ASSIGNMENT 3

Date	04 October 2022
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Roll Number	718020L435
Project Name	Project – Smart Farmer-IoT Enabled Smart Farming Application
Maximum Marks	2 Marks

Write a python code for blinking LED and Traffic Lights for Raspberry Pi.

(i) Python Code for Blinking LED:

#import RPi.GPIO as GPIO #from gpiozero import LED from time import sleep #led = LED(17) while True: #led.on() print("LED turned ON") sleep(1) #led.off() print("LED turned OFF") sleep(1)

Editor Window:

led_blink.py - D:\ibm_proj\assignment\py\led_blink.py (3.9.6)

File Edit Format Run Options Window Help

```
#import RPi.GPIO as GPIO
#from gpiozero import LED
from time import sleep
#led = LED(17)
while True:
    #led.on()
    print("LED turned ON")
    sleep(1)
    #led.off()
    print("LED turned OFF")
    sleep(1)
```

Output Window:

IDLE Shell 3.9.6

File Edit Shell Debug Options Window Help

```
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
LED turned OFF
LED turned ON
```

:

ii) Python Code for Traffic Lights

```
import RPi.GPIO as GPIO import
time import signal import sys

#setup

GPIO.setmode(GPIO.BCM)

GPIO.setup(9, GPIO.OUT)

GPIO.setup(10, GPIO.OUT)

GPIO.setup(11, GPIO.OUT)

#Turn off all lights def
allLightOff(signal, frame):
GPIO.output(9,False)

   GPIO.output(10,False)

   GPIO.output(11,False)     GPIO.cleanup()
sys.exit(0) signal.signal(signal.SIGINT,
allLightsOff) #Forever Loop while True:     #Red

   GPIO.output(9, True)
time.sleep(3)     GPIO.output(10,
True)     time.sleep(1)     #Green

   GPIO.output(9,False)

   GPIO.output(10,False)
GPIO.output(11,True)
time.sleep(5)     #Amber

   GPIO.output(11,False)
GPIO.output(10,True)
time.sleep(2)     #Amber off

   GPIO.output(10,False)
```