

## Pattern 1

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

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

## Pattern 2

```
In [2]: ▶ inc = 1  
          for i in range(5):  
              for j in range(5):  
                  print(inc, end="")  
              print()  
              inc = inc + 1
```

```
11111  
22222  
33333  
44444  
55555
```

## Pattern 3

```
In [4]: ▶ inc = 1  
          for i in range(5):  
              for j in range(5):  
                  print(inc, end="")  
                  inc = inc + 1  
              print()  
              inc = 1
```

```
12345  
12345  
12345  
12345  
12345
```

## Pattern 4

```
In [5]: ▶ inc = 5
        for i in range(5):
            for j in range(5):
                print(inc, end="")
            print()
            inc = inc - 1
```

```
55555
44444
33333
22222
11111
```

## Pattern 5

```
In [13]: ▶ inc = 65
        for i in range(5):
            for j in range(5):
                print(chr(inc), end="")
            print()
            inc = inc + 1
```

```
AAAAA
BBBBB
CCCCC
DDDDD
EEEE
```

## Pattern 6

```
In [14]: ▶ inc = 69
        for i in range(5):
            for j in range(5):
                print(chr(inc), end="")
            print()
            inc -= 1
```

```
EEEE
DDDD
CCCC
BBBB
AAAA
```

## Pattern 7

```
In [17]: ▶ for i in range(6):
           for j in range(i):
               print("*", end=" ")
           print()
```

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

## Pattern 8

```
In [28]: ▶ inc = 0
           for i in range(6):
               for j in range(i):
                   print(inc, end=" ")
               print()
               inc = inc + 1
```

```
1
22
333
4444
55555
```

## Pattern 9

```
In [31]: ▶ inc = 1
           for i in range(6):
               for j in range(i):
                   print(inc, end=" ")
                   inc += 1
               print()
               inc = 1
```

```
1
12
123
1234
12345
```

## Pattern 10

```
In [35]: ▶ inc = 64
         for i in range(6):
             for j in range(i):
                 print(chr(inc), end="")
             print()
             inc = inc + 1
```

A  
BB  
CCC  
DDDD  
EEEE

## Pattern 11

```
In [39]: ▶ inc = 65
         for i in range(6):
             for j in range(i):
                 print(chr(inc), end="")
                 inc = inc + 1
             print()
             inc = 65
```

A  
AB  
ABC  
ABCD  
ABCDE

## Pattern 12

```
In [40]: ▶ word = "PRABHU"
         for i in range(1, len(word) + 1):
             for j in range(1, i + 1):
                 print(word[j-1], end="")
             print()
```

P  
PR  
PRA  
PRAB  
PRABH  
PRABHU

## Pattern 13

```
In [42]: ▶ for i in range(5, 0, -1):
           for j in range(i, 0, -1):
               print("*", end="")
           print()
```

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

## Pattern 14

```
In [43]: ▶ inc = 1
           for i in range(5, 0, -1):
               for j in range(i, 0, -1):
                   print(inc, end="")
               print()
               inc += 1
```

```
11111
2222
333
44
5
```

## Pattern 15

```
In [44]: ▶ inc = 1
           for i in range(5, 0, -1):
               for j in range(i, 0, -1):
                   print(inc, end="")
                   inc = inc + 1
               print()
               inc = 1
```

```
12345
1234
123
12
1
```

## Pattern 16

```
In [45]: ▶ inc = 65
          for i in range(5, 0, -1):
              for j in range(i, 0, -1):
                  print(chr(inc), end=" ")
              print()
              inc += 1
```

```
AAAAA
BBBBB
CCCCC
DDDDD
EEEE
```

## Pattern 17

```
In [46]: ▶ inc = 65
          for i in range(5, 0, -1):
              for j in range(i, 0, -1):
                  print(chr(inc), end=" ")
                  inc = inc + 1
              print()
              inc = 65
```

```
ABCDE
ABCD
ABC
AB
A
```

## Pattern 18

```
In [47]: ▶ inc = 69
          for i in range(5, 0, -1):
              for j in range(i, 0, -1):
                  print(chr(inc), end=" ")
              print()
              inc -= 1
```

```
EEEE
DDDD
CCC
BB
A
```

