HATFD1035

Print Pascal's Triangle

Write a program to generate and print the first n rows of Pascal's triangle without using built-in math or

array functions. For n = 5, the output should be:

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

PROGRAM:

```c
#include <stdio.h>
void main() {
    int n,rows,cols,space;
    scanf("%d",&n);
    for (rows = 0; rows < n; rows++) {
        for (space = 0; space < n - rows; space++) {
            printf(" ");
        }
        int val = 1;
        for (cols = 0; cols <= rows; cols++) {
            printf("%d ", val);
            val = val * (rows - cols) / (cols + 1);
        }
        printf("\n");
    }
}
```

Test case-1

Expected-Input: 4

Expected-Output:

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

Test case-2

Expected-Input: 5

Expected-Output:

```
    1
   1 1
  1 2 1
 1 3 3 1
1 4 6 4 1
```

Test case-3

Expected-Input: 7

Expected-Output:

```
      1
     1 1
    1 2 1
   1 3 3 1
  1 4 6 4 1
 1 5 10 10 5 1
1 6 15 20 15 6 1
```