

كلية الهندسة بشبرا

FACULTY OF ENGINEERING AT SHOUBRA

Embedded Systems Training



Traffic light controller

Name:

Asmaa Mohamed Fawzy

Embedded System

A system is an arrangement in which all its unit assemble work together according to a set of rules.

And as the name suggests, Embedded means that these systems are usually an integral part of a larger system.

Embedded Systems are Application-specific systems which contain hardware and software that are designed to perform a dedicated and repeated function and are generally part of a larger system.





What are Embedded Systems Applications?



Industrial Robots



GPS Receivers



Digital Cameras



DVD Players



Wireless Routers

Embedded Systems



MP3 Players



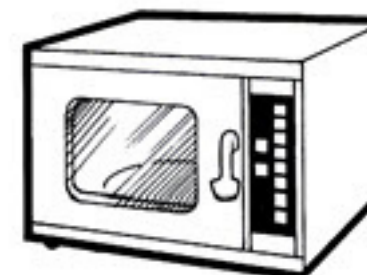
Set top Boxes



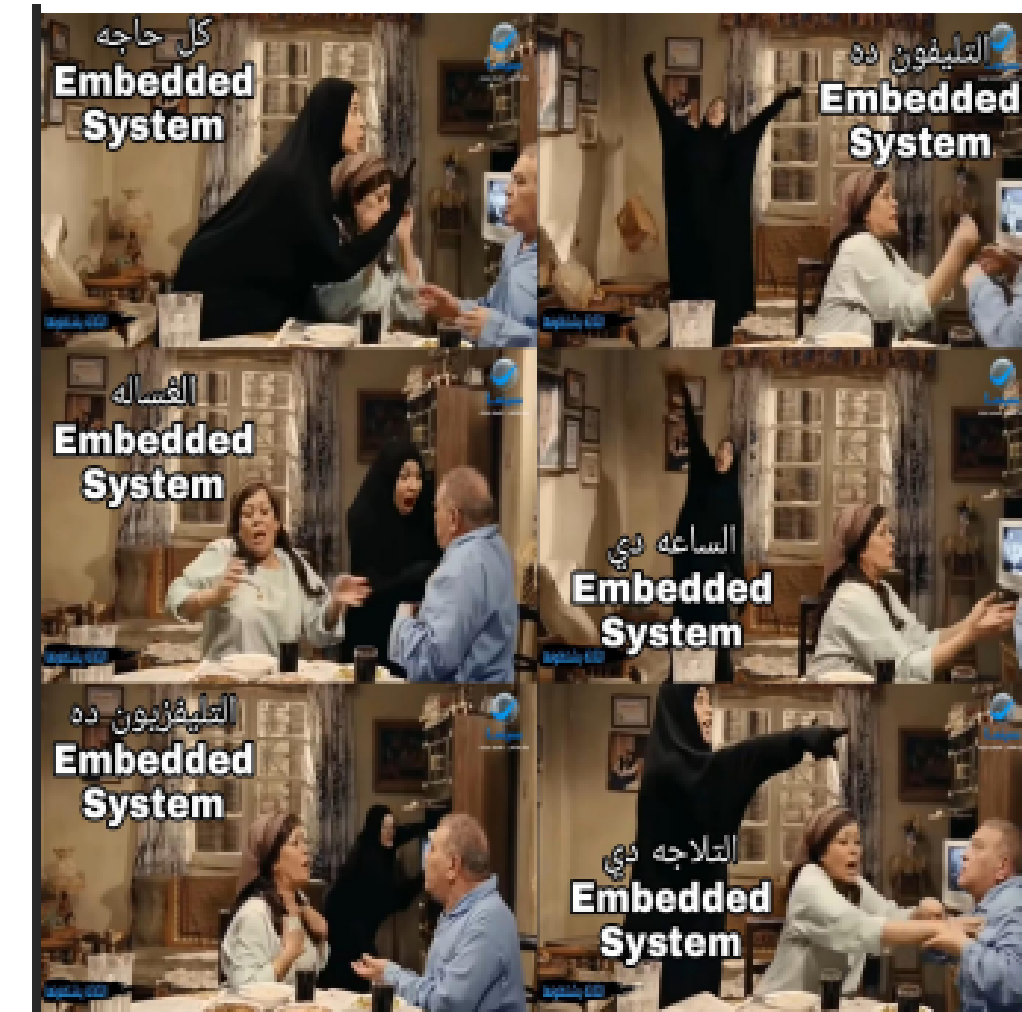
Gaming Consoles



Photocopiers



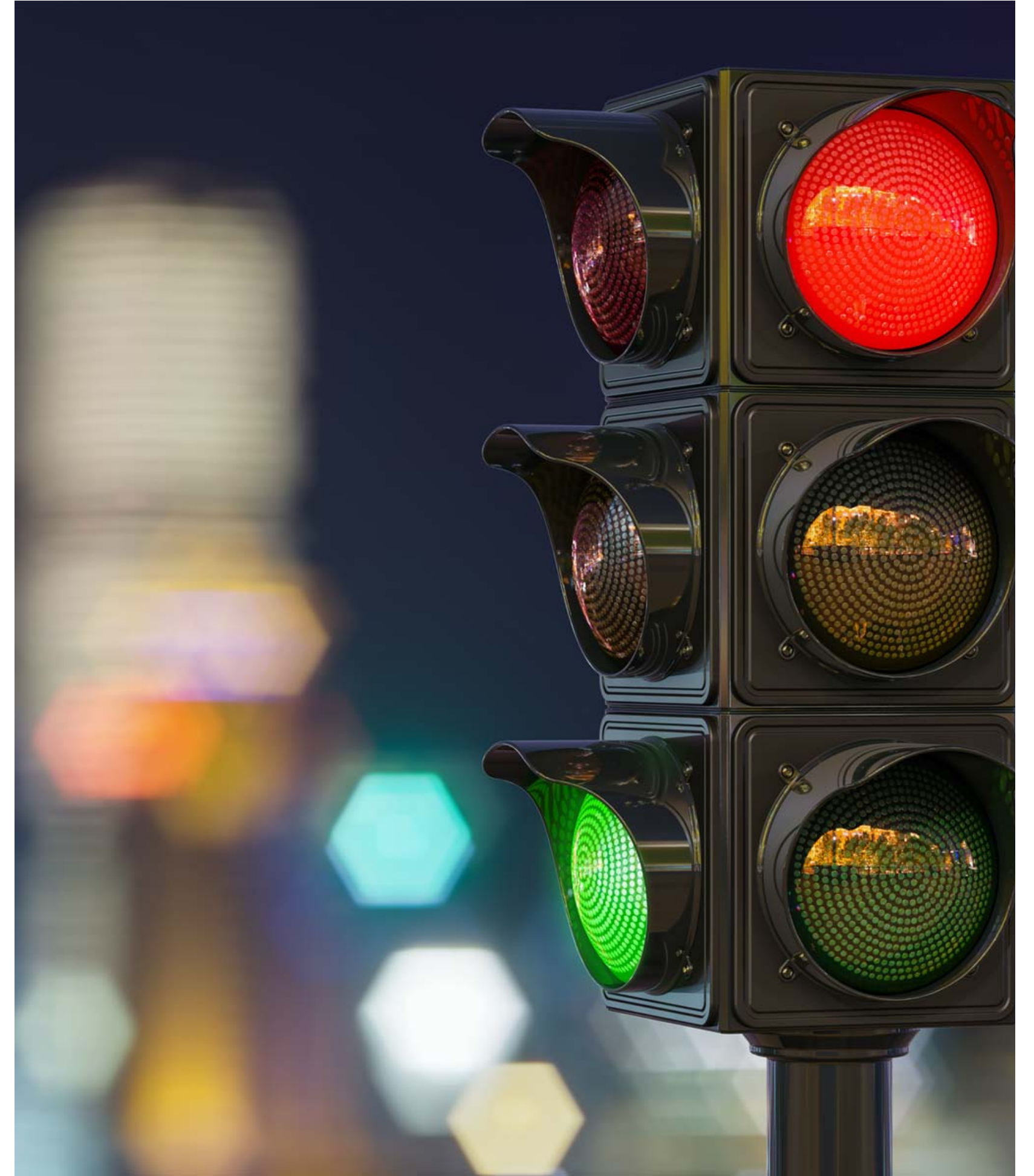
Microwave Ovens

