Assignment – 3

Write python code for blinking LED and Traffic lights for

Raspberry pi : -

Program : -

**# GPIO traffic light program**

**# pin numbers**

**GPIO\_RED = 22**

**GPIO\_AMBER = 23**

**GPIO\_GREEN = 24**

**GPIO\_SWITCH = 17**

**# time delay in secs**

**TIME = 1**

**# import RPi.GPIO module**

**import RPi.GPIO as GPIO**

**# import time module used for sleep**

**import time**

**# Use GPIO pin numbering disable in-use warnings**

**GPIO.setmode(GPIO.BCM)**

**GPIO.setwarnings(False)**

**# Setup relevant pins**

**GPIO.setup(GPIO\_RED, GPIO.OUT)**

**GPIO.setup(GPIO\_AMBER, GPIO.OUT)**

**GPIO.setup(GPIO\_GREEN, GPIO.OUT)**

**GPIO.setup(GPIO\_SWITCH, GPIO.IN, pull\_up\_down=GPIO.PUD\_UP)**

**# start with red light on**

**def main():**

**GPIO.output(GPIO\_RED, False)**

**GPIO.output(GPIO\_AMBER, False)**

**GPIO.output(GPIO\_GREEN, False)**

**# Loop keeps running**

**while True:**

**switchOutput(GPIO\_SWITCH)**

**GPIO.output (GPIO\_RED, True)**

**time.sleep (TIME)**

**switchOutput(GPIO\_SWITCH)**

**GPIO.output (GPIO\_RED, False)**

**GPIO.output (GPIO\_AMBER, True)**

**time.sleep(TIME)**

**switchOutput(GPIO\_SWITCH)**

**GPIO.output (GPIO\_AMBER, False)**

**GPIO.output (GPIO\_GREEN, True)**

**time.sleep(TIME)**

**GPIO.output (GPIO\_GREEN, False)**

**def switchOutput(input):**

**state = 'On' if not GPIO.input(GPIO\_SWITCH) else 'Off'**

**print("The switch is " + state)**

**main()**

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