

Striver's DSA
SheetsStriver's DSA
PlaylistsSystem
DesignCS
SubjectsInterview Prep
SheetsStriver's CP
Sheet

February 26, 2023 ▪ Pattern

Search

Search

Pattern – 6: Inverted Numbered Right Pyramid

Problem Statement: Given an integer **N**, print
the following pattern :

```
12345
1234
123
12
1
```

Here, N = 5.

Examples:

Input Format: N = 3

Result:

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

Input Format: N = 6

Result:

Latest Video
on
takeUforward

L2...



Latest Video
on Striver

```

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

```



Solution

Disclaimer: Don't jump directly to the solution, try it out yourself first.

[Problem Link](#)

Approach:

There are 4 general rules for solving a pattern-based question :

- We always use nested loops for printing the patterns. For the outer loop, we count the number of lines/rows and loop for them.
- Next, for the inner loop, we focus on the number of columns and somehow connect them to the rows by forming a logic such that for each row we get the required number of columns to be printed.
- We print the '*' inside the inner loop.
- Observe symmetry in the pattern or check if a pattern is a combination of two or more similar patterns or not.

Recent Posts

Top LinkedList Interview Questions – Structured Path with Video Solutions

Insert before the node with Value X of the Linked List

Insert before the Kth element of the Linked List

Insert at the head of a Linked List

Delete the node with value X of a Linked List

In this pattern, we run the outer loop for N times as we have to print N rows and since we have to print a right-angled triangle/pyramid which must be inverted, so the inner loop will run from 1 to (N-i)th integer in every row till we reach the Nth row where only '1' would be left to get printed. For eg: in the 1st-row numbers from 1 to N get printed, in the 2nd-row numbers from 1 to (N-1) get printed, and so on.

Code:

C++ Code

```
#include <bits/stdc++.h>
using namespace std;

void pattern6(int N)
{
    // This is the outer loop which will l
    for (int i = 0; i < N; i++)
    {
        // This is the inner loop which l
        // no. of columns = (N - row index
        // as we have to print an inverted
        // (N-j) will give us the numbers
        for (int j =N; j>i; j--)
        {
            cout <<N-j+1<<" ";
        }

        // As soon as numbers for each ite
        // next row and give a line break
        // would get printed in 1 line.
        cout << endl;
    }
}

int main()
```

```

{
    // Here, we have taken the value of N
    // We can also take input from the use
    int N = 5;

    pattern6(N);

    return 0;
}

```

Output

```

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

```

Java Code

```

class Main {
    static void pattern6(int N)
    {
        // This is the outer loop which will l
        for (int i = 0; i < N; i++)
        {
            // This is the inner loop which lo
            // no. of columns = (N - row index
            // as we have to print an inverted
            // (N-j) will give us the numbers
            for (int j = N; j > i; j--)
            {
                System.out.print(N-j+1+" ");
            }

            // As soon as numbers for each it
            // next row and give a line break
            // would get printed in 1 line.
            System.out.println();
        }
    }
}

```

```
}  
  
public static void main(String[] args)  
  
    // Here, we have taken the value o  
    // We can also take input from the  
    int N = 5;  
    pattern6(N);  
}
```

Output

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

Special thanks to [Priyanshi Goel](#) for contributing to this article on takeUforward. If you also wish to share your knowledge with the takeUforward fam, [please check out this article](#). If you want to suggest any improvement/correction in this article

◀ please mail us at write4tuf@gmail.com ▶

[DSA Self Paced](#)[Strivers A2Z DSA Course](#)[« Previous Post](#)[Next Post »](#)**Pattern – 7: Star
Pyramid****Pattern-5: Inverted
Right Pyramid**[Load Comments](#)

The best place to learn data structures, algorithms, most asked coding interview questions, real interview experiences free of cost.

Follow Us**DSA Playlist**[Array Series](#)[Tree Series](#)[Graph Series](#)[DP Series](#)**DSA Sheets**[Striver's SDE Sheet](#)[Striver's A2Z DSA Sheet](#)[SDE Core Sheet](#)[Striver's CP Sheet](#)**Contribute**[Write an Article](#)

Copyright © 2023 takeufoward | All rights reserved