ASSIGNMENT- 3

Python Programming

Assignment Date	9 October 2022
Student Name	A. ARSHITHA
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Maximum Marks	2 Marks

Question:

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

Solution:

#Blinking LED

 import RPi.GPIO as GPIO

from time import sleep

GPIO.setwarnings(False)

GPIO.setmode(GPIO.BOARD)

GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW)

while True:

GPIO.output(8, GPIO.HIGH)

```python
sleep(1)
GPIO.output(8, GPIO. LOW)
sleep(1)


# Traffic light Simulation
import RPi.GPIO as GPIO
import time
import signal
import sys
GPIO.setmode(GPIO.BCM)
GPIO.setup(9, GPIO.OUT)
GPIO.setup(10, GPIO.OUT)
GPIO.setup( 11, GPIO.OUT)


#Turn off all lights when user ends demo
def allLightsoff(signal, frame):
    GPIO.output(9, False)
    GPIO.output(10, False)
    GPIO.output(11, False)
    GPIO.cleanup()
    sys.exit(0)
signal.signal(signal.SIGINT,allLightsoff)
```

```python
while True:

    # Red
    GPIO. output (9, True)
    time. sleep(3)

    # Red and amber
    GPIO.output(10, True)
    time. sleep(1)

    # Green
    GPIO.output(9, False)
    GPIO.output(10, False)
    GPIO.output(11, True)
    time. sleep(5)

    # Amber
    GPIO.output(11, False)
    GPIO. output(10, True)
    time. sleep(2)

    # Amber off (red comes on at top of loop)
    GPIO. output (10, False)
```