

## Laboratory Report Cover Sheet

SRM Institute of Science and Technology  
College of Engineering and Technology  
Department of Electronics and Communication Engineering

**18ECO109J Embedded System Design using**

**Raspberry Pi**

**Sixth Semester, 2022-23 (Even semester)**

Name :

Register Number

:

Day Order :

Venue :

Title of the Experiment :

Date of conduction

:

Date of Submission

:

Particulars	Max. Marks	Marks Obtaine d
Pre-lab / Algorithm	10	
Lab Performance	20	
Post-lab	10	
<b>Total</b>	<b>40</b>	

### REPORT VERIFICATION

Date

:

Faculty Name :

Signature :

## LAB-2 Loop Operations

### Aim:

To explore loop operations using python 3

### Task:

1. Write a function that returns the maximum of two numbers. **(Use if loop)**
2. Write a function called divisible that takes a number. **( Use if loop)**
  - If the number is divisible by 3, it should return “Three”.
  - If it is divisible by 5, it should return “Five”.
  - If it is divisible by both 3 and 5, it should return “Three and Five”

Otherwise, it should return the same number.
3. Write a function for checking the speed of drivers. This function should have one parameter: speed.
  - a) If speed is less than 70, it should print “Ok”.
  - b) Otherwise, for every 5km above the speed limit (70), it should give the driver one demerit point and print the total number of demerit points. For example, if the speed is 80, it should print: “Points: 2”.
  - c) If the driver gets more than 12 points, the function should print: “License suspended”
4. Write a function(Use for loop) called showNumbers that takes a parameter called limit. It should print all the numbers between 0 and limit with a label to identify the even and odd numbers. For example, if the limit is 3, it should print:
  - a) 0 EVEN
  - b) 1 ODD
  - c) 2 EVEN
  - d) 3 ODD
5. Write a program using while loop to check the number n is less than seven. If it is less than seven, print n is less than 7 and add 1 to n. If it is greater than 7, print n is not less than 7.

**Algorithm:**

## Programs:

```
Lab2.py > max
1  def max(a,b):
2      if(a>b):
3          print(a)
4      else:
5          print(b)
6
7  def divisible(n):
8      if(n%3==0 and n%5==0):
9          print("Three and Five")
10     elif(n%3==0):
11         print("Three")
12     elif(n%5==0):
13         print("Five")
14     else:
15         print(n)
16
17 def speed(s):
18     points=0
19     if(s<70):
20         print(Ok)
21     elif(s>70):
22         points = (s-70)/5
23
24     if(points<12):
25         print(points)
26     else:
27         print("License Suspended")
28
29 def evenOdd(limit):
30     for i in range(limit):
31         if(i%2 == 0):
32             print(f"{i} EVEN")
33         else:
34             print(f"{i} ODD")
35
36 def lessThan(s):
37     if(s<7):
38
39         print(f"{s} is less than 7.....{s+1}")
```

```

    else:
        print(f"{s} is greater than 7")

if __name__=="__main__":
    a=int(input("Check Max:"))
    b = int(input())
    max(a,b)
    c=int(input("Divisible:"))
    divisible(c)
    d=int(input("Speed:"))
    speed(d)
    e=int(input("Even Odd:"))
    evenOdd(e)
    f=int(input("Less Than 7:"))
    lessThan(f)

```

**Output:**

```

Check Max:2
3
3

```

```

Divisible:15
Three and Five
Speed:80
2.0
Even Odd:5
0 EVEN
1 ODD
2 EVEN
3 ODD
4 EVEN
Less Than 7:6
6 is less than 7.....7

```

### Post Lab Questions:

1. Write a function that prints all the prime numbers between 0 and limit where limit is a parameter.
2. Write a Python program to find a Factorial of a Number using Loop

```
def limit(l):  
    for i in range(1,l+1):  
        print(i)  
  
def factorial(n):  
    mul=1  
    for i in range(1,n+1):  
        mul = mul*i  
    print(mul)  
  
if __name__ == '__main__':  
    print("Nuber between limit:")  
    limit(4)  
    print("Factorial of 5:")  
    factorial(5)
```

```
PS C:\Users\hy717\Docume  
Nuber between limit:  
1  
2  
3  
4  
Factorial of 5:  
120
```