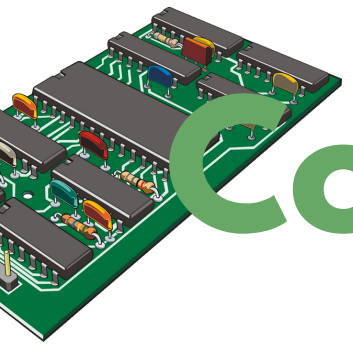


Traffic Light

are signalling devices positioned at road intersections, pedestrian crossing, and other locations in order to control the flow of traffic.

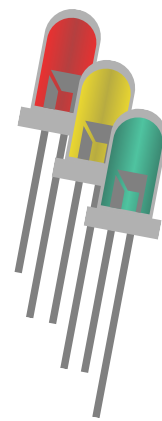
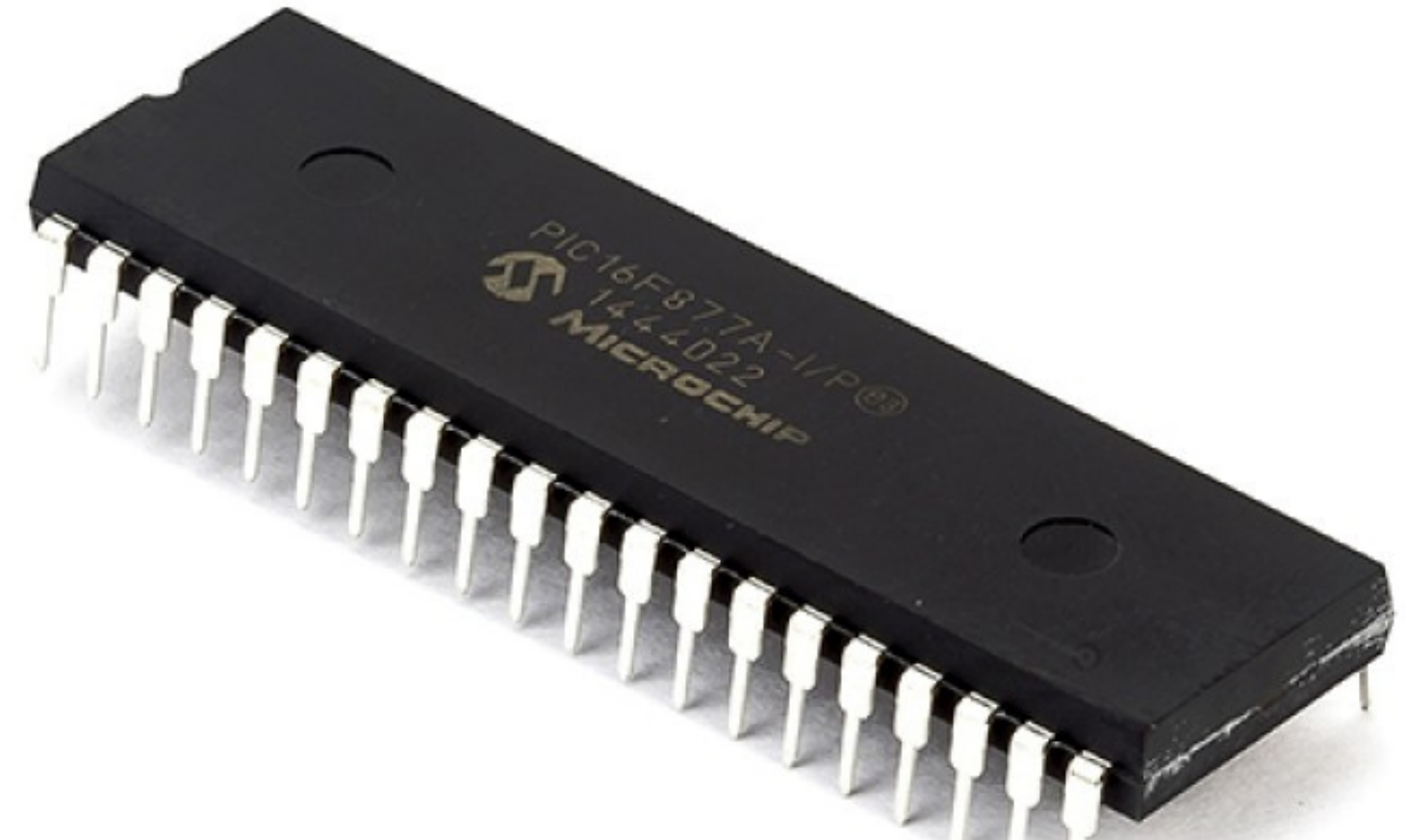
Traffic lights consist normally of three signals, transmitting meaningful information to drivers and riders through colours and symbols including arrows and bicycles





