Assignment 3

Python code for blinking LED and Traffic light using Raspberry Pi

Blinking LED

```
from machine import Pin
import utime
led = Pin(28, Pin.OUT)
led.low()
while True:
    led.toggle()
    print("Toggle")
    utime.sleep(1)
```

Traffic light

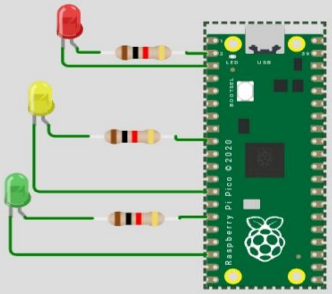
```
import time
import board
import digitalio

red_led = digitalio.DigitalInOut(board.GP11)
red_led.direction = digitalio.Direction.OUTPUT
amber_led = digitalio.DigitalInOut(board.GP14)
amber_led.direction = digitalio.Direction.OUTPUT
```

```
green_led = digitalio.DigitalInOut(board.GP13)
green_led.direction = digitalio.Direction.OUTPUT

while True:
    red_led.value = True
    time.sleep(5)
    amber_led.value = True
    time.sleep(2)
    red_led.value = False
    amber_led.value = False
    green_led.value = True
    time.sleep(5)
    green_led.value = False
    amber_led.value = True
    time.sleep(3)
    amber_led.value = False
```

sketch.ino | diagram.json | Library Manager

```ino
#define RED 1
#define YELLOW 6
#define GREEN 11

void setup() {
  pinMode(RED, OUTPUT);
  pinMode(YELLOW, OUTPUT);
  pinMode(GREEN, OUTPUT);
}

void loop() {
  digitalWrite(GREEN, HIGH);
  delay(3000);

  digitalWrite(GREEN, LOW);
  digitalWrite(YELLOW, HIGH);
  delay(500);

  digitalWrite(YELLOW, LOW);
  digitalWrite(RED, HIGH);
  delay(2000);

  digitalWrite(YELLOW, HIGH);
  delay(500);
  digitalWrite(YELLOW, LOW);
  digitalWrite(RED, LOW);
}
```

Simulation



sketch.ino | diagram.json | Library Manager

```ino

void setup() {
  pinMode(1, OUTPUT);

}

void loop() {
 digitalWrite(1, HIGH);
 delay(500);
 digitalWrite(1, LOW);
 delay(500);
}
```

Simulation