## Pattern 19

```
In [48]: ▶ inc = 69
          for i in range(5, 0, -1):
              for j in range(i, 0, -1):
                  print(chr(inc), end="")
                  inc -= 1
              print()
          inc = 69
```

```
EDCBA
EDCB
EDC
ED
E
```

## Pattern 20

```
In [62]: ▶ word = "PRABHU"
          for i in range(len(word), 0, -1):
              print(word[:i])
          print()
```

```
PRABHU
PRABH
PRAB
PRA
PR
P
```

## Pattern 21

```
In [65]: ▶ rows = 5
          for i in range(1, rows + 1):
              for j in range(rows, i, -1):
                  print(" ", end="")
              for k in range(1, i + 1):
                  print("*", end="")
              print()
```

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

## Pattern 22

```
In [67]: ▶ rows = 5
a = 1
for i in range(1, rows + 1):
    for j in range(rows, i, -1):
        print(" ", end="")
    for k in range(1, i + 1):
        print(a, end="")
    print()
    a = a + 1
```

```
1
22
333
4444
55555
```

## Pattern 23

```
In [68]: ▶ rows = 5
a = 1
for i in range(1, rows + 1):
    for j in range(rows, i, -1):
        print(" ", end="")
    for k in range(1, i + 1):
        print(a, end="")
        a = a + 1
    print()
    a = 1
```

```
1
12
123
1234
12345
```

## Pattern 24



```
In [70]: ▶ rows = 5
a = 65
for i in range(1, rows + 1):
    for j in range(rows, i, -1):
        print(" ", end="")
    for k in range(1, i + 1):
        print(chr(a), end="")
        a = a + 1
    print()
a = 65
```

A  
AB  
ABC  
ABCD  
ABCDE

## Pattern 25

```
In [72]: ▶ rows = 5
a = 65
for i in range(1, rows + 1):
    for j in range(rows, i, -1):
        print(" ", end="")
    for k in range(1, i + 1):
        print(chr(a), end="")
    print()
a = a + 1
```

A  
BB  
CCC  
DDDD  
EEEE

## Pattern 26

```
In [73]: ▶ a = "PRABHU"
rows = len(a)
for i in range(rows):
    for j in range(rows - 1, i, -1):
        print(" ", end="")
    for k in range(i + 1):
        print(word[k], end="")
    print()
```

```
P
PR
PRA
PRAB
PRABH
PRABHU
```

## Pattern 27

```
In [74]: ▶ rows = 5
for i in range(rows):
    for j in range(i):
        print(" ", end="")
    for k in range(rows - i):
        print("*", end="")
    print()
```

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

## Pattern 28

```
In [75]: ▶ rows = 5
a = 5
for i in range(rows):
    for j in range(i):
        print(" ", end="")
    for k in range(rows - i):
        print(a, end="")
    print()
    a = a - 1
```

```
55555
4444
333
22
1
```

## Pattern 29

```
In [77]: ▶ rows = 5
a = 1
for i in range(rows):
    for j in range(i):
        print(" ", end="")
    for k in range(rows - i):
        print(a, end="")
        a = a + 1
    print()
    a = 1
```

```
12345
 1234
   123
    12
     1
```

## Pattern 30

```
In [78]: ▶ rows = 5
a = 69
for i in range(rows):
    for j in range(i):
        print(" ", end="")
    for k in range(rows-i):
        print(chr(a), end="")
    print()
    a = a - 1
```

```
EEEE
 DDDD
  CCC
   BB
    A
```

## Pattern 31

```
In [79]: ▶ rows = 5
a = 65
for i in range(rows):
    for j in range(i):
        print(" ", end="")
    for k in range(rows-i):
        print(chr(a), end="")
        a = a + 1
    print()
    a = 65
```

```
ABCDE
ABCD
ABC
AB
A
```

## Pattern 32

```
In [80]: ▶ rows = 5
for i in range(rows):
    for j in range(rows - i - 1):
        print(" ", end="")
    for k in range(2 * i + 1):
        print("*", end="")
    print()
```

