

Pyramid Pattern using Python

Creating patterns by using a programming language is not less than designing an algorithm for a beginner. One of the easiest patterns that you can create is a pyramid that looks like a triangle. So to get your hands on pattern programming let's start by creating a pyramid pattern using Python.

Pyramid Pattern using Python

Writing pattern programs will help you improve your coding skills and problems based on pattern programs are also commonly asked in coding interviews. So the time spent on writing pattern programs will always be worthwhile. A pyramid pattern is like a triangle that is not empty, so to create such a pattern using Python you need to use for loops to design a pyramid structure using stars, numbers, alphabets, or any other symbol. Below is how you can write a Python program to print a pyramid using Python:

```
In [1]: def pyramid_pattern(n):
        a = 2 * n - 2
        for i in range(0, n):
            for j in range(0, a):
                print(end=" ")
            a = a - 1
            for j in range(0, i + 1):
                print("*", end=" ")
            print("\n")
        print(pyramid_pattern(10))
```

```

          *
        * *
      * * *
    * * * *
  * * * * *
* * * * * *
* * * * * *
* * * * * *
* * * * * *
* * * * * *
* * * * * *
* * * * * *
* * * * * *

```

None

```
In [ ]:
```

Example of another patterns

```
In [ ]:
```

Numbers without reassigning

```
In [2]: # Python 3.x code to demonstrate star pattern

# Function to demonstrate printing pattern of numbers
def contnum(n):

    # initializing starting number
    num = 1

    # outer loop to handle number of rows
    for i in range(0, n):

        # not re assigning num
        # num = 1

        # inner loop to handle number of columns
        # values changing acc. to outer loop
        for j in range(0, i+1):

            # printing number
            print(num, end=" ")

            # incrementing number at each column
            num = num + 1

        # ending line after each row
        print("\r")

n = 5

# sending 5 as argument
# calling Function
contnum(n)
```

1
2 3
4 5 6
7 8 9 10
11 12 13 14 15

In []:

Character Pattern

```
In [3]: # Python 3.x code to demonstrate star pattern

# Function to demonstrate printing pattern of alphabets
def alphapat(n):

    # initializing value corresponding to 'A'
    # ASCII value
    num = 65
```

```

# outer loop to handle number of rows
# 5 in this case
for i in range(0, n):

    # inner loop to handle number of columns
    # values changing acc. to outer loop
    for j in range(0, i+1):

        # explicitly converting to char
        ch = chr(num)

        # printing char value
        print(ch, end=" ")

    # incrementing number
    num = num + 1

    # ending line after each row
    print("\n")

# Driver Code
n = 5
alphapat(n)

```

```

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

```

In []:

Continuous Character pattern

In []:

In []:

In []:

In []:

In []:

```

In [6]: # function to print row
def print_row(ct, num):

```

```

    # base case
    if (num == 0):
        return ct;
    print(chr(ct + 64), end=" ");

    # recursively calling print_row()
    print_row(ct + 1, num - 1);

```

```
        return num + ct;

# function to print the pattern
def pattern(n, count, num):

    # base case
    if (n == 0):
        return;
    count = print_row(count, num);
    print();

    # recursively calling pattern()
    pattern(n - 1, count, num + 1);

# Driver code
if __name__ == '__main__':
    n = 5;
    pattern(n, 1, 1);

# This code is contributed by Rajput-Ji
```

```
A
B C
D E F
G H I J
K L M N O
```

Summary

I have created this structure of a pyramid using stars, you can also use alphabets, numbers or any symbol by replacing them with "*". So this is how you can easily create a pyramid pattern by using the Python programming language.

In []: