

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 exp3loopspyramid2.c &gt; ...

```
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     }
```

```
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> █
```