Traffic Light System Control

Shihab Ud Doula

Introduction

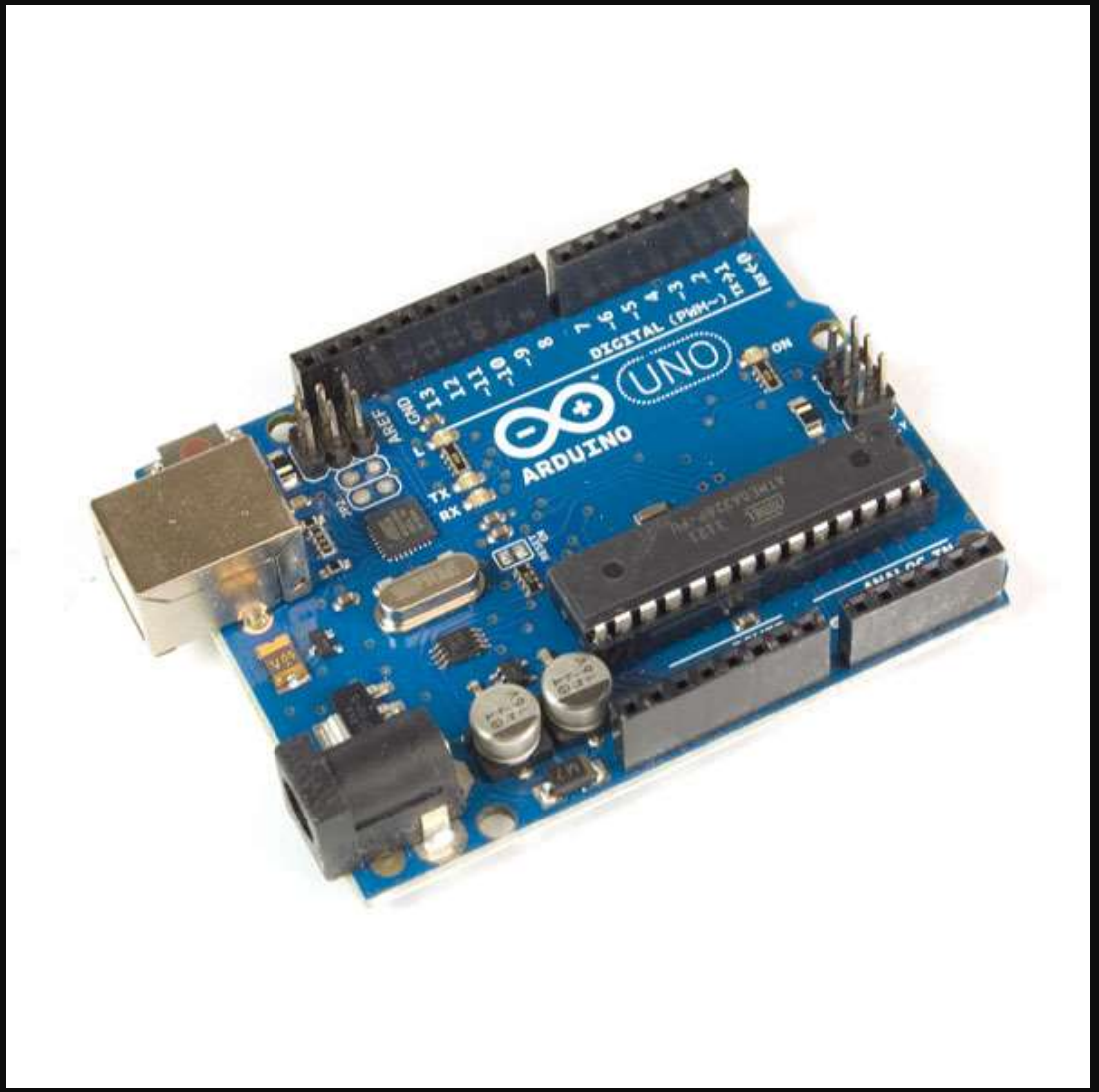
- In this system we have tried to create a traffic light system where a microcontroller control the traffic signal for Pedestrians and cars in order to avoid accidents and maintain safety of traffic system. We have tried to develop concurrent representation of the traffic system between them in certain time using different components of a microcontroller.

