Darshan UNIVERSITY

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# Python Programming - 2301CS404

# Lab - 3

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## for and while loop

### 01) WAP to print 1 to 10.

In [2]:
```
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 [4]:
```
n = int(input("Enter range number"))
for i in range(1,n+1):
    print(i)
```

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

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

In [5]:
```
n = int(input("Enter the range n"))
for i in range(1,n+1,2):
    print(i)
```

```
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 [12]:
```
a = int(input("Enter the n1"))
b = int(input("Enter the n2"))
for a in range(a,b+1,1):
    if a%2==0 and a%3!=0:
        print(a)
```

```
2
4
8
10
```

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

In [14]:
```
n = int(input("Enter the n1"))
ans = 0
for n in range(1,n+1):
    ans += n
print(ans)
```

```
55
```

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

In [15]:
```
n = int(input("Enter the n1"))
ans = 0
for n in range(1,n+1):
    ans += n*n
```

```
print(ans)
```

```
30
```

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

In [22]:
```
# n = int(input("Enter the n1"))
# ans = 0
# for n in range(1,n+1):
#     if n%2==0:
#         ans -= n
#     else:
#         ans += n
# print(ans)
n = int(input("Enter the n1"))
sum = 0
sign = 1
for i in range(1,n+1):
    sum+=i*sign
    sign*=-1
print(sum)
```

```
6
```

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

In [21]:
```
n = int(input("Enter the n1"))
i = 1
for i in range(1,n+1):
    print(f"{n} * {i} = {n*i}")
    i+=1
```

```
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 [23]:
```
n = int(input("Enter the n1"))
ans = 1
for i in range(n,0,-1):
    ans *= i
print(ans)
```

```
120
```

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

In [24]:
```
n = int(input("Enter the n1"))
for i in range(1,n+1):
    if n%i==0:
        print(i)
```

```
1
2
5
10
```

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

In [37]:
```
n = int(input("Enter the n1"))
count = 0
for i in range(2,n):
    if n%i!=0:
        count+=1
        break
if count==1:
    print("not")
else:
    print("prime")
```

```
not
```

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

In [30]:
```
n = input()
ans = 0
for i in range(len(n)):
    ans += int(n[i])
print(ans)
```

```
6
```

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

In [32]:
```
n = input("Enter the number")
c = n[::-1]
if c == n:
    print("palindrome")
else:
    print("Not")
```

```
Not
```

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

In [42]:
```
n1 = int(input("Enter n1"))
n2 = int(input("Enter n2"))
ans = 0
for i in range(1,(n1 if n1>n2 else n2),1):
    if n1%i==0 and n2%i==0:
        ans = i
print(ans)
```

```
9
```