TECHKRITI '21

ECDC 2021
ABSTRACT

Event Name: EMBEDDED

Team Name: TRITONS

Tech ID: 10826

Institute Name: Motilal Nehru National Institute of Technology

Team Leader's Name: Abhishek Prasad Seth

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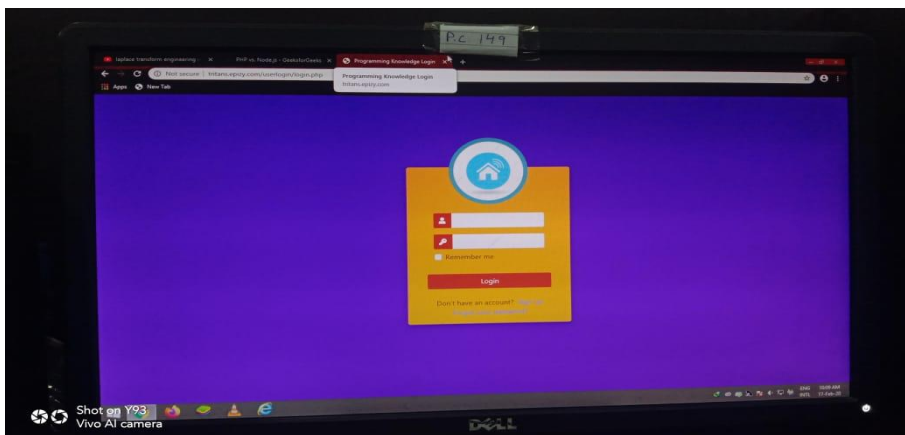104, New Student Activity Center, IIT Kanpur

Based on IOT, our Home Automation project has been designed and developed in order to provide accessibility and security as its major concern.

Features we are providing to user are –

1. 4 modes of accessing electrical equipment's

    They are – a) WEBSITE (Global)
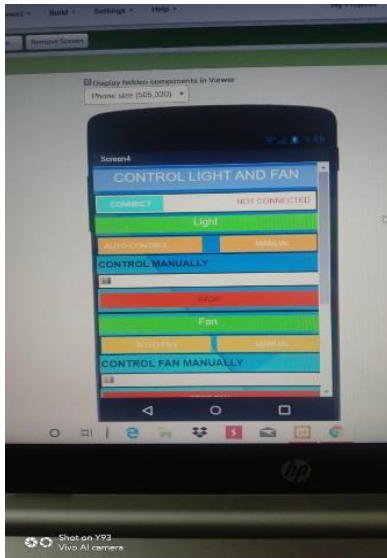
b)APP (Global)　　　　c) GUI
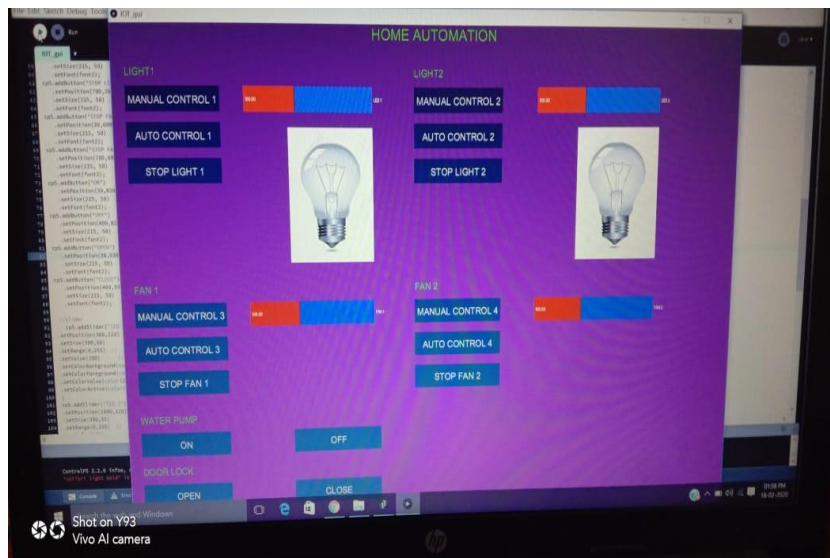
d)FULLY AUTOMATED – Whole system works according to its surrounding environment.

2. Controlling speed of fans and brightness of AC bulbs.
3. Automatic water pump for saving electricity and water wastage.
4. An email alert if there is fire in kitchen as well as quick spray of water.
5. Controlling door lock from app and website.
6. Display of data of state of devices on website and app.
7. Two-way communication between the unit and app & website with security passwords enabled.
8. Solar panels to charge the batteries and controlling street/garden lights according brightness of sun.
9. Using motion sensors to detect the human presence.
10. Burglary detection and notification.
11. A central display to show necessary information.

Major Components used are-

Arduino Mega, Nodemcu, Relays – 5V, Water Pump -12V, Motor - 12V, Motor driver, L.E.D, Bulb- 12W and 7W, Servo Motor, IR sensor, DHT 11, Smoke sensor, L.D.R, Ultrasonic sensor, Solar Panel.