

Python Programming - Lab - 3

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Python Programming - 2301CS404

Lab - 3

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1 for and while loop

1.0.1 01) WAP to print 1 to 10.

```
[4]: for i in range(1,11):  
      print(i)
```

```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

1.0.2 02) WAP to print 1 to n.

```
[7]: n = int(input("enter n: "))  
      for i in range(n+1):  
          print(i)
```

```
enter n: 50  
0  
1  
2  
3  
4  
5  
6  
7  
8
```

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1.0.3 03) WAP to print odd numbers between 1 to n.

```
[15]: n = int(input("enter n: "))
      for i in range(n+1):
          if(i%2!=0):
              print(i,end = " ")
```

enter n: 50

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49

1.0.4 04) WAP to print numbers between two given numbers which is divisible by 2 but not divisible by 3.

```
[16]: a = int(input("enter a "))
      b = int(input("enter b "))
      for i in (a,b+1):
          if(i%2==0 and i%3!=0):
              print(i,end = " ")
```

enter a 1

enter b 50

50

1.0.5 05) WAP to print sum of 1 to n numbers.

```
[24]: n = int(input("enter n "))
      sum = 0
      for i in range(1,n+1):
          sum+=i
      print(sum)
```

enter n 5

15

1.0.6 06) WAP to print sum of series $1 + 4 + 9 + 16 + 25 + 36 + \dots n$.

```
[27]: n = int(input("enter n "))
      sum = 0
      for i in range(1,n+1):
          sum+=i**2
      print(sum)
```

enter n 3

14

1.0.7 07) WAP to print sum of series $1 - 2 + 3 - 4 + 5 - 6 + 7 \dots n$.

```
[29]: n = int(input("enter n "))
sum = 0
for i in range(1,n+1):
    if(i%2==0):
        sum-=i
    else:
        sum+=i
print(sum)
```

```
enter n 5
3
```

1.0.8 08) WAP to print multiplication table of given number.

```
[31]: n = int(input("enter n "))
for i in range(1,11):
    print(n*i,end=" ")
```

```
enter n 10
10 20 30 40 50 60 70 80 90 100
```

1.0.9 09) WAP to find factorial of the given number.

```
[33]: def factorial(n):
    fact = 1
    ans = 1
    for i in range(2,n+1):
        ans = ans*i
    return ans
n = int(input("enter n"))
print(factorial(n))
```

```
enter n5
120
```

1.0.10 10) WAP to find factors of the given number.

```
[3]: def factors(n):
    list = []
    for i in range(1,n+1):
        if(n%i==0):
            list.append(i)
    return list
n = int(input("enter n "))
print(factors(n))
```

```
[1, 2, 3, 6]
```

1.0.11 11) WAP to find whether the given number is prime or not.

```
[8]: def checkPrime(n):  
    if(n==1):  
        return False  
    for i in range(2,int(n/2)+1):  
        if(i%n==0):  
            return False  
  
    return True  
  
n = int(input("enter n "))  
print(checkPrime(n))
```

False

1.0.12 12) WAP to print sum of digits of given number.

```
[14]: def sumOfDigits(n):  
    sum=0  
    while(n>0):  
        lastDigit = n%10  
        sum+=lastDigit  
        n//=10  
    return sum  
n = int(input("enter n "))  
print(sumOfDigits(n))
```

7

1.0.13 13) WAP to check whether the given number is palindrome or not

```
[17]: def checkPalindrome(n):  
    originalNum = n  
    reversedNum = 0  
    while (n>0):  
        remainder = n%10  
        reversedNum = reversedNum*10 + remainder  
        n//=10  
    return originalNum==reversedNum  
n = int(input("enter n "))  
print((checkPalindrome(n)))
```

False

1.0.14 14) WAP to print GCD of given two numbers.

```
[21]: a = int(input("enter a "))
      b = int(input("enter b"))
      i=2
      while(i<=a and i<=b):
          if(a%i==0 and b%i==0):
              print(i)
              break
      i+=1
```

5