Components

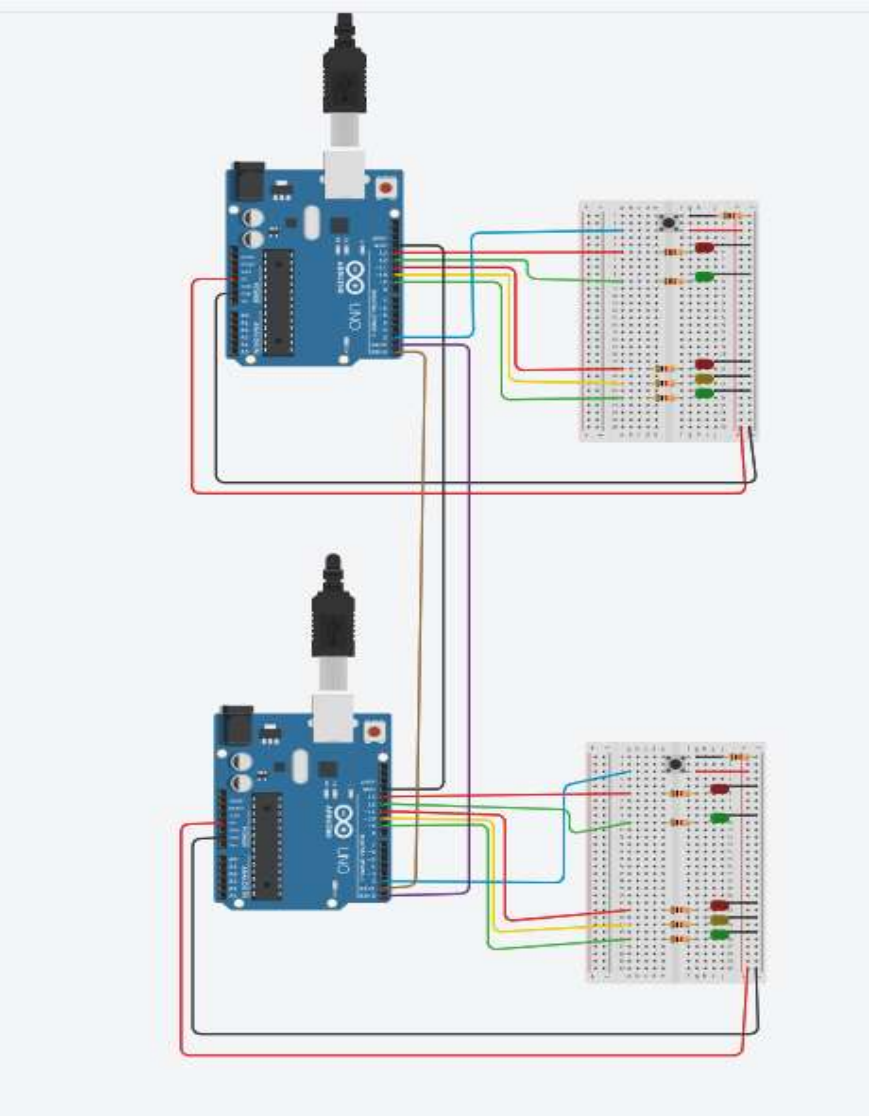
- TinkerCAD (Online Simulation)
- Arduino Uno R3 (Microcontroller)
- Breadboard
- LED’s (4 Red, 4 Green and 2 Yellow)
- Pushbutton
- Resistors
- Connecting wires

About Arduino Uno R3 Microcontroller

- Arduino UNO is a microcontroller board based on the **ATmega328P.**
- It has 14 digital input/output pins and more.
- Communication type available are UART, SPI,12C.
- Memory contains 2KB SRAM, 32KB FLASH, 1KB EEPROM.
- Easily Programmable.

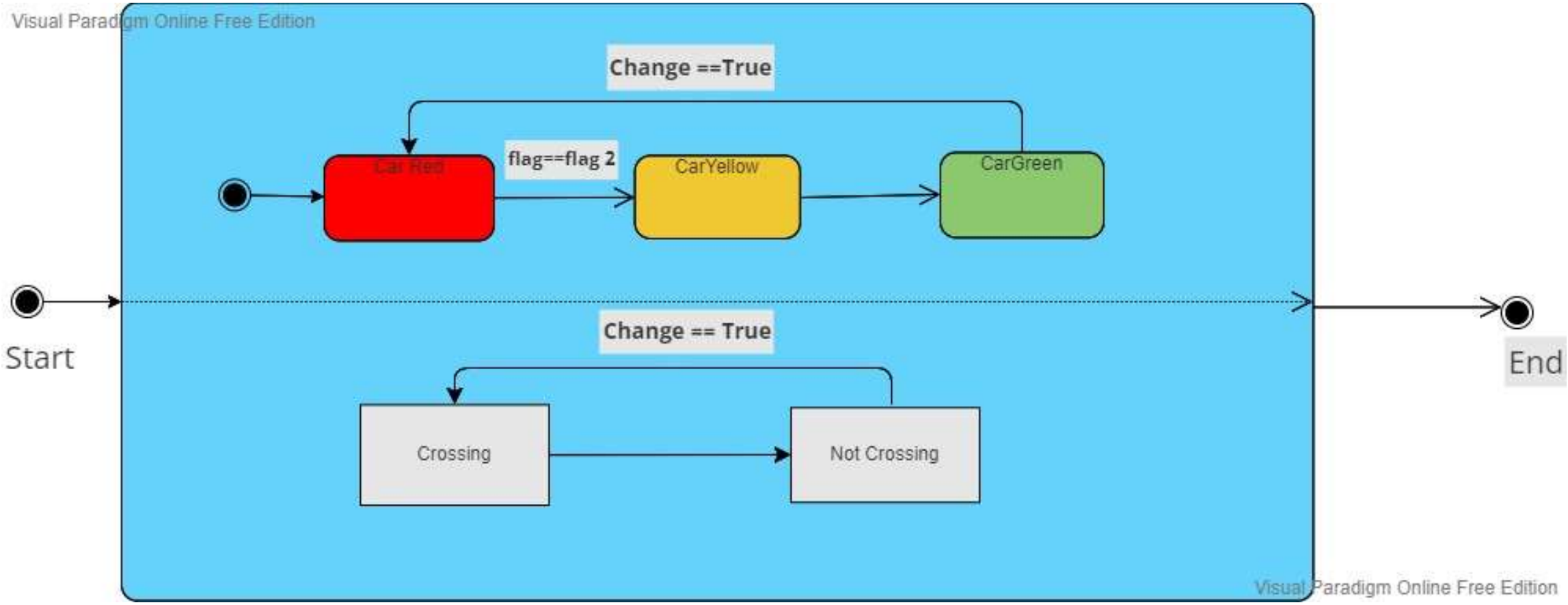


Circuit Diagram and function



Running simulation link:
https://www.tinkercad.com/things/jbctdIoaerH

State Machine Diagram



Applications

- This can smooth traffic jams and resist the use of traffic persons in many countries.
- It can also be easily programmed for better in future application and uses.
- Saving time.

Thank You