Print first 10 natural numbers using while loop

In [1]:
```
natural_number =1
while natural_number <=10:
 print(natural_number)
 natural_number +=1
```

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

print the following pattern

In [3]:
```
n=int(input("Enter a values:"))
for i in range(1,n+1):
  for j in range(1,i+1):
    print(j, end=" ")
  print()
```

```
Enter a values:5
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Calculate sum of all numbers from 1 to a given number

In [5]:
```
num = int(input("Enter number: "))
total = 0
for i in range(1, num + 1):
   total += i
print("Sum is:", total)
```

```
Enter number: 10
Sum is: 55
```

multiplication table by given number

In [6]:
```
num = int(input("Enter a number: "))
for i in range(1, 11):
   print(num, 'x', i, '=', num*i)
```

```
Enter a number: 3
3 x 1 = 3
3 x 2 = 6
3 x 3 = 9
3 x 4 = 12
3 x 5 = 15
3 x 6 = 18
3 x 7 = 21
3 x 8 = 24
3 x 9 = 27
3 x 10 = 30
```

If the number is greater than 150, then skip it and move to the following number

If the number is greater than 500, then stop the loop

In [7]:
```
numbers = [12, 75, 150, 180, 145, 525, 50]
for num in numbers:
    if num > 500:
     break
    elif num > 150:
     continue
    elif num % 5 == 0:
      print(num)
```

```
75
150
145
```

Count the total number of digits in a number

In [8]:
```
num=75869
count=0
while num!=0:
  num=num//10
  count=count+1
print("Total digits are:",count)
```

```
Total digits are: 5
```

Print list in reverse order using a loop

In [12]:
```
n=int(input("Enter a values:"))
for i in range(n,0,-1):
    for j in range(i,0,-1):
        print(j,end=' ')
    print()
```

```
Enter a values:5
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
```

Print list in reverse order using a loop

In [13]:
```
list1 = [10, 20, 30, 40, 50]
new_list = reversed(list1)
for item in new_list:
    print(item)
```

```
50
40
30
20
10
```

Display numbers from -10 to -1 using for loop

In [14]:
```
for num in range(-10,0,1):
  print(num)
```

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

Display a message “Done” after the successful execution of the for loop

In [15]:
```
for i in range(5):
    print(i)
print("Done!")Display a message “Done” after the successful execution of the for
```

```
0
1
2
3
4
Done!
```

print prime number between 25 and 50

In [16]:
```
for i in range(25,51):
  if i%2==1:
    print(i)
```

```
25
27
29
31
33
35
37
39
41
43
45
47
49
```

Display Fibonacci series up to 10 terms

In [17]:
```
num1=int(input())
num2=int(input())
for i in range(10):
  num3=num1+num2
  print(num3)
  num1=num2
  num2=num3
```

```
0
1
1
2
3
5
8
13
21
34
55
89
```

Find the factorial of a given number

In [18]:
```
n=int(input("Enter a Factorial value:"))
fact=1
for i in range(1, n+1):
    fact = fact * i
    print(fact)
```

```
Enter a Factorial value:5
1
2
6
24
120
```

reverse a given number

In [1]:
```
given_num=int(input("Enter a number: "))
reverse_num=reversed (str(given_num))
for i in reverse_num:
  print(i)
```

```
Enter a number: 76542
2
4
5
6
7
```

Print elements from a given list present at odd index positions

In [2]:
```
my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
for i in my_list[1::2]:
      print(i)
```

```
20
40
60
80
100
```

Calculate the cube of all numbers from 1 to a given number

In [3]:
```
Given_num=int(input("Enter the given number: "))
for i in range(1,Given_num+1):
  print("Current number is",i,"and the cube is",i**3)
```

```
Enter the given number: 6
Current number is 1 and the cube is 1
Current number is 2 and the cube is 8
Current number is 3 and the cube is 27
Current number is 4 and the cube is 64
Current number is 5 and the cube is 125
Current number is 6 and the cube is 216
```

Find the sum of the series up to n terms

In [4]:
```
n=int(input("Enter a value: "))
start=2
sum_seq=0
for i in range(0,n):
  print(start,end="+")
  sum_seq+=start
  start=(start*10)+2
print("\nSum of above series is:",sum_seq)
```

```
Enter a value: 5
2+22+222+2222+22222+
Sum of above series is: 24690
```

Print the following pattern

In [5]:
```
for i in range(1,6):
  for j in range(i):
    print("*",end='')
  print()
for i in range(4,0,-1):
  for j in range(i,0,-1):
    print("*",end='')
  print()
```

```
*
**
***
****
*****
****
***
**
*
```