Composition:

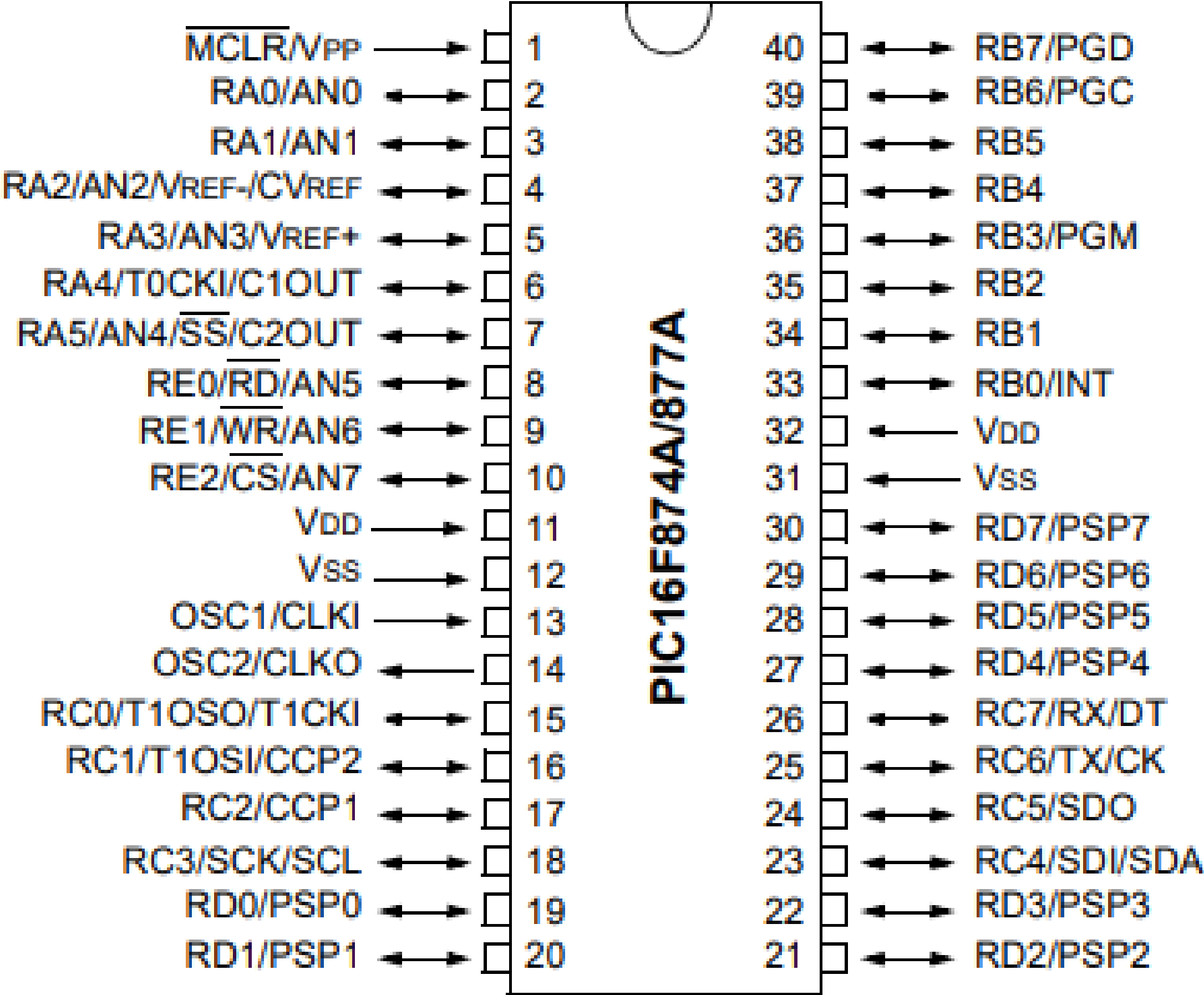
- pic16F877A
- 7447 ic
- 7Segment-COM-ANOD
- capacitor ,Resistors
- PNP Transistor
- Button
- LEDs

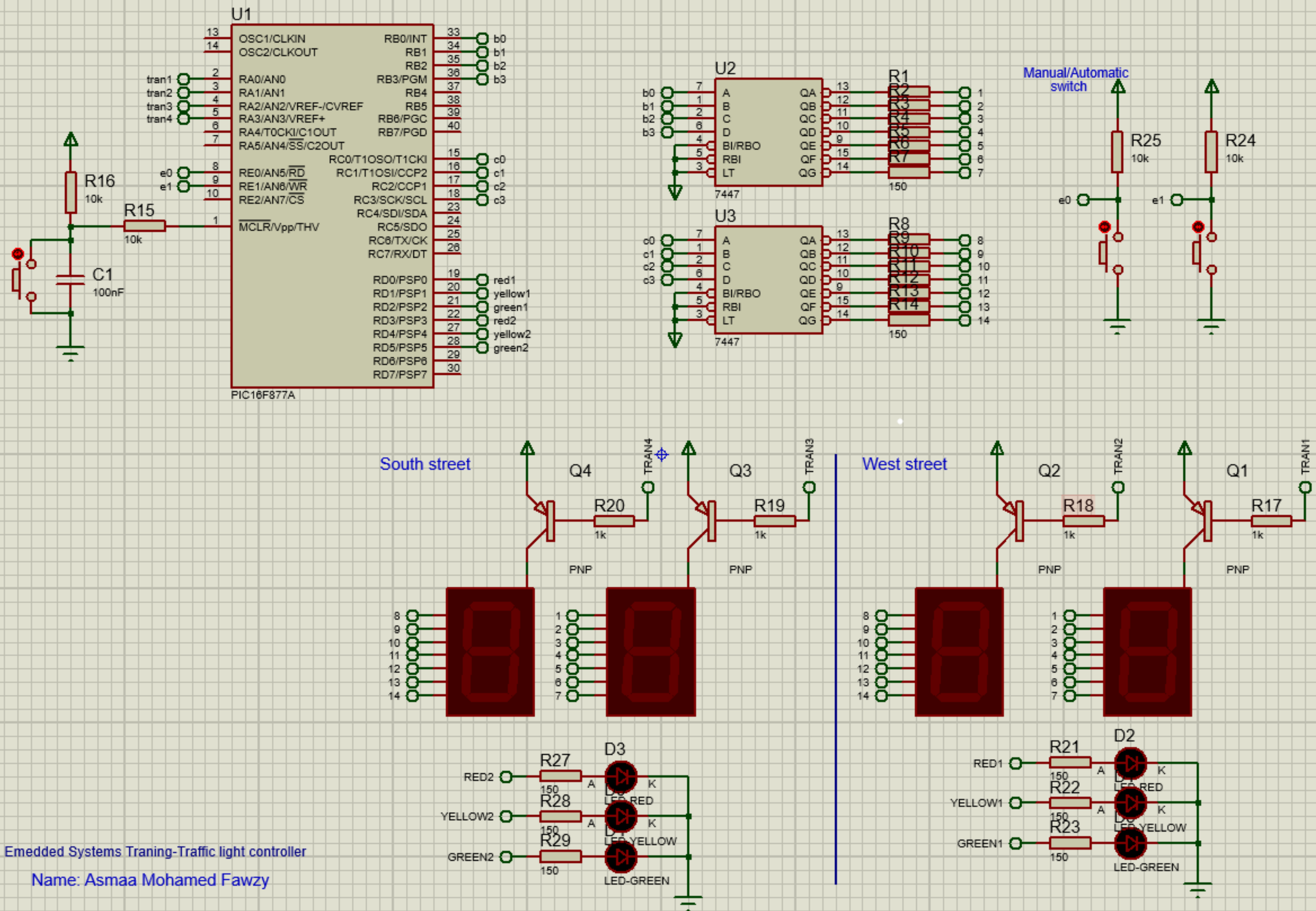


PIC16F877A

The PIC16F877A is arguably the most popular 8-bit microcontroller in the PIC family of MCUs.

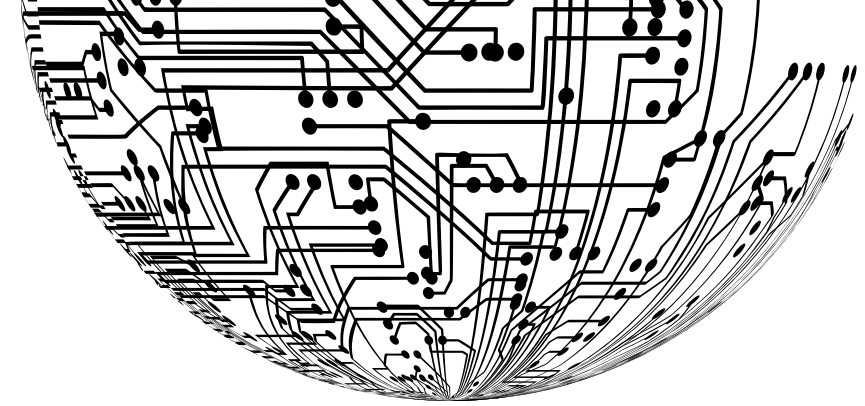
- It is easy to use. The PIC16F877A has a simple instruction set that is easy to learn. There are also many resources available to help developers learn how to use the PIC16F877A, including books, tutorials, and online forums.
- It has a wide range of features. The PIC16F877A has a variety of features that make it suitable for a wide range of applications. These features include the ADC, the PWM modules, the synchronous serial port, and the USART.
- It is relatively inexpensive. The PIC16F877A is a cost-effective solution for many embedded systems applications.





Emdedded Systems Traning-Traffic light controller

Name: Asmaa Mohamed Fawzy



[Youtube Link](#)



[GitHub](#)



[Schematic](#)



[Code](#)

*Thank
You*

