## Assignment -3

Python Programming

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| Assignment Date | 07 October 2022 |
| Student Name | DEEPTHIKA S |
| Student Roll Number | 917719IT020 |
| Maximum Marks | 2 Marks |

## Question-1:

Write a Python code for Blinking LED and Traffic Light for Raspberry Pi

**Solution:**

# Blinking Of an LED For Raspberry Pi

import RPi.GPIO as GPIO import time

#assign numbering for the GPIO using BCM GPIO.setmode(GPIO.BCM)

#assingn number for the GPIO using Board #GPIO.setmode(GPIO.BOARD)

cnt = 0

MAIL\_CHECK\_FREQ = 1 # change LED status every 1 seconds RED\_LED = 4

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

ifcnt == 0 : GPIO.output(RED\_LED, False) cnt = 1

else: GPIO.output(RED\_LED, True) cnt = 0

time.sleep(MAIL\_CHECK\_FREQ) GPIO.cleanup()

# Traffic Light 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)