

NESTED LOOPING**PROBLEM GIVEN:**

Write a program in C to display the following pattern

10 9 8 7

6 5 4

3 2

1

ALGORITHM:

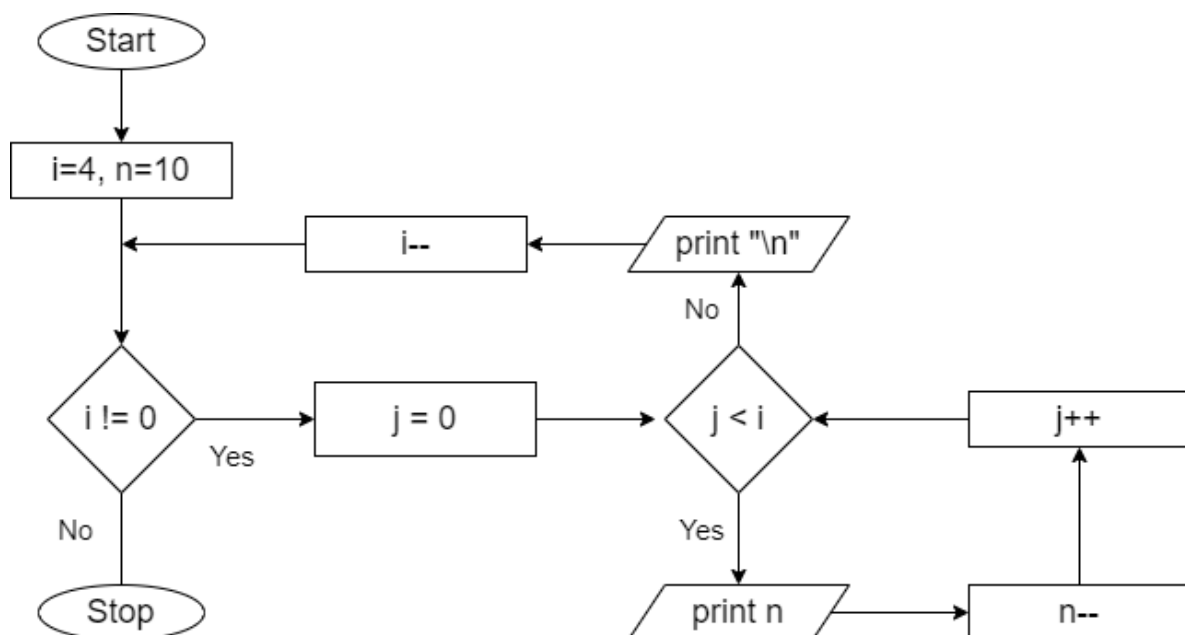
Step 1: Start

Step 2: Initialize i=4, j, and n=10.

Step 3: Introduce an outer for loop, where it checks if i is not equal to 0. If yes, let j=0, else, End the program.

Step 4: Introduce an inner for loop where it checks if j is less than i. If yes, print n, post-decrement n and post-increment j, else, print "\n" and post-decrement i.

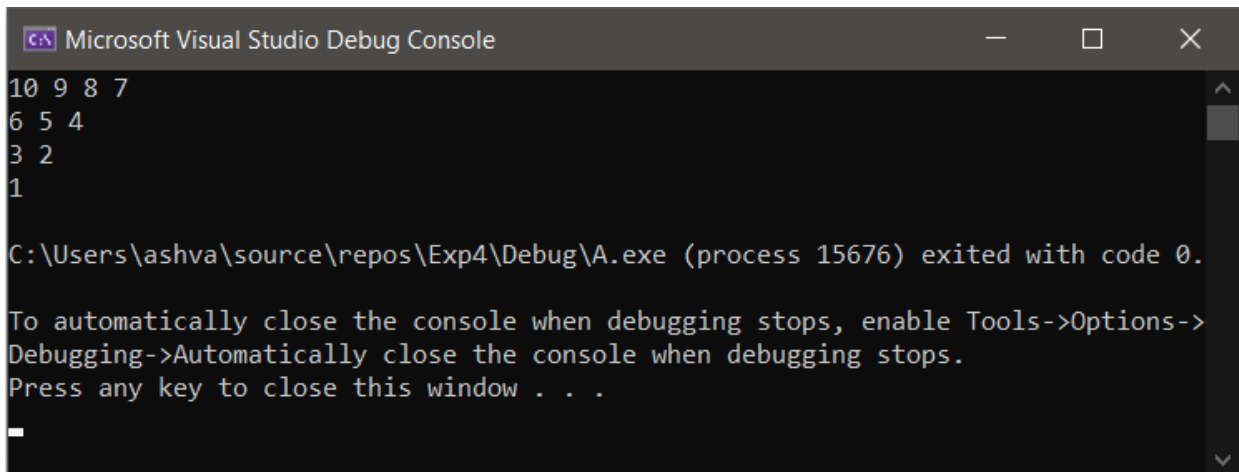
Step 5: Stop

FLOWCHART:

PROGRAM:

```
//Exp 4 - Nested Looping
#include <stdio.h>
int main()
{
    int n, i, j;
    n = 10;
    for (i = 4; i != 0; i--) {
        for (j = 0; j < i; j++) {
            printf("%d ", n);
            n--;
        }
        printf("\n");
    }
}
```

OUTPUT:



The screenshot shows the Microsoft Visual Studio Debug Console window. The output of the program is displayed as follows:

```
10 9 8 7
6 5 4
3 2
1

C:\Users\ashva\source\repos\Exp4\Debug\A.exe (process 15676) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->
Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```