Eg2: **To print the sum of 2 numbers**

Java:

```java
1)  public class Add
2)  {
3)    public static void main(String[] args)
4)    {
5)      int a,b;
6)      a =10;
7)      b=20;
8)      System.out.println("The Sum:"+(a+b));
9)    }
10) }
```

C:

```c
1)  #include <stdio.h>
2)
3)  void main()
4)  {
5)    int a,b;
6)    a =10;
7)    b=20;
8)    printf("The Sum:%d",(a+b));
9)  }
```

Python:

```python
1)  a=10
2)  b=20
3)  print("The Sum:",(a+b))
```

The name Python was selected from the TV Show
"The Complete
Monty
Python's
Circus", which was broadcasted in BBC from 1969 to 1974.

Guido developed Python language by taking almost all programming features from
different languages

1. Functional Programming Features from C
2. Object Oriented Programming Features from C++
3. Scripting Language Features from Perl and Shell Script

Pattern Programs

Pattern-1:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    print("* "*n)
```

Pattern-2:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+1):
4)      print(i,end=" ")
5)    print()
```

Pattern-3:

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

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

```python
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+1):
4)      print(j,end=" ")
5)    print()
```

Pattern-4:

```
A A A A A A A A A A
B B B B B B B B B B
C C C C C C C C C C
D D D D D D D D D D
E E E E E E E E E E
F F F F F F F F F F
G G G G G G G G G G
H H H H H H H H H H
I I I I I I I I I I
J J J J J J J J J J
```

```python
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+1):
4)      print(chr(64+i),end=" ")
5)    print()
```

Pattern-5:

```
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
A B C D E F G H I J
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      for j in range(1,n+1):
4)          print(chr(64+j),end=" ")
5)      print()
```

Pattern-6:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      for j in range(1,n+1):
4)          print(n+1-i,end=" ")
5)      print()
```

Pattern-6:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      for j in range(1,n+1):
4)          print(n+1-j,end=" ")
5)      print()
```

Pattern-7:

```
J J J J J J J J J J
I I I I I I I I I I
H H H H H H H H H H
G G G G G G G G G G
F F F F F F F F F F
E E E E E E E E E E
D D D D D D D D D D
C C C C C C C C C C
B B B B B B B B B B
A A A A A A A A A A
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      for j in range(1,n+1):
4)          print(chr(65+n-i),end=" ")
5)      print()
```

Pattern-8:

```
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
J I H G F E D C B A
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      for j in range(1,n+1):
4)          print(chr(65+n-j),end=" ")
5)      print()
```

Pattern-9:

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

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

Code - 1:

```
1)  n=int(input("Enter the number of rows:"))
2)  for i in range(1,n+1):
3)    for j in range(1,i+1):
4)      print("*",end=" ")
5)    print()
```

Code - 2:

```
1)  n=int(input("Enter the number of rows:"))
2)  for i in range(1,n+1):
3)    print("* "*i)
```

Pattern-10:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,i+1):
4)      print(i,end=" ")
5)    print()
```

Pattern-11:

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

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,i+1):
4)      print(j,end=" ")
5)    print()
```

Pattern-12:

A
B B
C C C
D D D D
E E E E E
F F F F F F
G G G G G G G
H H H H H H H H
I I I I I I I I I
J J J J J J J J J J

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,i+1):
4)      print(chr(64+i),end=" ")
5)    print()
```

Pattern-13:

A
A B
A B C
A B C D
A B C D E
A B C D E F
A B C D E F G
A B C D E F G H
A B C D E F G H I
A B C D E F G H I J

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,i+1):
4)      print(chr(64+j),end=" ")
5)    print()
```

- ❖ Squares
- ❖ Right Angled Triangle
- ❖ Reverse of Right Angled Triangle

Pattern-14:

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

```python
1) n=int(input("Enter the number of rows: "))
2) for i in range(1,n+1):
3)    for j in range(1,n+2-i):
4)       print("*",end=" ")
5)    print()
```

Pattern-15:

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

```python
1) n=int(input("Enter the number of rows: "))
2) for i in range(1,n+1):
3)    for j in range(1,n+2-i):
4)       print(i,end=" ")
5)    print()
```

Pattern-16:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+2-i):
4)      print(j,end=" ")
5)    print()
```

Pattern-17:

```
A A A A A A A A A A
B B B B B B B B B
C C C C C C C C
D D D D D D D
E E E E E E
F F F F F
G G G G
H H H
I I
J
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+2-i):
4)      print(chr(64+i),end=" ")
5)    print()
```

Pattern-18:

```
A B C D E F G H I J
A B C D E F G H I
A B C D E F G H
A B C D E F G
A B C D E F
A B C D E
A B C D
```

A B C
A B
A

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+2-i):
4)      print(chr(64+j),end=" ")
5)    print()
```

Pattern-19:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+2-i):
4)      print(n+1-i,end=" ")
5)    print()
```

Pattern-20:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    for j in range(1,n+2-i):
4)      print(n+1-j,end=" ")
5)    print()
```

Pattern-21:

```
J J J J J J J J J J
I I I I I I I I I
H H H H H H H H
G G G G G G G
F F F F F F
E E E E E
D D D D
C C C
B B
A
```

```
1)   n=int(input("Enter the number of rows: "))
2)   for i in range(1,n+1):
3)     for j in range(1,n+2-i):
4)       print(chr(65+n-i),end=" ")
5)     print()
```

Pattern-22:

```
J I H G F E D C B A
J I H G F E D C B
J I H G F E D C
J I H G F E D
J I H G F E
J I H G F
J I H G
J I H
J I
J
```

```
1)   n=int(input("Enter the number of rows: "))
2)   for i in range(1,n+1):
3)     for j in range(1,n+2-i):
4)       print(chr(65+n-j),end=" ")
5)     print()
```

Pattern-23:

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

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print(" "*(n-i),"*"*i,end=" ")
4)      print()
```

Pattern-24:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print(" "*(n-i),end="")
4)      for j in range(1,i+1):
5)          print("*",end=" ")
6)      print()
```

Pattern-25:

```
        1

       2 2

      3 3 3

     4 4 4 4

    5 5 5 5 5

   6 6 6 6 6 6

  7 7 7 7 7 7 7

 8 8 8 8 8 8 8 8
```

9 9 9 9 9 9 9 9 9

10 10 10 10 10 10 10 10 10 10

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    print("  "*(n-i),(str(i)+" ")*i)
4)    print()
```

Pattern-26:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)    print("  "*(n-i),end="")
4)    for j in range(1,i+1):
5)      print(j,end=" ")
6)    print()
```

Pattern-27:

```
        A

       B B

      C C C

     D D D D

    E E E E E

   F F F F F F

  G G G G G G G

 H H H H H H H H
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),(chr(64+i)+" ")*i)
4)      print()
```

Pattern-28:

```
          A
         A B
        A B C
       A B C D
      A B C D E
     A B C D E F
    A B C D E F G
   A B C D E F G H
  A B C D E F G H I
 A B C D E F G H I J
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),end="")
4)      for j in range(1,i+1):
5)          print(chr(64+j),end=" ")
6)      print()
```

Pattern-29:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(i-1),"* "*(n+1-i))
```

Pattern-30:

```
5 5 5 5 5
 4 4 4 4
  3 3 3
   2 2
    1
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(i-1),(str(n+1-i)+" ")*(n+1-i))
```

Pattern-31:

```
1 2 3 4 5
 1 2 3 4
  1 2 3
   1 2
    1
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(i-1),end="")
4)      for j in range(1,n+2-i):
5)          print(j,end=" ")
6)      print()
```

Pattern-32:

```
E E E E E
 D D D D
  C C C
   B B
    A
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(i-1),(str(chr(65+n-i))+" ")*(n+1-i))
```

Pattern-33:

```
A B C D E
 A B C D
  A B C
   A B
    A
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(i-1),end="")
4)      for j in range(65,66+n-i):
5)          print(chr(j),end=" ")
6)      print()
```

Pattern-34:

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

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),"* "*(2*i-1))
```

Pattern-35:

```
        1
      2 2 2
    3 3 3 3 3
  4 4 4 4 4 4 4
5 5 5 5 5 5 5 5 5
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),(str(i)+" ")*(2*i-1))
```

Pattern-36:

```
        A
      B B B
    C C C C C
  D D D D D D D
E E E E E E E E E
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),(str(chr(64+i)+" "))*(2*i-1))
```

Pattern-37:

```
        A
      C C C
    E E E E E
  G G G G G G G
  I I I I I I I I I
```

```
1)   n=int(input("Enter the number of rows: "))
2)   for i in range(1,n+1):
3)     print("  "*(n-i),(str(chr(64+2*i-1)+" "))*(2*i-1))
```

Pattern-38:

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

```
1)   n=int(input("Enter the number of rows: "))
2)   for i in range(1,n+1):
3)     print("  "*(n-i),end="")
4)     for j in range(1,2*i):
5)       print(j,end=" ")
6)     print()
```

Pattern-39:

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

```
1)   n=int(input("Enter the number of rows: "))
2)   for i in range(1,n+1):
3)     print("  "*(n-i),end="")
4)     for j in range(2*i-1,0,-1):
5)       print(j,end=" ")
6)     print()
```

Pattern-40:

```
    A
   A B C
  A B C D E
 A B C D E F G
A B C D E F G H I
```

```
1)   n=int(input("Enter the number of rows: "))
2)   for i in range(1,n+1):
3)     print("  "*(n-i),end="")
4)     for j in range(65,65+2*i-1):
```

```
5)          print(chr(j),end=" ")
6)      print()
```

Pattern-41:

```
    A
   C B A
  E D C B A
 G F E D C B A
I H G F E D C B A
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),end="")
4)      for j in range(65+2*i-2,64,-1):
5)          print(chr(j),end=" ")
6)      print()
```

Pattern-42:

```
    0
   1 0 1
  2 1 0 1 2
 3 2 1 0 1 2 3
4 3 2 1 0 1 2 3 4
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),end="")
4)      for j in range(1,i):
5)      print(i-j,end=" ")
6)      for k in range(0,i):
7)          print(k,end=" ")
8)      print()
```

Pattern-43:

```
    A
   B A B
  C B A B C
 D C B A B C D
E D C B A B C D E
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print("  "*(n-i),end="")
```

```
4)      for j in range(1,i):
5)          print(chr(i-j+65),end=" ")
6)      for k in range(0,i):
7)          print(chr(k+65),end=" ")
8)      print()
```

Pattern-44:

```
    1
   1 2 1
  1 2 3 2 1
 1 2 3 4 3 2 1
1 2 3 4 5 4 3 2 1
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print(" "*(n-i),end="")
4)      for j in range(1,i+1):
5)          print(j,end=" ")
6)      for k in range(i-1,0,-1):
7)          print(k,end=" ")
8)      print()
```

Pattern-45:

```
    A
   A B A
  A B C A B
 A B C D A B C
A B C D E A B C D
```

```
1)  n=int(input("Enter the number of rows: "))
2)  for i in range(1,n+1):
3)      print(" "*(n-i),end="")
4)      for j in range(1,i+1):
5)          print(chr(64+j),end=" ")
6)      for k in range(1,i):
7)          print(chr(64+k),end=" ")
8)      print()
```

Pattern-46:

```
1)  n=int(input("Enter a number:"))
2)  for i in range(1,n+1):
3)      print(" "*(n-i),end="")
4)      for j in range(1,i+1):
```

```
5)        print(n+1-j,end=" ")
6)        print()
```

```
    5
   5 4
  5 4 3
 5 4 3 2
5 4 3 2 1
```

Pattern-47:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print("  "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)         print("*",end=" ")
6)      for k in range(1,num+1-i):
7)         print("*",end=" ")
8)      print()
```

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

Pattern-48:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print("  "*(i-1),end="")
4)      for j in range(0,num+1-i):
5)         print(num+1-i,end=" ")
6)      for k in range(1,num+1-i):
7)         print(num+1-i,end=" ")
8)      print()
```

```
5 5 5 5 5 5 5 5 5
 4 4 4 4 4 4 4
  3 3 3 3 3
   2 2 2
    1
```

Pattern-49:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(0,num+1-i):
5)          print(2*num+1-2*i,end=" ")
6)      for k in range(1,num+1-i):
7)          print(2*num+1-2*i,end=" ")
8)      print()
```

```
9 9 9 9 9 9 9 9 9
 7 7 7 7 7 7 7
  5 5 5 5 5
   3 3 3
    1
```

Pattern-50:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(j,end=" ")
6)      for k in range(2,num+2-i):
7)          print(num+k-i,end=" ")
8)      print()
```

```
1 2 3 4 5 6 7
 1 2 3 4 5
  1 2 3
   1
```

Pattern-51:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(chr(65+num-i),end=" ")
6)      for k in range(2,num+2-i):
7)          print(chr(65+num-i),end=" ")
8)      print()
```

```
E E E E E E E E
 D D D D D D D
  C C C C C
   B B B
    A
```

Pattern-52:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(chr(65+2*num-2*i),end=" ")
6)      for k in range(2,num+2-i):
7)          print(chr(65+2*num-2*i),end=" ")
8)      print()
```

```
I I I I I I I I
 G G G G G G G
  E E E E E
   C C C
    A
```

Pattern-53:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)     print(" "*(i-1),end="")
4)     for j in range(1,num+2-i):
5)         print(chr(64+j),end=" ")
6)     for k in range(2,num+2-i):
7)         print(chr(68+k-i),end=" ")
8)      print()
```

```
A B C D E F G
 A B C D E
  A B C
   A
```

Pattern-54:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)     print(" "*(num-i),end="")
4)     for j in range(1,i+1):
5)         print(j,end=" ")
```

```
6)      print()
7)   for k in range(1,num):
8)      print("  "*k,end="")
9)      for l in range(1,num+1-k):
10)        print(l,end=" ")
11)     print()
```

```
    1
   1 2
  1 2 3
 1 2 3 4
1 2 3 4 5
 1 2 3 4
  1 2 3
   1 2
    1
```

Pattern-55:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print("  "*(num-i),end="")
4)      for j in range(1,i+1):
5)         print("*",end=" ")
6)      print()
7)   for k in range(1,num):
8)      print("  "*k,end="")
9)      for l in range(1,num+1-k):
10)        print("*",end=" ")
11)     print()
```

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

Pattern-56:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print("  "*(num-i),end="")
4)      for j in range(1,i+1):
```

```
5)        print(num-j,end=" ")
6)     print()
7)  for k in range(1,num):
8)     print("  "*k,end="")
9)     for l in range(1,num+1-k):
10)       print(num-l,end=" ")
11)    print()
```

```
    4
   4 3
  4 3 2
 4 3 2 1
4 3 2 1 0
 4 3 2 1
  4 3 2
   4 3
    4
```

Pattern-57:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)     print("  "*(num-i),end="")
4)     for j in range(0,i):
5)        print(num+j-i,end=" ")
6)     print()
7)  for k in range(1,num):
8)     print("  "*k,end="")
9)     for l in range(1,num+1-k):
10)       print(l+k-1,end=" ")
11)    print()
```

```
    3
   2 3
  1 2 3
 0 1 2 3
  1 2 3
   2 3
    3
```

Pattern-58:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)     print("  "*(num-i),end="")
4)     for j in range(0,i):
5)        print(chr(65+num+j-i),end=" ")
```

```
6)    print()
7)  for k in range(1,num):
8)    print(" "*k,end="")
9)    for l in range(0,num-k):
10)      print(chr(65+k+l),end=" ")
11)    print()
```

```
    E
   D E
  C D E
 B C D E
A B C D E
 B C D E
  C D E
   D E
    E
```

Pattern-59:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    for j in range(1,i+1):
4)      print("*",end=" ")
5)    print()
6)  for a in range(1,num+1):
7)    for k in range(1,num+1-a):
8)      print("*",end=" ")
9)    print()
```

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

Pattern-60:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    for j in range(1,i+1):
4)      print(num-j,end=" ")
5)    print()
6)  for a in range(1,num+1):
7)    for k in range(1,num+1-a):
```

```
8)        print(num-k,end=" ")
9)    print()
```

```
4
4 3
4 3 2
4 3 2 1
4 3 2 1 0
4 3 2 1
4 3 2
4 3
4
```

Pattern-61:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    for j in range(1,i+1):
4)      print(num-i+j-1,end=" ")
5)    print()
6)  for a in range(1,num+1):
7)    for k in range(0,num-a):
8)      print(k+a,end=" ")
9)     print()
```

```
4
3 4
2 3 4
1 2 3 4
0 1 2 3 4
1 2 3 4
2 3 4
3 4
4
```

Pattern-62:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    for j in range(1,i+1):
4)      print(chr(65+num-i),end=" ")
5)    print()
6)  for a in range(1,num+1):
7)    for k in range(0,num-a):
8)      print(chr(65+a),end=" ")
9)    print()
```

```
E
D D
C C C
B B B B
A A A A A
B B B B
C C C
D D
E
```

Pattern-63:

```
1)  for i in range(1,num+1):
2)      for j in range(1,i+1):
3)          print(chr(65+num-j),end=" ")
4)      print()
5)  for a in range(1,num+1):
6)      for k in range(num-a,0,-1):
7)          print(chr(64+k+a),end=" ")
8)      print()
9)  num=int(input("Enter a number:"))
```

```
E
E D
E D C
E D C B
E D C B A
E D C B
E D C
E D
E
```

Pattern-64:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      for j in range(1,i+1):
4)          print(chr(64+num-i+j),end=" ")
5)      print()
6)  for a in range(1,num+1):
7)      for k in range(1,num-a+1):
8)          print(chr(64+k+a),end=" ")
9)      print()
```

E
D E
C D E
B C D E
A B C D E
B C D E
C D E
D E
E

Pattern-65:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(num-i),end="")
4)      for j in range(1,i+1):
5)          print("*",end=" ")
6)      print()
```

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

Pattern-66:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(num-i),end="")
4)      for j in range(1,i+1):
5)          print(i,end=" ")
6)      print()
```

```
    1
   2 2
  3 3 3
 4 4 4 4
5 5 5 5 5
```

Pattern-67:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(num-i),end="")
```

```
4)    for j in range(1,1+i):
5)       print(j,end=" ")
6)    print()
```

```
    1
   1 2
  1 2 3
 1 2 3 4
1 2 3 4 5
```

Pattern-68:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(num-i),end="")
4)    for j in range(1,1+i):
5)       print(chr(64+i),end=" ")
6)    print()
```

```
    A
   B B
  C C C
 D D D D
E E E E E
```

Pattern-69:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(num-i),end="")
4)    for j in range(1,1+i):
5)       print(chr(64+j),end=" ")
6)    print()
```

```
    A
   A B
  A B C
 A B C D
A B C D E
```

Pattern-70:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(i-1),end="")
4)    for j in range(1,num+2-i):
```

```
5)        print("*",end=" ")
6)        print()
```

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

Pattern-71:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(num-i+1,end=" ")
6)      print()
```

```
5 5 5 5 5
 4 4 4 4
  3 3 3
   2 2
    1
```

Pattern-72:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(num+2-i-j,end=" ")
6)      print()
```

```
 5 4 3 2 1
  4 3 2 1
   3 2 1
    2 1
     1
```

Pattern-73:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(chr(65+num-i),end=" ")
6)      print()
```

```
E E E E E
 D D D D
  C C C
   B B
    A
```

Pattern-74:

```python
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(chr(65+num+1-i-j),end=" ")
6)      print()
```

```
E D C B A
 D C B A
  C B A
   B A
    A
```

Pattern-75:

```python
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(1,num+2-i):
5)          print(chr(64+j),end=" ")
6)      print()
```

```
A B C D E
 A B C D
  A B C
   A B
    A
```

Pattern-76:

```python
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(num-i),end="")
4)      for j in range(1,i+1):
5)          print("*",end=" ")
6)      print()
7)  for p in range(1,num):
8)      print(" "*p,end="")
```

```
9)      for q in range(1,num+1-p):
10)         print("*",end=" ")
11)      print()
```

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

Pattern-77:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print(" "*(num-i),end="")
4)      for j in range(1,i+1):
5)         print(i,end=" ")
6)      print()
7)   for p in range(1,num):
8)      print(" "*p,end="")
9)      for q in range(1,num+1-p):
10)        print(num-p,end=" ")
11)     print()
```

```
    1
   2 2
  3 3 3
 4 4 4 4
5 5 5 5 5
 4 4 4 4
  3 3 3
   2 2
    1
```

Pattern-78:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print(" "*(num-i),end="")
4)      for j in range(1,i+1):
5)         print(j,end=" ")
6)      print()
7)   for p in range(1,num):
```

```
8)      print(" "*p,end="")
9)      for q in range(1,num+1-p):
10)       print(q+p,end=" ")
11)     print()
```

```
 1
 1 2
 1 2 3
 1 2 3 4
1 2 3 4 5
 2 3 4 5
 3 4 5
 4 5
 5
```

Pattern-79:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print(" "*(num-i),end="")
4)      for j in range(1,i+1):
5)        print(j,end=" ")
6)      print()
7)   for p in range(1,num):
8)      print(" "*p,end="")
9)      for q in range(1,num+1-p):
10)       print(q,end=" ")
11)     print()
```

```
 1
 1 2
 1 2 3
 1 2 3 4
1 2 3 4 5
 1 2 3 4
 1 2 3
 1 2
 1
```

Pattern-80:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print(" "*(num-i),end="")
4)      for j in range(1,i+1):
5)        print(chr(64+i),end=" ")
6)      print()
```

```
7)    for p in range(1,num):
8)        print(" "*p,end="")
9)        for q in range(1,num+1-p):
10)           print(chr(64+num-p),end=" ")
11)       print()
```

```
    A
   B B
  C C C
 D D D D
E E E E E
 D D D D
  C C C
   B B
    A
```

Pattern-81:

```
1)    num=int(input("Enter a number:"))
2)    for i in range(1,num+1):
3)        print(" "*(num-i),end="")
4)        for j in range(1,i+1):
5)           print(chr(64+j),end=" ")
6)        print()
7)    for p in range(1,num):
8)        print(" "*p,end="")
9)        for q in range(1,num+1-p):
10)           print(chr(64+q+p),end=" ")
11)       print()
```

```
    A
   A B
  A B C
 A B C D
A B C D E
 B C D E
  C D E
   D E
    E
```

Pattern-82:

```
1)    n=int(input("Enter a number:"))
2)    for i in range(1,n+1):
3)        print("  "*(n-i),end="")
4)        for j in range(1,i+1):
5)           print(n-i+j,end=" ")
```

```
6)      for k in range(2,i+1):
7)        print(n+1-k,end=" ")
8)      print()
9)   for i in range(1,n+1):
10)    print("  "*i,end="")
11)    for j in range(1+i,n+1):
12)      print(j,end=" ")
13)    for k in range(2,n+1-i):
14)      print(n+1-k,end=" ")
15)    print()
```

```
    5
   4 5 4
  3 4 5 4 3
 2 3 4 5 4 3 2
1 2 3 4 5 4 3 2 1
 2 3 4 5 4 3 2
  3 4 5 4 3
   4 5 4
    5
```

Pattern-83:

```
1)   while True:
2)     n=int(input("Enter a number:"))
3)     for i in range(1,n+1):
4)       print("  "*(n-i),end="")
5)       for j in range(1,i+1):
6)         print(n+1-j,end=" ")
7)       for k in range(2,i+1):
8)         print(n-i+k,end=" ")
9)       print()
10)    for i in range(1,n+1):
11)      print("  "*i,end="")
12)      for j in range(1,n+1-i):
13)        print(n+1-j,end=" ")
14)      for k in range(2,n+1-i):
15)        print(i+k,end=" ")
16)      print()
```

```
    5
   5 4 5
  5 4 3 4 5
 5 4 3 2 3 4 5
5 4 3 2 1 2 3 4 5
 5 4 3 2 3 4 5
  5 4 3 4 5
   5 4 5
```

Pattern-84:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(num-i),end="")
4)    for j in range(i,i+1):
5)      print("*",end=" ")
6)      if i>=2:
7)        print(" "*(2*i-4),end="")
8)        for k in range(i,i+1):
9)          print("*",end=" ")
10)   print()
```

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

Pattern-85:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(num-i),end="")
4)    for j in range(i,i+1):
5)      print(i,end=" ")
6)      if i>=2:
7)        print(" "*(2*i-4),end="")
8)        for k in range(i,i+1):
9)          print(i,end=" ")
10)   print()
```

```
    1
   2 2
  3   3
 4     4
5       5
```

Pattern-86:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(num-i),end="")
4)    for j in range(i,i+1):
```

```
5)        print(num+1-i,end=" ")
6)     if i>=2:
7)        print(" "*(2*i-4),end="")
8)        for k in range(i,i+1):
9)            print(num+1-i,end=" ")
10)    print()
```

```
  5
 4 4
 3   3
2     2
1       1
```

Pattern-87:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)     print(" "*(num-i),end="")
4)     for j in range(i,i+1):
5)        print(chr(64+num+1-i),end=" ")
6)     if i>=2:
7)        print(" "*(2*i-4),end="")
8)        for k in range(i,i+1):
9)            print(chr(64+num+1-i),end=" ")
10)    print()
```

```
  E
 D D
 C   C
B     B
A       A
```

Pattern-88:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)     print(" "*(num-i),end="")
4)     for j in range(i,i+1):
5)        print(chr(64+i),end=" ")
6)     if i>=2:
7)        print(" "*(2*i-4),end="")
8)        for k in range(i,i+1):
9)                print(chr(64+i),end=" ")
10)    print()
```

```
  A
B B
C   C
D   D
E   E
```

Pattern-89:

```python
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(i-1),end="")
4)    for j in range(i,i+1):
5)      print("*",end=" ")
6)    if i<=4:
7)        print(" "*(2*num-2*i-2),end="")
8)        for k in range(i,i+1):
9)          print("*",end=" ")
10)   print()
```

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

Pattern-90:

```python
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print(" "*(i-1),end="")
4)    for j in range(i,i+1):
5)      print(i,end=" ")
6)    if i<num:
7)        print(" "*(2*num-2*i-2),end="")
8)        for k in range(i,i+1):
9)          print(i,end=" ")
10)   print()
```

```
1       1
 2     2
  3   3
   4 4
    5
```

Pattern-91:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(i,i+1):
5)         print(num-i+1,end=" ")
6)      if i<=4:
7)         print(" "*(2*num-2*i-2),end="")
8)         for k in range(i,i+1):
9)            print(num-i+1,end=" ")
10)     print()
```

```
5   5
 4   4
  3 3
   2 2
    1
```

Pattern-92:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(i,i+1):
5)         print(chr(64+num-i+1),end=" ")
6)      if i<=4:
7)         print(" "*(2*num-2*i-2),end="")
8)         for k in range(i,i+1):
9)            print(chr(64+num-i+1),end=" ")
10)     print()
```

```
E   E
 D   D
  C C
   B B
    A
```

Pattern-93:

```
1)   num=int(input("Enter a number:"))
2)   for i in range(1,num+1):
3)      print(" "*(i-1),end="")
4)      for j in range(i,i+1):
5)         print(chr(64+i),end=" ")
6)         if i<=4:
```

```
7)          print(" "*(2*num-2*i-2),end="")
8)          for k in range(i,i+1):
9)              print(chr(64+i),end=" ")
10)     print()
```

```
A   A
 B   B
  C   C
   D D
    E
```

Pattern-94:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print("  "*(i-1),end="")
4)    for j in range(1,num+1):
5)        print("*",end=" ")
6)    print()
```

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

Pattern-95:

```
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)    print("  "*(num-i),end="")
4)    for j in range(1,i+1):
5)        print("*",end=" ")
6)    print("  "*(num-i),end="")
7)    for k in range(1,i+1):
8)        print("*",end=" ")
9)    print()
```

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

Pattern-96:

```python
1)  n=int(input("Enter a number:"))
2)  for i in range(1,n+1):
3)      for j in range(1,i+1):
4)          if (i%2!=0 and j%2!=0 )or(i%2==0 and j%2==0):
5)              print("1",end=" ")
6)          else:
7)              print("0",end=" ")
8)      print()
```

```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
0 1 0 1 0 1
1 0 1 0 1 0 1
```

Pattern-97:

```python
1)  num=int(input("Enter a number:"))
2)  for i in range(1,num+1):
3)      print(" "*(2*num-i+3),end="")
4)      for j in range(1,i+1):
5)          print("*",end=" ")
6)      print()
7)  for i in range(1,num+3):
8)      print(" "*(2*num-i+1),end="")
9)      for j in range(-1,i+1):
10)         print("*",end=" ")
11)     print()
12) for i in range(1,num+5):
13)     print(" "*(2*num-i),end="")
14)     for j in range(-2,i+1):
15)         print("*",end=" ")
16)     print()
17) for i in range(1,num+3):
18)     print(" "*((2*num)),end="")
19)     print("* "*3)
```

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

Pattern-98:

```python
1)  num=int(input("Enter a number"))
2)  for i in range(1,num+1):
3)      print(" "*(2*num-i),end="")
4)      for j in range(1,i+1):
5)          print("*",end=" ")
6)      print()
7)  for i in range(1,num+1):
8)      print(" "*(num-i),end="")
9)      for j in range(1,i+1):
10)         print("*",end=" ")
11)     print(" "*(num-i),end="")
12)     for k in range(1,i+1):
13)         print("*",end=" ")
14)     print()
```

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

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

Pattern-99:

```python
1)  n=int(input("Enter a number"))
2)  for i in range(1,2*n+1):
3)     if i%2==0:
4)        print("*"*i,end=" ")
5)     else:
6)        print("*"*(i+1),end=" ")
7)     print()
```

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

Pattern-100:

```python
1)   n=int(input("Enter a number:"))
2)   for a in range(1,n+1,2):
3)      for i in range(1,n+1):
4)         print(" "*(2*n-i-a),end="")
5)         for j in range(1,i+a):
6)            print("*",end=" ")
7)         print()
8)   for b in range(1,n+1):
9)      print("  "*(n-2),end="")
10)     print("* "*3)
```

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