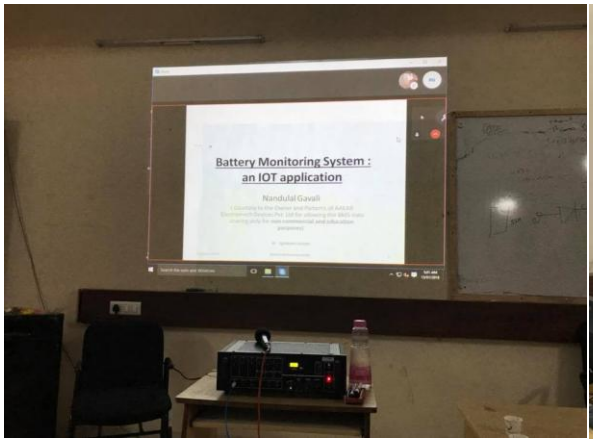



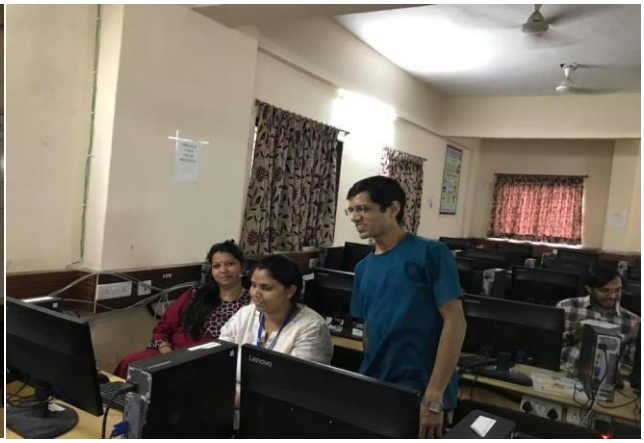
Day 5 (13th January)

Lecture session:

First session was video conference with **Mr.Nandulal Gavali (Manager at Aakar Engineering.Pvt.Ltd, Pune.)**. He delivered expert lecture on IoT applications. Day 5 lecture session was started **by Hon.Prof.(Dr.) Y.S.Rao(Professor & Dean (R&D) ,Sardar Patel Institute of Technology, Mumbai.)**He started the session with Importance of Battery monitoring system in IoT Devices, Component design for Battery monitoring system, discussion about Solar Photovoltaic & Solar thermal energy, Power generation in india, Flash memory, Disruptive technologies.

Glimpse of fifth day (13th January)



Lab session:

After the lunch break lab session was started where he introduced SPP (Serial Port Protocol), Bluetooth module, AT command with wifi, zigbee, GSM and GPS, SIM-808.

Between the sessions, **Mr. Nandulal Gavali** (Manager, Aakar Engineering, Pune) had webcast his experience of developing idea on IoT. It was great experience to have his practical knowledge towards Internet of things.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ENGINEERING & TECHNOLOGY
VLSI/DD/BE LAB

Outcome:

The STTP may help faculty to aware about controlling devices over Wifi using Node MCU and raspberry pi 3. Faculty may able to write python program of simple IoT application. Faculty able to interface various sensors with NodeMCU and raspberry pi 3, collect data from sensor, upload data on cloud and control devices using that data.

Feedback Forms

Bhagwan Mahavir Education Foundation's

Bhagwan Mahavir College of Engg & Tech

One-Week ISTE STTP on Implementation of Internet of Things (IoT) Technology with Python Programing

Feedback Form

Objectives of the workshop:

to study architecture and protocols of IoT
to study basics of python programming with hands on
Selection of IoT devices, according to applications.
to study architecture of NodeMCU
NodeMCU interfacing using python programming
To study raspberry pi 3 architecture and GPIO.
Interfacing of raspberry pi 3 using python programming
Upload and access data from cloud using NodeMCU and raspberry pi 3
Implement online and offline server using NodeMCU and raspberry pi 3

Expected Outcomes:

Faculty should able to control devices over WiFi using Node MCU and raspberry pi 3.
Faculty should able to write python program of simple IoT application.
Faculty should able to interface various sensors with NodeMCU and raspberry pi 3, collect data from sensor, upload data on cloud and control devices using that data.

Note: '5' suggest maximum and '1' suggest minimum for evaluation

1. Covered useful topics?

5. ✓ 4. 3. 2. 1.

comments.....

2. Theory/Practicals are to your needs and interests?

5. ✓ 4. 3. 2. 1.

comments.....

3. Knowledge and information gained from participation?

5. ✓ 4. 3. 2. 1.

comments.....

4. Will be applicable in your work/ Research?

5. ✓ 4. 3. 2. 1.

comments.....

5. Please comment on presentation style.

5. ✓ 4. 3. 2. 1.

comments. It was good & from scratch.

6. Please comment on organization of the event.

5. ✓ 4. 3. 2. 1.

comments.....

7. Points presented in logical easy-to-follow sequence?

5. ✓ 4. 3. 2. 1.

comments.....

8. What extent the objectives and expected outcomes of this STTP are fulfilled?

5. ✓ 4. 3. 2. 1.

comments.....

Session wise Feedback

		5/4/3/2/1 Marks	Comments
9/1/2018	Dr. Shweta Shah	5	She has delivered very well
10/1/2018	Dr Hiren Mevada	5	V. Good
11/1/2018	Mr. Jignesh Patoliya	5	V. Good, Very well delivered technically
	Dr. Anand Darji	5	V. Good
12/1/2018	Mr. Keyur Chauhan	5	V. Good.
13/1/2018	Dr. Y.S. Rao	5	V. Good, made us aware with recent research trends.
	Mr. Nandulal Gavali	5	V. Good.

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Institute: SCET. *Branch:* EC

Email: dhiren.bhagat@scet.ac.in. *Mob No:* 9898299266.

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   comments.....

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   5. 4. 3. 2. 1.
   comments..... Useful & dynamic

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   comments..... Well done Team Workshop !!

Session wise Feedback

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9/1/2018	Dr. Shweta Shah	3	
10/1/2018	Dr Hiren Mevada	4	
11/1/2018	Mr. Jignesh Patoliya	5+	Best Explaination Power & knowledge.
	Dr. Anand Darji	4	
12/1/2018	Mr. Keyur Chauhan	3	
13/1/2018	Dr. Y.S. Rao	4	
	Mr. Nandulal Gavali	4	

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Institute: SCET ***Branch:*** ECC

Email: sarosh.dastoor@scet.ac.in ***Mob No:*** 9825897672

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9/1/2018	Dr. Shweta Shah	4	
10/1/2018	Dr Hiren Mevada	4	
11/1/2018	Mr. Jignesh Patoliya	4	
	Dr. Anand Darji	5	
12/1/2018	Mr. Keyur Chauhan	–	
13/1/2018	Dr. Y.S. Rao	4	
	Mr. Nandulal Gavali	–	

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Email: naresh.patel@scet.ac.in ***Mob No:*** 9825723798

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10/1/2018	Dr Hiren Mevada	5	
11/1/2018	Mr. Jignesh Patoliya	5	
	Dr. Anand Darji	5	
12/1/2018	Mr. Keyur Chauhan	5	
13/1/2018	Dr. Y.S. Rao	5	
	Mr. Nandulal Gavali	5	

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Email: hod_ece-bmcet@bmcetcollege.in ***Mob No:*** 9427925219

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9/1/2018	Dr. Shweta Shah	5	–
10/1/2018	Dr Hiren Mevada	5	–
11/1/2018	Mr. Jignesh Patoliya	4	–
	Dr. Anand Darji	3	–
12/1/2018	Mr. Keyur Chauhan	5	–
13/1/2018	Dr. Y.S. Rao	4	–
	Mr. Nandulal Gavali	3	–

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