Workshop on Internet of Things for creating smart homes and cities

14-15th Sept., 2018

TEACHER'S ACTIVITY REPORT 2018 - 2019.

FACULTY: Science   DEPARTMENT/ COMMITTEE: Electronics   IQAC ACTIVITY No: SVC/2018-19/ELECT/NJ/1

NAME OF THE ACTIVITY Workshop on Internet of Things for creating smart homes and cities			
DATE	FACULTY	DEPARTMENT/COMMITTEE	COORDINATOR NAME
14-15th Sept., 2018	Science	Department of Electronics	Dr. Nutan Kala Joshi Dr. Rakhi Narang Ms. Shubhra Gupta
TIME	VENUE	NUMBER OF PARTICIPANTS	NATURE: Outdoor/Indoor
NA	ICT Lab III, Sri Venkateswara College	48	Indoor
SUPPORT/ASSISTANCE:	Sri Venkateswara College, Co-sponsored under DBT Star College Scheme, IEEE EDS Delhi Chapter		

BRIEF INFORMATION ABOUT THE ACTIVITY (**CRITERION NO. -   III**   ):

TOPIC/SUBJECT OF THE ACTIVITY	Workshop on Internet of Things for creating smart homes and cities
OBJECTIVES	To introduce internet of things and awareness about the security issues associated with IoT applications and devices.
METHODOLOGY	Invited lecture by Mr. Deepak Maheshwari followed by hands-on session on ATmega 8 microcontrollers by resource person Mr. Amritansh Ranjan
OUTCOMES	Session was conducted for undergraduate students from different streams with 48 students participated. The participants were given brief introduction about IOT, the role of technology in developing smart systems, its future scope for exchanging data with other devices over internet and security concerns related to IOT.

PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):

Notice & Letters √	**Student list of participation** √	**Activity report** √	**Photos** √	Feedback form
Feedback analysis	News clip with details	Certificate	Any other	

IQAC Document No:		Criterion No: III	Metric No:
Departmental file no		IQAC file No;	

NAME OF TEACHER & SIGNATURE	NAME OF HEAD/ COMMITTEE INCHARGE & SIGNATURE	IQAC COORDINATOR (SEAL & SIGNATURE)

Dr. Nutan Kala Joshi	Dr. Nutan Kala Joshi	

For Reference

Criterion I	Curricular Aspects (planning & Implementation)		Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation		Criterion VI	Governance
Criterion III	Research, Innovations & Extension		Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure			

Proofs

Summary Report :

The workshop started with an invited lecture on Internet of Things (IOT) Security and Privacy from Mr. Deepak Maheshwari , Director - Government Affairs, India, ASEAN & China, Symantec Corporation, Global Chair, IEEE Internet Initiative. on the topic: Internet of Things (IOT) Security and Privacy. The lecture gave an insight into the security concerns and risks involved in implementation of IOT ecosystem, challenges regarding the security of data and data protection framework. The prospect of Artificial intelligence as the new frontier for security and privacy was also discussed briefly along with IOT policy. Lecture was followed by a hands-on-session on Internet of Things for creating smart homes and cities by resource person, Mr. Amritansh Ranjan, Embedded Engineer from i3indya technologies, New Delhi, a Technical Training Service Company for School, Colleges, Corporate and Government Sector. Internet of Things is a new revolution of the Internet. A world where the real, digital and the virtual are converging to create smart environments that make energy, transport, cities and many other areas more intelligent. A device become a smart device is called IOT. The participants were given brief introduction about IOT and its role in developing smart systems. The practical part was carried out on ATmega 8 microcontrollers. The following projects were taken up by participants during the hands-on-session:

1. Blinking of LED.
2. Turn ON/OFF Buzzer at desired delay.
3. Transferring data serially from PC to microcontroller.
4. LDR SENSOR and Display sensor data on Hyper Terminal.
5. Configuration of AT commands and Acquire a control signal from an IP over WiFi.
6. IOT Platform (Think Speak / IBM Watson / Local Server)

Two days Workshop on "Internet of Things for creating Smart homes and cities"
14-15th September, 2018
Sri Venkateswara College

