CodeWithHarry

🏠   HTML   CSS   JS   C   C++   JAVA   PYTHON   PHP   🔍

C Program To Print Star Pattern - 4

▶

Overview   Q&A   Downloads   Announcements

C Program To Print Star Pattern - 4

In this tutorial, we will write a program to print a star pattern in the C language. The star pattern for which we will write a C program is shown in the figure below

Figure 1: Star Pattern

As shown in figure 1, consider the row as "i" and the columns as "j". To find the formula about when to print the stars and when to print space; see that when the index of "j" is greater or equal to the index of "i" we are printing star and when the index of "j" is smaller than the index of "i" we are printing space.

To print this star pattern we will use the formula (j>=i), if the condition (j>=i) will be true then we will print the star otherwise we will print the space; where "i" is the current index of row and "j" is the current index of the column

Note: The main thing to note here is that the star pattern shown in figure 1 is for n = 5

C program to print the following pattern is shown below

```c
int main(){

    int n = 5;

    for (int i = 0; i < n; i++)

    {

        for (int j = 0; j < n; j++)

        {
```

Code Snippet 1: Main Program 1

As shown in the code snippet 1, we have to use the nested "for" loop to print such a pattern because the first loop will run for each row and the second loop will run for each column.

1. We have initialized an integer variable "n" and assigned value "5" to it
2. The first "for" loop will start from the value "0" and runs till (n); the value of "n" is "5" so the loop will run until the value of "i" becomes "4"
3. The second "for" loop will start from the value "0" and runs till (n); the value of "n" is "5" so the loop will run until the value of "j" becomes "4"

```c
if(j>=i){

            printf("*");

        }

        else{
```

```c
            printf(" ");

        }

    }

    printf("\n");

    }

    return 0;
}
```
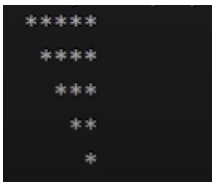
Code Snippet 2: Main program 2

As shown in the code snippet 2, we have used the formula (j>=i) in the "if" condition to determine whether to print star or print space, for example, if the value of "i" is "0" and the value of "j" is "3" by putting the values into the formula (j>=i) we get the value (5>=0) which is true so the star will be printed.

Similarly, if the value of "i" is "2" and the value of "j" is "1" by putting the values into the formula (j>=i) we get the value (1>=2) which is false so space will be printed.

The output of the following program is shown in figure 2

Figure 2: Program Output

Previous

Next

CodeWithHarry | Copyright © 2022 CodeWithHarry.com