ST. FRANCIS COLLEGE FOR WOMEN, HYDERABAD
ACADEMIC YEAR 2023 - 2024
DEPARTMENT OF COMPUTER SCIENCE

Report on Hands – on Training on "Building Smart IoT Solutions"

Date: Jan - Feb 2024

Brochure:

The Department of Computer Science organized a **Hands- on Training on "Building Smart IoT Solutions"** under DBT STAR COLLEGE for the B.Sc. II Year students in St. Francis College- CS Lab 7. Around 65 students participated. The resource person was Mr. G.N.L. Ravi Teja, Founder & Manager Tejasya Innovative Solutions and Pvt LTD.

St. Francis
College for Women
Begumpet, Hyderabad-500016
(Autonomous & Affiliated to Osmania University)
NAAC Re-accredited with 'A' Grade 4ᵗʰ Cycle

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DEPARTMENT OF
BIOTECHNOLOGY
सत्यमेव जयते

Session 1:

Date:4 – Jan -2024

Time: 9am – 3pm

Objective:

- To make students understand the interconnected world of Internet of Things, exploring its applications and impact on various industries.

Outcome:

- Familiarized with various electrical instruments, sensor technologies, data analytics, and real-world examples, providing insights into the transformative potential of technology and communication.
- Updated knowledge on how to run a code through node MCU and light a LED through Arduino software through various time stamps.

Session 2:

Date: 6 – Jan -2024

Time: 9am- 1pm

Objective:

The aim of this session was to run a code through NODE MCU and light two LEDs which glow with different time stamps.

Outcome:

- Students have approached to next level learning on delay of lighting of one LED corresponding to the other LED and controlling two LEDs at same time.
- Students were also able to see the output on screen. The screen prints "ON" when the LED is lit and "OFF" when the LED is off and also learnt about how a half-duplex and a bout baud rate works.

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Session 3:

Date: 11 – Jan -2024

Time: 9am- 3pm

Objective:

The aim of this session was to concentrate on the intensity of LED that is glowing and how the intensity of LED changes with time and learnt how to change the intensity of LED.

Outcome:

- Students were introduced to the concept of sensors and their types.
- Students learnt how to measure the distance using an ultrasonic sensor.
- This session has also taught to calculate temperature and humidity using a device known as DHT (Digital Humidity and Temperature).
- Learnt how the servo motor works and the applications of it along with handling of the motor angle while it rotates.

Session 4:

Date: 16 – Jan -2024

Time: 9am- 3pm

Objective:

The aim of this session was to introduce the concept of LDR (Light Dependent Resistor).

Outcome:

- Familiarized with the concept of finding the moisture level of soil is done using a device known as soil moisture detector.
- Students were also given the insights about the different projects like home automation, soil moisture detector, face recognition device.

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Session 5:

Date: 31 – Jan -2024

Time: 9am- 3pm

Objective:

The aim of this session was to introduce innovative ways to control devices

Outcome:

- Students were taught about how to control devices using another device like a phone, laptop and were able to create a console to control the IoT devices.
- Students learnt to control devices like ultrasonic sensor, LED, soil moisture detector using the console and were introduced to BLYNK an IOT platform used to control Arduino, raspberry pi and Node MCU via the internet.

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