



Python Programming - 2301CS404

Lab - 4

Roll No.: 418

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01) WAP to print 1 to 10.

```
In [3]: for i in range(1,11):  
        print(i)
```

1
2
3
4
5
6
7
8
9
10

02) WAP to print 1 to n.

```
In [64]: n = int(input("Enter Number: "))  
print(f"1 To {n} Number: ")  
for i in range(1,n+1) :  
    print(i)
```

1 To 7 Number:
1
2
3
4
5
6
7

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

```
In [65]: n = int(input("Enter Number : "))
print(f": 1 To {n} ODD Number: ")
for i in range(1,n+1) :
    if(i % 2 != 0) :
        print(i)
```

: 1 To 10 ODD Number:

1
3
5
7
9

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

```
In [67]: n1 = int(input("Enter Starting Number: "))
n2 = int(input("Enter Ending Number: "))
for i in range(n1,n2+1) :
    if(i % 2 == 0 and i % 3 != 0) :
        print(i)
```

2
4
8
10
14
16
20
22
26
28

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

```
In [68]: n = int(input("Enter Number : "))
sum = 0
for i in range(1,n+1):
    sum = sum + i
print(f"Sum OF 1 To {n} Number : ")
print(sum)
```

Sum OF 1 To 10 Number :
55

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

```
In [71]: n = int(input("Enter Number : "))
sum = 0
squ = 0
for i in range(1,n+1):
    sum = sum + i*i
print(f"Sum OF Series 1 + 4 + 9 + 16 + 25 + 36 + ...n : {sum}")
```

Sum OF Series $1 + 4 + 9 + 16 + 25 + 36 + \dots n : 385$

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

```
In [72]: n = int(input("Enter Number: "))
sum = 0
for i in range(1,n+1):
    if(i % 2 == 0):
        sum -= i
    else:
        sum += i
print(f"Sum OF Series 1 - 2 + 3 - 4 + 5 - 6 + 7 ... n : {sum}")
```

Sum OF Series $1 - 2 + 3 - 4 + 5 - 6 + 7 \dots n : -5$

08) WAP to print Multiplication Table of the given number.

```
In [25]: n = int(input("Enter Number To Print Table: "))
for i in range(1,n+1):
    print(f"{n} * {i} = {n*i}")
```

```
10 * 1 = 10
10 * 2 = 20
10 * 3 = 30
10 * 4 = 40
10 * 5 = 50
10 * 6 = 60
10 * 7 = 70
10 * 8 = 80
10 * 9 = 90
10 * 10 = 100
```

09) WAP to find Factorial of the given number.

```
In [74]: n = int(input("Enter Number: "))
fac = 1
for i in range(2, n+1):
    fac *= i
print(f"{n}! = {fac}")
```

5! = 120

10) WAP to print GCD of given two numbers.

```
In [6]: """
import math

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))

result = math.gcd(num1, num2)
print(f"The GCD of {num1} and {num2} is: {result}")
"""

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
```

```
while num2 != 0:
    remainder = num1 % num2
    num1 = num2
    num2 = remainder

print("The Greatest Common Divisor (GCD) is:", num1)
```

The Greatest Common Divisor (GCD) is: 5

11) WAP to find Factors of the given number.

```
In [75]: n = int(input("Enter Number: "))
print("Factors OF Number: ")
for i in range(1, n+1):
    if(n % i == 0):
        print(i)
```

Factors OF Number:

1
2
5
10

12) WAP to find whether the given number is Prime or not.

```
In [76]: n = int(input("Enter Number:"))
isPrime = 1

if n <= 1:
    print(f"{n} is Not Prime")

for i in range(2, n):
    if(n % i == 0):
        isPrime = 0
        break

if(isPrime):
    print(f"{n} is Prime Number.")
else:
    print(f"{n} is Not Prime Number.")
```

7 is Prime Number

13) WAP to print sum of digits of given number.

```
In [78]: n = int(input("Enter Number :"))
sum = 0
for i in range(1,n+1):
    rem = n % 10
    sum += rem
    n //= 10

print(f"Sum OF Digit : {sum}")
```

Sum OF Digit : 15

14) WAP to check whether the given number is Palindrome or not.

```
In [5]: n = int(input("Enter Number:"))
isPal = 0
temp = n
while temp != 0:
    isPal = isPal * 10 + temp % 10
    temp //= 10
if n == isPal:
    print(f"{n} is Palindrome Number.")
else:
    print(f"{n} is Not Palindrome Number.")
```

12321 is Palindrome Number.

15) WAP to check whether the given number is an Armstrong Number or not.

```
In [4]: n = input("Enter Number:")
isArm = 0
digit = len(n)
n = int(n)
temp = n
while temp != 0:
    rem = temp % 10
    isArm += rem ** digit
    temp //= 10
if n == isArm:
    print(f"{n} is Armstrong Number.")
else:
    print(f"{n} is Not Armstrong Number.")
```

153 is Armstrong Number.

16) WAP to print all the perfect numbers between 1 to n.

```
In [3]: n1 = int(input("Enter Number: "))
n2 = int(input("Enter Number: "))
print(f"{n1} To {n2} Perfect Number : ")
for i in range(n1, n2+1):
    sum = 0
    for j in range(1, i):
        if i % j == 0:
            sum += j
    if sum == i:
        print(i)
```

1 To 1000 Perfect Number :

6

28

496

In []: