**ASSIGNMENT-3**

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**Write a python code for blinking led and Traffic light for raspberry pi**

**Program for blinking LED:**

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

from time import sleep # Import the sleep function from the time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BOARD) # Use physical pin numbering

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

while True: # Run forever

GPIO.output(8, GPIO.HIGH) # Turn on

sleep(1) # Sleep for 1 second

GPIO.output(8, GPIO.LOW) # Turn off

sleep(1) # Sleep for 1 second

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

from time import sleep # Import the sleep function from the time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BOARD) # Use physical pin numbering

GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and set initial value to low (off)

while True: # Run forever

GPIO.output(8, GPIO.HIGH) # Turn on

sleep(1) # Sleep for 1 second

GPIO.output(8, GPIO.LOW) # Turn off

sleep(1) # Sleep for 1 second

**Program for blinking Traffic light:**

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()