

b.

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

```
#include <stdio.h>
// Function to calculate factorial
int factorial (int n) {
    int fact = 1;
    for (int i=1; i<=n; i++)
        fact *= i;
    return fact;
}
```

```
// Function to calculate binomial coefficient C(n,k)
int binomial (int n, int k) {
    return factorial (n) / (factorial(k) * factorial (n-k));
}

int main () {
    int rows;
    printf ("Enter number of rows : ");
    scanf ("%d", &rows);
    for (int i=0 ; i<rows ; i++) {
        for (int space=0 ; space<rows-i-1 ; space++) {
            printf (" ");
        }
        for (int j=0 ; j<=i ; j++) {
            printf ("%d", binomial (i,j));
        }
        printf ("\n");
    }
    return 0;
}
```

C exp3loopspyramid1.c ●

C exp3loopspyramid2.c X

C exp3loopspyramid2.c > ...

```
1
2     #include <stdio.h>
3
4     // Function to calculate factorial
5     int factorial(int n) {
6         int fact = 1;
7         for (int i = 1; i <= n; i++)
8             fact *= i;
9         return fact;
10    }
11
12    // Function to calculate binomial coefficient C(n, k)
13    int binomial(int n, int k) {
14        return factorial(n) / (factorial(k) * factorial(n - k));
15    }
16
17    int main() {
18        int rows;
19
20        // Ask user for number of rows
21        printf("Enter number of rows: ");
22        scanf("%d", &rows);
23
24        for (int i = 0; i < rows; i++) {
25            // Print leading spaces for alignment
26            for (int space = 0; space < rows - i - 1; space++) {
27                printf(" ");
28            }
29
30            // Print values in the row
31            for (int j = 0; j <= i; j++) {
32                printf("%d ", binomial(i, j));
33            }
34        }
35    }
36
```

```
34
35         printf("\n");
36     }
37
38     return 0;
39 }
40
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE PORTS

```
d2.c -o exp3loopspyramid2 } ; if ($?) { .\exp3loopspyramid2 }
Enter number of rows: 5
      1
     1 1
    1 2 1
   1 3 3 1
  1 4 6 4 1
PS C:\Users\abiga\OneDrive\Desktop\Absproj> █
```