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

## Pattern 33

```
In [81]: ▶ rows = 5
a = 1
for i in range(rows):
    for j in range(rows - i - 1):
        print(" ", end="")
    for k in range(2 * i + 1):
        print(a, end="")
    print()
    a = a + 1
```

```
1
222
33333
4444444
555555555
```

## Pattern 34

```
In [82]: ▶ rows = 5
a = 1
for i in range(rows):
    for j in range(rows - i - 1):
        print(" ", end="")
    for k in range(2 * i + 1):
        print(a, end="")
    print()
    a = a + 2
```

```
1
333
55555
7777777
999999999
```

## Pattern 35

```
In [83]: ▶ rows = 5
a = 1
for i in range(rows):
    for j in range(rows - i - 1):
        print(" ", end="")
    for k in range(2 * i + 1):
        print(a, end="")
        a = a + 1
    print()
    a = 1
```

```
1
123
12345
1234567
123456789
```

## Pattern 36

```
In [88]: ▶ k = 1
          for i in range(1, 6):
              for j in range(5 - i):
                  print(" ", end="")
              for k in range(2*i - 1, 0, -1):
                  print(k, end="")
              print()
```

```
1
321
54321
7654321
987654321
```

## Pattern 37

```
In [85]: ▶ rows = 5
          a = 65
          for i in range(rows):
              for j in range(rows - i - 1):
                  print(" ", end="")
              for k in range(2 * i + 1):
                  print(chr(a), end="")
              print()
              a = a + 1
```

```
A
BBB
CCCCC
DDDDDDD
EEEEEEEE
```

## Pattern 38

```
In [89]: ▶ rows = 5
          a = 65
          for i in range(rows):
              for j in range(rows - i - 1):
                  print(" ", end="")
              for k in range(2 * i + 1):
                  print(chr(a), end="")
              print()
              a = a + 2
```

```
A
CCC
EEEE
GGGGGG
IIIIIIIII
```

## Pattern 39

```
In [90]: ▶ rows = 5
a = 65
for i in range(rows):
    for j in range(rows - i - 1):
        print(" ", end="")
    for k in range(2 * i + 1):
        print(chr(a), end="")
        a = a + 1
    print()
    a = 65
```

```
A
ABC
ABCDE
ABCDEF
ABCDEFGH
```

## Pattern 40

```
In [96]: ▶ for i in range(1, 6):
    for j in range(5 - i):
        print(" ", end="")
    for k in range(65 + 2*i - 2, 64, -1):
        print(chr(k), end="")
    print()
```

```
A
CBA
EDCBA
GFEDCBA
IHGFEDCBA
```

## Pattern 41

```
In [100]: ▶ rows = 5
for i in range(1, rows + 1):
    for j in range(i):
        print("*", end="")
    print()

for i in range(rows-1, 0, -1):
    for j in range(i):
        print("*", end="")
    print()
```

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

## Pattern 42

```
In [101]: ▶ word = "PRABHU"
length = len(word)

for i in range(1, length + 1):
    print(word[:i])
for i in range(length - 1, 0, -1):
    print(word[:i])
```

```
P
PR
PRA
PRAB
PRABH
PRABHU
PRABH
PRAB
PRA
PR
P
```

## Pattern 43



```
In [102]: ▶ rows = 5
for i in range(rows):
    for j in range(rows - i):
        print("*", end="")
    for k in range(2 * i):
        print(" ", end="")
    for l in range(rows - i):
        print("*", end="")
    print()
```

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

## Pattern 44

```
In [103]: ▶ rows = 5
for i in range(rows):
    for j in range(i + 1):
        print("*", end="")
    for k in range(2 * (rows - i - 1)):
        print(" ", end="")
    for l in range(i + 1):
        print("*", end="")
    print()
```

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

## Pattern 45

```
In [104]: ▶ rows = 5
for i in range(rows):
    for j in range(rows - i):
        print("*", end="")
    for k in range(2 * i):
        print(" ", end="")
    for l in range(rows - i):
        print("*", end="")
    print()

for i in range(rows):
    for j in range(i + 1):
        print("*", end="")
    for k in range(2 * (rows - i - 1)):
        print(" ", end="")
    for l in range(i + 1):
        print("*", end="")
    print()
```

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