Python Programming - 2301CS404

Lab - 4

Roll No.: 364

Name: Soham Joshi

01) WAP to print 1 to 10.

```python
In [60]: 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.

```python
In [61]: num = int(input("Enter a Number :"))
         for i in range(1,num+1):
             print(i,end=',');
```

1,2,3,4,5,6,

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

```python
In [62]: num = int(input("Enter a Number :"))
         for i in range(1,num+1,2):
             print(i,end=',');
```

1,3,5,

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

```python
In [63]: num1,num2 = map(int,input("Enter two numbers :").split())
         min = num1 if(num1<num2) else num2
```

```python
max = num1 if(num1>num2) else num2
for i in range(min,max+1):
    if(i%2==0 and i%3!=0):
        print(i,end=',')
```

2,4,8,10,

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

```python
In [15]:  num = int(input("Enter a Number :"))
          sum = 0;
          for i in range(1,num+1):
              sum = i+sum;
          print(f"Sum of 1 to {num} is: {sum}")
          sum1 = (num*(num+1))/2
          print(sum1)
```

Sum of 1 to 5 is: 15
15.0

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

```python
In [26]:  num = int(input("Enter a Number :"))
          odd = 3;
          temp = 1;
          for i in range(i,num+1):
                  print(temp,end=' ')
                  temp = odd+temp
                  odd = odd+2
```

1 4 9

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

```python
In [25]:  num = int(input("Enter a number :"))
          if num>0:
              print("1",end = ' ');
          for i in range(2,num+1):
              if i%2 == 0:
                  print(f"- {i} ",end = '');
              else:
                  print(f"+ {i} ",end = '');
```

1 - 2 + 3 - 4 + 5 - 6

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

```python
In [30]:  num = int(input("Enter Table Number :"))
          for i in range(1,11):
              print(f"{num:^5} X {i:^5} = {num*i:^5}")
```

```
2   X    1   =    2
2   X    2   =    4
2   X    3   =    6
2   X    4   =    8
2   X    5   =   10
2   X    6   =   12
2   X    7   =   14
2   X    8   =   16
2   X    9   =   18
2   X   10   =   20
```

09) WAP to find Factorial of the given number.

```
In [38]: num = int(input("Enter a Number :"))
         sum = 1
         for i in range(num,1,-1):
             sum = sum*i
         print(f"{num}! = {sum}")
```

```
3! = 6
```

10) WAP to print GCD of given two numbers.

```
In [35]: num1,num2 = map(int,input("Enter two numbers:").split())
         min = num1 if num1<num2 else num2
         for i in range(min,0,-1):
             if num1%i==0 and num2%i==0:
                 print(f"{i} is a GCD of {num1} and {num2}")
                 break;
```

```
2 is a GCD of 6 and 8
```

11) WAP to find Factors of the given number.

```
In [39]: num = int(input("Enter a Number :"))
         for i in range(1,i+1):
             if num%i==0:
                 print(f"{i}",end=',')
```

```
1,2,
```

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

```
In [44]: num = int(input("Enter a number:"))
         count = 0
         for i in range(2,num//2):
             if num % i == 0:
                 count = count+1
                 break;
         if count > 0:
             print(f"{num} is not a prime number.")
         else :
             print(f"{num} is a prime number.")
```

```
11 is a prime number.
```

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

```
In [47]:  num = int(input("Enter a number:"))
          temp = num
          sum = 0
          while temp>0:
              digit = temp%10
              temp = temp//10
              sum = sum + digit

          print(sum)
```

```
10
```

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

```
In [49]:  num = int(input("Enter a number:"))
          temp = num
          rev = 0
          while temp>0:
              digit = temp%10
              temp = temp//10
              rev = rev*10 + digit
          if rev == num :
              print(f"{num} is Palindrome.")
          else :
              print(f"{num} is not Palindrome.")
```

```
123 is not Palindrome.
```

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

```
In [54]:  num = int(input("Enter a number :"))
          temp1 = num;
          total_digit = 0
          digit = 0
          sum = 0

          while temp1 > 0:
              temp1 = temp1//10
              total_digit = total_digit+1

          temp2 = num
          while temp2 > 0:
              digit = temp2%10
              temp2 = temp2//10
              pow = digit
              for i in range(1,total_digit):
                  pow = pow*digit
              sum = sum+pow
```

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

153 is Armstrong.

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

In [59]:
```
num = int(input("Enter a Number :"))
for i in range(1,num+1):
    sum = 0
    for j in range(1,i):
        if i%j==0:
            sum = sum + j
    if sum == i:
        print(f"{i}",end=',')
```

6,28,

In [ ]: