Darshan UNIVERSITY

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Python Programming - 2301CS404

Lab - 4

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01) WAP to print 1 to 10.

In [1]:
```
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 [8]:
```
number = int(input('Enter the range number:'))
for i in range(1, number+1):
    print(i)
```

```
1
2
3
```

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

In [9]:
```
number = int(input('Enter the range number:'))
for i in range(1, number+1, 2):
    print(i)
```

```
1
3
5
```

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

In [11]:
```
num1 = int(input('Enter first number:'))
num2 = int(input('Enter second number:'))

for i in range(num1, num2):
    if(i % 2 == 0 and i % 3 != 0):
        print(i)
```

```
8
10
```

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

In [13]:
```
number = int(input('Enter the range number:'))
sum = 0
for i in range(1, number+1):
    sum += i

print(f'Sum of 1 to n numbers: {sum}')
```

```
Sum of 1 to n numbers: 15
```

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

In [22]:
```
number = int(input('Enter the range number:'))
sum = 0
for i in range(1, number+1):
    sum += i*i

print(f'Sum of 1 to n numbers: {sum}')
```

```
Sum of 1 to n numbers: 55
```

07) WAP to print sum of series 1 – 2 + 3 – 4 + 5 – 6 + 7 ... n.

In [47]:
```
number = int(input('Enter the range number:'))
sum = 0
for i in range(1, number+1):
    if(i % 2 == 0):
        sum -= i
    else:
        sum += i
else:
    print(f'Sum of 1 to n numbers: {sum}')
```

```
Sum of 1 to n numbers: 3
```

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

In [24]:
```
number = int(input('Enter the range number:'))
for i in range(1, 11):
    print(f'{number} x {i} = {number * i}')
```

```
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
```

09) WAP to find Factorial of the given number.

In [46]:
```
number = int(input('Enter the range number:'))
fac = 1
for i in range(1, number+1):
    fac *= i
else:
    print(f'Factorial of {number}: {fac}')
```

```
Factorial of 4: 24
```

10) WAP to print GCD of given two numbers.

In [44]:
```
import math

num1 = int(input('Enter first number:'))
num2 = int(input('Enter second number:'))
result = 1
for i in range(1, min(num1, num2)):
    if(num1 % i == 0 and num2 % i == 0):
        result = i

print(f'GCD: {result}')
```

```
GCD: 5
```

11) WAP to find Factors of the given number.

In [3]:
```
number = int(input('Enter the range number:'))
print(f'Factors of {number}: ')
for i in range(1, number):
    if(number % i == 0):
        print(i,end=', ')
```

```
Factors of 6:
1, 2, 3,
```

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

In [46]:
```
number = int(input('Enter the range number:'))
if(number == 1):
    print(f'{number} is not Prime number.')
else:
    for i in range(2, number):
        if(number % i == 0):
            print(f'{number} is not Prime number.')
            break
    else:
        print(f'{number} is Prime number.')
```

```
1 is not Prime number.
```

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

In [9]:
```
number = int(input('Enter the range number:'))
sum = 0
while(number != 0):
    sum += number % 10
    number //= 10
else:
    print(sum)
```

```
14
```

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

In [42]:
```
number = int(input('Enter the number:'))
temp = number; sum = 0

while(temp != 0):
    sum = (sum * 10) + temp % 10
    temp //= 10
else:
    if(number == sum):
        print(f'{number} is Palindrome number.')
    else:
        print(f'{number} is not a Palindrome number.')


# if(number == number[::-1]):
#     print(f'{number} is Palindrome number.')
# else:
#     print(f'{number} is not a Palindrome number.')
```

```
494 is Palindrome number.
```

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

In [29]:
```
import math

number = int(input('Enter the number:'))
length = len(str(number))
temp = number; sum = 0
while(temp != 0):
    sum += pow(temp % 10, length)
    temp //= 10
else:
    if(sum == number):
        print(f'{number} is an Armstrong number.')
    else:
        print(f'{number} is not an Armstrong number.')
```

```
153 is an Armstrong number.
```

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

In [37]:
```
number = int(input('Enter the number:'))

for i in range(1, number):
    sum = 0; start = 1
    for idx in range(1, i):
        if(i % idx == 0):
            sum += idx
    if(sum == i):
            print(i)
```

```
6
28
```