Assignment 3 PNT2022TMID53925

Python Programming

Assignment Date	6 October 2022
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Maximum Marks	2 Marks

Question-1:

Write a python code to blink LED for Raspberry pi

Solution:

```
import RPi.GPIO as GPIO#RPi.GPIO can bereferred as GPIO from now on

import time

ledPin=22 #pin22

def setup():
        GPIO.setmode(GPIO.BOARD)  #GPIO NumberingofPins

        GPIO.setup(ledPin, GPIO.OUT) #Set ledPinasoutput

            GPIO.output(ledPin,GPIO.LOW) #Set ledPintoLOWto turnOfftheLED


    def loop():
while True:

                print'LEDon'

                GPIO.output(ledPin, GPIO.HIGH) #LEDOn time.sleep(1.0)

                #wait 1sec

                print'LEDoff'

                GPIO.output(ledPin, GPIO.LOW) #LEDOff time.sleep(1.0)

                #wait 1sec

    def endprogram():

        GPIO.output(ledPin,GPIO.LOW) #LEDOff
         GPIO.cleanup()                #Releaseresources

if__name__=='__main__':  #Programstartsfromhere setup()
        try:
```

loop()

except KeyboardInterrupt: #When'Ctrl+C' ispressed,thedestroy()will be executed. endprogram()

Question-2:

Write a python code for traffic lights for Raspberry pi

SOLUTION:

```
importRPi.GPIO asGPIO importtime try:
defightTraffic(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)
ifinput_state==     False: print('Button
      Pressed') lightTraffic(ledGreen,
ledYellow, ledRed, 1) else:
GPIO.output(ledGreen, 0)
GPIO.output(ledYellow, 0)
GPIO.output(ledRed, 0)
exceptKeyboardInterrupt: print
"You'veexitedtheprogram" finally:

GPIO.cleanup()
```