```c
//30 pascal trangle up to n row
/**
 * C program to print Pascal triangle up to n rows
 */

#include <stdio.h>

/* Function definition */
long long fact(int n);

int main()
{
    int n, k, num, i;
    long long term;

    /* Input number of rows */
    printf("Enter number of rows : ");
    scanf("%d", &num);

    for(n=0; n<num; n++)
    {
        /* Prints 3 spaces */
        for(i=n; i<=num; i++)
            printf("%3c", ' ');

        /* Generate term for current row */
        for(k=0; k<=n; k++)
        {
            term = fact(n) / (fact(k) * fact(n-k));

            printf("%6lld", term);
        }

        printf("\n");
    }

    return 0;
}

/**
 * Function to calculate factorial
 */
long long fact(int n)
{
    long long factorial = 1ll;
    while(n>=1)
    {
        factorial *= n;
        n--;
    }

    return factorial;
}
```
OUTPUT:
```
Enter number of rows : 10
                    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
   1    7   21   35   35   21    7    1
  1    8   28   56   70   56   28    8    1
```

```
1   9   36   84 126 126   84   36   9   1
```