Assignment – 3

Python Programming for Raspberry Pi

Assignment Date	10 October 2022
Student Name	Mr. S.Nijanthan
Student Roll Number	612419106005
Maximum Marks	2 Marks

Question-1:

Write python code for blinking LED light for Raspberry pi.

Solution:

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

Question-2:

Write python code for Traffic lights for Raspberry pi.

Solution:

```
import RPi.GPIO as GPIO
import time

try:
def lightTraffic(led1, led2, led3, delay ):
GPIO.output(led1, 1)
time.sleep(delay)
GPIO.output(led1, 0)
GPIO.output(led2, 1)
time.sleep(delay)
GPIO.output(led2, 0)
GPIO.output(led3, 1)
time.sleep(delay)
GPIO.output(led3, 0)

GPIO.setmode(GPIO.BCM)
button = 19

GPIO.setup(button, GPIO.IN, pull_up_down=GPIO.PUD_UP)
ledGreen = 16
ledYellow = 12
ledRed = 23
GPIO.setup(ledGreen, GPIO.OUT)
GPIO.setup(ledYellow, GPIO.OUT)
GPIO.setup(ledRed, GPIO.OUT)
```

```
while True:
input_state = GPIO.input(button)
if input_state == False:
print('Button Pressed')
lightTraffic(ledGreen, ledYellow, ledRed, 1)
else:
GPIO.output(ledGreen, 0)
GPIO.output(ledYellow, 0)
GPIO.output(ledRed, 0)

except KeyboardInterrupt:
print "You've exited the program"

finally:
GPIO.cleanup()
```