WELCOME

INTERNET OF THINGS(IOT)

INTRODUCTION OF IOT

- The Internet of Things (IoT) describes the network of physical objects – “things” – that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet

MENTOR DETAILS

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TRAFFIC MANAGEMENT

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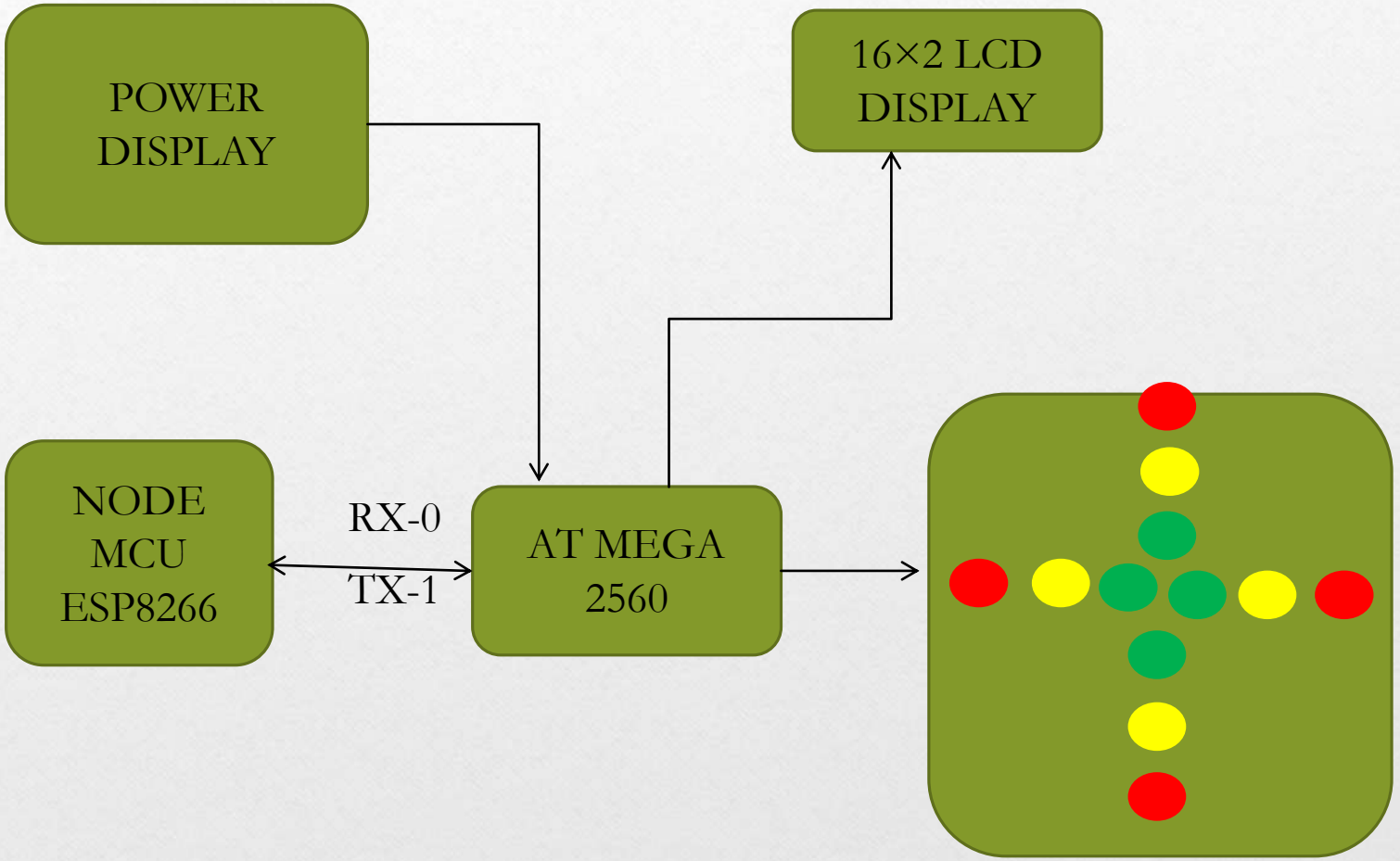
PROBLEM DEFINITION

- The project involves using IoT devices and data analytics to monitor traffic flow and congestion in real-time, providing commuters with access to this information through a public platform or mobile apps. The objective is to help commuters make informed decisions about their routes and alleviate traffic congestion. This project includes defining objectives, designing the IoT traffic monitoring system, developing the traffic information platform, and integrating them using IoT technology and Python.

DESIGN THINKING

1. **Project Objectives:** Define objectives such as real-time traffic monitoring, congestion detection, route optimization, and improved commuting experience.
2. **IoT Sensor Design:** Plan the deployment of IoT devices (sensors) to monitor traffic flow and congestion.
3. **Real-Time Transit Information Platform:** Design a web-based platform and mobile apps to display real-time traffic information to the public.
4. **Integration Approach:** Design a web-based platform and mobile apps to display real-time traffic information to the public.

BLOCK DIAGRAM



HARDWARE/SOFTWARETOOLS/ SPECIFICATION

- BLYNK APP
- NODE MCU ESP8266
- AT MEGA 2560
- 16×2 LCD DISPLAY
- DUAL LED
- STEP DOWN TRANSFORMER
- LED
- 5V 1A ADAPTER
- WIRES

REFERENCES

- City of Troy, Michigan, "SCATS Traffic Signal System." August 2000 <http://www.ci.troy.mi.us/TrafficEngineering/sindex.htm >.
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- "Manual of Uniform Traffic Control Devices for Streets and Highways." Federal Highway Administration, Washington, DC, 2003.
- Kell, J.H., and I.J. Fullerton. "Manual of Traffic Signal Design." Institute of Transportation Engineers, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1998.
- https://youtu.be/dM7ntZMwVw?si=2esjftK1×EtrRfFJ

THANK YOU