Darshan UNIVERSITY
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Python Programming - 24010101116

Lab - 4

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01) WAP to print 1 to 10.

In [5]:
```
for i in range(1,11):
    print(i,end=" ")
```

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

02) WAP to print 1 to n.

In [7]:
```
n = int(input("Enter a number - "))

for i in range(1,n+1):
    print(i,end=" ")
```

```
Enter a number - 10
1 2 3 4 5 6 7 8 9 10
```

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

In [8]:
```
n = int(input("Enter a number - "))

for i in range(1,n+1):
    if i&1:
        print(i,end=" ")
```

```
Enter a number - 10
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 [14]:
```
n = int(input("Enter a number n - "))
m = int(input("Enter a number m - "))

for i in range(n,m+1):
    if (i%2 == 0) and (i%3 != 0):
        print(i,end=" ")
```

```
Enter a number n - 1
Enter a number m - 10
2 4 8 10
```

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

In [13]:
```
n = int(input("Enter a number - "))
sum = 0

for i in range(1,n+1):
    sum += i

print(f"Sum = {sum}")
```

```
Enter a number - 5
Sum = 15
```

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

In [15]:
```
n = int(input("Enter a number - "))
sum = 0

for i in range(1,n+1):
    sum += i*i

print(f"Sum = {sum}")
```

```
Enter a number - 5
Sum = 55
```

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

In [16]:
```
n = int(input("Enter a number - "))
sum = 0

for i in range(1,n+1):
    sum += i if i&1 else -i

print(f"Sum = {sum}")
```

```
Enter a number - 5
Sum = 3
```

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

In [22]:
```
n = int(input("Enter a number - "))
```

```
for i in range(1,11):
    print(f"{n} x {i} = {n*i}")
```

```
Enter a number - 1
1 x 1 = 1
1 x 2 = 2
1 x 3 = 3
1 x 4 = 4
1 x 5 = 5
1 x 6 = 6
1 x 7 = 7
1 x 8 = 8
1 x 9 = 9
1 x 10 = 10
```

09) WAP to find Factorial of the given number.

In [23]:
```
n = int(input("Enter a number - "))
fac = 1

for i in range(1,n+1):
    fac *= i

print(f"Factorial = {fac}")
```

```
Enter a number - 5
Factorial = 120
```

10) WAP to print GCD of given two numbers.

In [46]:
```
n = int(input("Enter a number n - "))
m = int(input("Enter a number m - "))
gcd = 1

min = n if n<m else m

for i in range(1,min+1):
    if (n%i == 0) and (m%i == 0):
        gcd = i

print(f"GCD of given two numbers = {gcd}")
```

```
Enter a number n - 10
Enter a number m - 20
GCD of given two numbers = 10
```

11) WAP to find Factors of the given number.

In [25]:
```
n = int(input("Enter a number - "))

for i in range(1,n+1):
    if n%i == 0:
        print(i,end=" ")
```

```
Enter a number - 10
1 2 5 10
```

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

In [35]:
```
n = int(input("Enter a number - "))
```

```
for i in range(2,n//2):
    if n%i == 0:
        print(f"{n} is not a prime number.")
        break
else:
    print(f"{n} is a prime number.")
```

```
Enter a number - 7
7 is a prime number.
```

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

In [37]:
```
n = int(input("Enter a number - "))
sum = 0

for i in range(1,n+1):
    d = n%10
    sum += d
    n //= 10

print(f"Sum of digits = {sum}")
```

```
Enter a number - 123
Sum of digits = 6
```

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

In [39]:
```
n = int(input("Enter a number - "))
rev = 0
temp = n

while n != 0:
    d = n%10
    rev = rev*10 + d
    n //= 10

if temp == rev:
    print(f"{temp} is a Palindrome.")
else:
    print(f"{temp} is not a Palindrome.")
```

```
Enter a number - 121
121 is a Palindrome.
```

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

In [40]:
```
import math

n = int(input("Enter a number - "))
sum = 0
temp = n
m = n
noOfDigits = 0

while n != 0:
    d = n%10
    noOfDigits += 1
    n //= 10
```

```
while m != 0:
    d = m%10
    sum += pow(d,noOfDigits)
    m //= 10

if temp == sum:
    print(f"{temp} is an Armstrong Number.")
else:
    print(f"{temp} is not an Armstrong Number.")
```

```
Enter a number - 153
153 is an Armstrong Number.
```

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

In [43]:
```
n = int(input("Enter a number - "))

for i in range(1,n+1):
    sum = 0
    for j in range(1,i):
        if i%j == 0:
            sum += j
    if i == sum:
        print(i,end=" ")
```

```
Enter a number - 100
6 28
```

In [ ]:
```

```