Time	Description
	SCHEDULE FOR DAY 1 (14.09.2018)
Time	Description
9:00 AM	Registration
9:30-9:40 AM	Inauguration
9:40-10:10 AM	Invited lecture by **Mr. Deepak Maheshwari** Director - Government Affairs, India, ASEAN & China, Symantec Corporation
10:10 AM	**Session I**
	Introduction to IoT.
	Future of IoT
	Wide description about Microcontrollers & ICs
	Memory organization & architecture.
	Input & Output peripherals interfacings.
11:30-11:45 AM	Tea break
11:45 AM	**Session II**
	Pin outs of ATmega8 Microcontroller
	Introduction to programming in embedded.
	Interfacing of LEDs and Buzzer.
	Writing first program in Embedded C.
1:30-2:00 PM	Lunch
2:00-2:15 PM	Kit Distribution
	Session-III Practical
2:15 PM	Practical-I Blinking of LED Project 1: Burning the program on Hardware with some different LED patterns.
3:00 PM	Practical 2: Turn ON/OFF Buzzer at desired delay.
	Integrated Chips.
	Interfacing Relays with Microcontrollers.
	Introduction to Relay Driver IC.
3:45 PM	Project 2: Turn ON/Off AC appliances with MCU at some delay.
	Serial communication
	UART in microcontrollers.
	Accessing internal UART
4:30 PM	Practical 3: Transferring data serially from PC to microcontroller.
	Introduction to ADC.
	How to detect the sensor values.
	Introduction to LDR SENSOR
5:00 PM	Project 3: Display sensor data on Hyper Terminal.

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	SCHEDULE FOR DAY 2 (15.09.2018)
	Session-IV
9:30 AM	Introduction To Wi-Fi.
	Practical 4: How to configure AT Commands.
	Introduction to TCP/IP
	IOT Platform (think speak / IBM Watson / Local server)
	Project 4 : Automatic Updates/uploads of sensor value on IP/web
11:15-11:30 AM	Tea break
11:30 AM	Project 5 : Real Time monitoring of sensors on a particular IP Address/server.
12:15 PM	Practical 5 : Acquire a control signal from an IP.
1:30-2:00 PM	Lunch Break
	Session-V
2:00 PM	Project 6 : IOT BASED SMART HOME
	IOT based Smart Lighting Intelligent and weather adaptive lighting in street lights for efficient use of power.
	A low cost smart irrigation control system
04:45 PM	Vote of Thanks and Certificate Distribution

List of students participated

Fee Receipt No.	Roll Number	Student's Name
IOTD42334453719	1616047	DEVENDRA SONI
IOTD45833643719	1616040	anurag negi
IOTD2047587719	1616017	Avaneesh Awasthi
IOTD40999646719	1618033	ABHISHEK SHARMA
IOTD39852954719	1618058	ABHISHEK SAINI
IOTD80667034719	1616009	Bhagat Singh
IOTD2269641719	1618061	TUSHAR
IOTD10379450719	1618027	AMAN MISHRA
IOTD99853228719	1618004	AKASH SRIVASTAVA
IOTD83364226719	1618035	JAY KUMAR TOMAR
IOTD55963012719	1618012	DIVYANSH RATHORE
IOTD37245020719	1618071	DEVASHISH PRATAP SINGH
IOTD66022357719	1817013	KIRAN KUMARI
IOTD99670635719	1617005	RUKHSAR SAYYED
IOTD50366853719	1618008	TANUJ KUMAR
IOTD59920858719	1817044	PREETI SONI
IOTD44391621719	1618025	Akshita Singh

IOTD66486511719	1618065	MUSKAN RANI
IOTD34263646719	1618060	TARUN KUMAR
IOTD1357379719	1817032	Nisha Yadav
IOTD72776141719	1618034	Nimit Vohra
IOTD64936012719	1618021	AASHNA LUTHRA
IOTD34494313719	1817047	HEMLATA CHOUDHARY
IOTD76607617919	1617027	KUSHAGRA PAL
IOTD5010735719	1817031	SWATI YADAV
IOTD82639130719	1817001	SHRIYA AGARWAL
IOTD23417429719	1618045	SAURAV SINGH SIKARWAR
IOTD81808242719	1817062	BHARTI OJHA
IOTD6009118819	1817011	ADITI RAWAT
IOTD47618911819	1618019	PRINCE KUMAR
IOTD4144325819	1618040	RIYA SHARMA
IOTD89534330819	1817022	LAKSHITA SANGWAN
IOTD11736256719	1617015	ANIKESH MAURYA
IOTD91838726819	1617004	SUMEDHA SINGH
IOTD20964729819	1817029	TANYA SAINI
IOTD55454823819	1616015	GAURI GUPTA
IOTD844587481019	1618044	ADARSH KUMAR JHA
IOTD93600751719	1817046	TANUSHREE CHOWDHURY
IOTD14480041819	1817014	ASTHA SHARMA
IOTD16765216819	1817037	KAMESHWAR
IOTD59177830819	1817036	Vansh Grover
IOTD9202279819	1616031	KAJAL SINGH
IOTD58510455819	1616007	SHUBHAM CHAUHAN
IOTD3538565819	1617011	NANCY TYAGI
IOTD49089625919	1617041	PRIYANSHU
IOTD150637131019	1618041	SATYAM
IOTD808277201019	1618009	DINESH
IOTD692426541019	1618066	RAHUL SINGH

SRI VENKATESWARA COLLEGE
(University of Delhi)

Internal Quality Assurance Cell

This is to certify that the Activity report (Teacher/Department /Society/Association) has been submitted for documentation to IQAC, Sri Venkateswara College, University of Delhi.

N. Latha

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