**Assignment -3**

Python Programming

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| Assignment Date | 07 October 2022 |
| Student Name | Ms. Shobana S |
| Student Roll Number | 611219106066 |
| Maximum Marks | 2 Marks |

**Question-1:**

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

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| **Solution:** |
| **Blinking Of an LED For Raspberry Pi**  import RPi.GPIO as GPIO # RPi.GPIO can be referred as GPIO from now  import time    ledPin = 22 # pin22    def setup():  GPIO.setmode(GPIO.BOARD) # GPIO Numbering of Pins  GPIO.setup(ledPin, GPIO.OUT) # Set ledPin as output  GPIO.output(ledPin, GPIO.LOW) # Set ledPin to LOW to turn Off the LED    def loop():  while True:  print 'LED on'  GPIO.output(ledPin, GPIO.HIGH) # LED On  time.sleep(1.0) # wait 1 sec  print 'LED off'  GPIO.output(ledPin, GPIO.LOW) # LED Off  time.sleep(1.0) # wait 1 sec  def endprogram():    GPIO.output(ledPin, GPIO.LOW) # LED Off  GPIO.cleanup() # Release resources    if \_\_name\_\_ == '\_\_main\_\_': # Program starts from here  setup()  try:  loop()  except KeyboardInterrupt: # When 'Ctrl+C' is pressed, the destroy() will be executed.  endprogram()  **Traffic Light for Raspberry Pi**  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() |