**Assignment -3**

Python Programming

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| Assignment Date | 19 November 2022 |
| Student Name | Varsha.A |
| Student Roll Number | 814419106005 |
| Maximum Marks | 2 Marks |

**Question-1:**

Write a python code for blinking LED and Traffic Lights for Raspberry Pi. Only python code is enough, no need to execute in Raspberry

#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) # 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

#Traffic lights for Raspberry Pi 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 when user ends demo

def allLightsOff(signal, frame): GPIO.output(9, False)

GPIO.output(10, False)

GPIO.output(11, False) GPIO.cleanup() sys.exit(0) signal.signal(signal.SIGINT, allLightsOff)

# Loop forever while True: # Red GPIO.output(9, True) time.sleep(3)

# Red and amber 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 (red comes on at top of loop)

GPIO.output(10, False)