**ASSIGNMENT 3**

**PROBLEM STATEMENT:**

Iot-Based Smart Crop Protection System for Agriculture

**DOMAIN:**

Internet of Things

**Assignment 3:**

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

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**Python Code for Blinking LED :**

import RPi.GPIO as GPIO

from time import

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)

**Python Code for Traffic Lights:**

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 have exited the Program"

finally:

GPIO.cleanup()