

ASSIGNMENT – 3

PYTHON PROGRAMMING WITH RASPBERRY PI

Assignment Date	02 October 2022
Student Name	Ajay A
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Maximum Marks	2 Marks

Question:

Write python code for blinking LED and Traffic lights for Raspberry pi.

Code:

Blinking LED:

```
import RPi.GPIO as GPIO
import time
ledPin = 22
def setup():
    GPIO.setmode(GPIO.BOARD)
    GPIO.setup(ledPin, GPIO.OUT)
    GPIO.output(ledPin, GPIO.LOW)
def loop():
    while True:
        GPIO.output(ledPin, GPIO.HIGH)
        time.sleep(2.0)
        GPIO.output(ledPin, GPIO.LOW)
        time.sleep(2.0)
def endprogram():
```

```
GPIO.output(ledPin, GPIO.LOW)
GPIO.cleanup()
if __name__ == '__main__':
    setup()
    try:
        loop()
    except KeyboardInterrupt:
        endprogram()
```

Traffic Lights:

```
import RPi.GPIO as GPIO
import time
red_led = 11
yellow_led = 13
green_led = 15
def setup():
    GPIO.setmode(GPIO.BOARD)
    GPIO.setup(red_led, GPIO.OUT)
    GPIO.setup(yellow_led, GPIO.OUT)
    GPIO.setup(green_led, GPIO.OUT)
    GPIO.output(red_led, GPIO.LOW)
    GPIO.output(yellow_led, GPIO.LOW)
    GPIO.output(green_led, GPIO.LOW)
def loop():
    while True:
```

```

GPIO.output(red_led, GPIO.HIGH)
GPIO.output(yellow_led, GPIO.LOW)
GPIO.output(green_led, GPIO.LOW)
time.sleep(30)
GPIO.output(red_led, GPIO.LOW)
GPIO.output(yellow_led, GPIO.HIGH)
GPIO.output(green_led, GPIO.LOW)
time.sleep(8)
GPIO.output(red_led, GPIO.LOW)
GPIO.output(yellow_led, GPIO.LOW)
GPIO.output(green_led, GPIO.HIGH)
time.sleep(30)
def endprogram():
    GPIO.output(red_led, GPIO.LOW)
    GPIO.output(yellow_led, GPIO.LOW)
    GPIO.output(green_led, GPIO.LOW)
    GPIO.cleanup()
if __name__ == '__main__':
    setup()
    try:
        loop()
    except KeyboardInterrupt:
        endprogram()

```