

## Lab Mst 1

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**Branch:** CSE

**Section/Group:**607A

**Semester:** 4th

**Date of Performance:** 24/03/2022

**Subject Name:**Programming in Python Lab

**Subject Code:** 22E-20CSP-259

### 1) Aim/Overview of the practical:

**Q1. Write a python program to determine whether number is perfect number ,an Armstrong number or a Palindrome number using for loop using parameterized Function.**

### 2) Task to be done/ Which logistics used:

**To write a python program to determine whether number is perfect number ,an Armstrong number or a Palindrome number using for loop using parameterized Function**

### 3) Algorithm/Flowchart (For programming based labs):

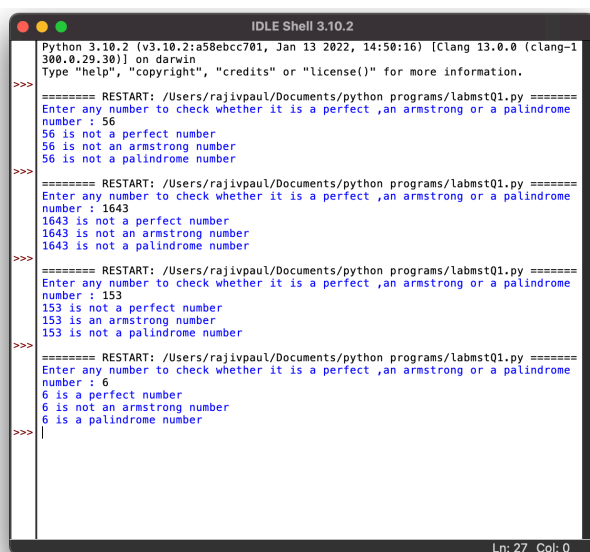
## 4) Steps for experiment/practical/Code:

```
labmstQ1.py - /Users/rajivpaul/Documents/python programs/labmstQ1.py (3.10.2)
n = int(input("Enter any number to check whether it is a perfect ,an armstrong or a palindrome number : "))
sum = 0
#for perfect number
for i in range(1,n):
    if n%i==0:
        sum = sum + i
    |
if sum == n :
    print( n,"is a perfect number")
else :
    print( n, "is not a perfect number")
#for armstrong number
temp = n
total = 0
while temp > 0 :
    digit = temp %10
    total = total + (digit**3)
    temp = temp//10
if n == total:
    print( n,"is an armstrong number")
else :
    print( n, "is not an armstrong number")
#for palindrome number
temp = n
rev = 0
while n > 0:
    d = n % 10
    rev = rev *10 + d
    n = n//10
if temp == rev :
    print( temp,"is a palindrome number")
else :
    print( temp, "is not a palindrome number")
```

Ln: 7 Col: 2

## 5. Observations/Discussions/ Complexity Analysis:

## 6. Result/Output/Writing Summary:



```
Python 3.10.2 (v3.10.2:a58ebcc701, Jan 13 2022, 14:50:16) [Clang 13.0.0 (clang-1300.0.29.30)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /Users/rajivpaul/Documents/python programs/labmst01.py =====
Enter any number to check whether it is a perfect ,an armstrong or a palindrome
number : 56
56 is not a perfect number
56 is not an armstrong number
56 is not a palindrome number
>>>
===== RESTART: /Users/rajivpaul/Documents/python programs/labmst01.py =====
Enter any number to check whether it is a perfect ,an armstrong or a palindrome
number : 1643
1643 is not a perfect number
1643 is not an armstrong number
1643 is not a palindrome number
>>>
===== RESTART: /Users/rajivpaul/Documents/python programs/labmst01.py =====
Enter any number to check whether it is a perfect ,an armstrong or a palindrome
number : 153
153 is not a perfect number
153 is an armstrong number
153 is not a palindrome number
>>>
===== RESTART: /Users/rajivpaul/Documents/python programs/labmst01.py =====
Enter any number to check whether it is a perfect ,an armstrong or a palindrome
number : 6
6 is a perfect number
6 is not an armstrong number
6 is a palindrome number
>>>
```

### 1) Aim/Overview of the practical:

**Q2. Write a python program using return type with function to input a number and check if the number is prime or composite number using nested if-else loop.**

### 2) Task to be done/ Which logistics used:

**To write a python program using return type with function to input a number and check if the number is prime or composite number using nested if-else loop.**

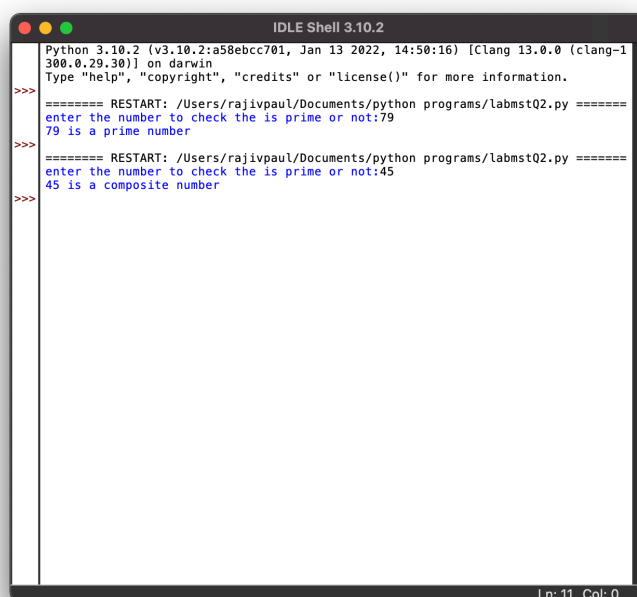
### 3) Algorithm/Flowchart (For programming based labs):

### 4) Steps for experiment/practical/Code:

```
labmstQ2.py - /Users/rajivpaul/Documents/python programs/labmstQ2.py (3.1...  
  
num = int(input('enter the number to check the is prime or not:'))  
flag = False  
  
if num > 1:  
    for i in range(2, num):  
        if (num % i) == 0:  
            flag = True  
            break  
  
if flag:  
    print(num, "is a composite number")  
else:  
    print(num, "is a prime number")  
  
Ln: 4 Col: 0
```

## 5. Observations/Discussions/ Complexity Analysis:

## 6. Result/Output/Writing Summary:



```
IDLE Shell 3.10.2
Python 3.10.2 (v3.10.2:a58ebcc701, Jan 13 2022, 14:50:16) [Clang 13.0.0 (clang-1300.0.29.30)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /Users/rajivpaul/Documents/python programs/labmstQ2.py =====
enter the number to check the is prime or not:79
79 is a prime number
>>>
===== RESTART: /Users/rajivpaul/Documents/python programs/labmstQ2.py =====
enter the number to check the is prime or not:45
45 is a composite number
>>>
```

Ln: 11 Col: 0

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**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			