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## Pattern-5: Inverted Right Pyramid

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

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

Here, N = 5.

**Examples:**

**Input Format:** N = 3

**Result:**

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

**Input Format:** N = 6

**Result:**

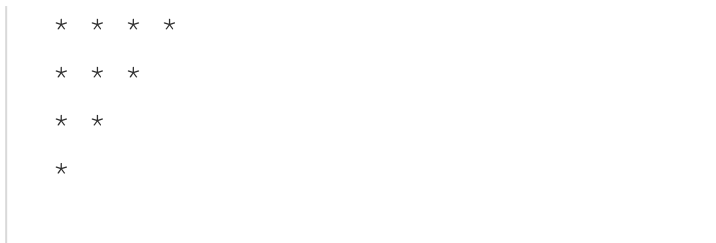
```
* * * * *
* * * * *
```

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## 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.

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

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which must be inverted, the inner loop will run in decreasing order of stars, for eg: Row 1 (i=0) would contain N stars, Row 2 (i=1) would contain (N - 1) stars and so on.

### Code:

---

### C++ Code

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

void pattern5(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)
        for (int j = N; j > i; j--)
        {
            cout << "* ";
        }

        // As soon as stars for each itera
        // 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;

    pattern5(N);
}
```

```
    return 0;
}
```

## Output

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

## Java Code

```
class Main {
    static void pattern5(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)
            for (int j = N; j > i; j--)
            {
                System.out.print("* ");
            }

            // As soon as stars for each iter
            // 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;
        pattern5(N);
    }
}
```

}

## Output

```
* * * * *
```

```
* * * *
```

```
* * *
```

```
* *
```

```
*
```

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](mailto:write4tuf@gmail.com)

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## Pattern – 4: Right- Angled Number Pyramid – II

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