PRACTICAL – 10   CTSD

1   Write a C program to generate Pascal's triangle.

```c
#include <stdio.h>
int main()
{
    int triangle[10][10];
    for (int i = 0; i< 10; i++)
{
        triangle[0][i] = 1;
    }
    for (int i = 1; i< 10; i++) {
        for (int j = 0; j <= i; j++) {
            if (j == 0 || j == i) {
                triangle[i][j] = 1;
            } else {
                triangle[i][j] = triangle[i-1][j-1] + triangle[i-1][j];
            }
        }
    }
 for (int i = 0; i< 10; i++) {
        for (int j = 0; j <= i; j++) {
printf("%d ", triangle[i][j]);
        }
printf("\n");
    }
 return 0;
}
```

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 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	
2	**Write a C program to construct a pyramid of numbers.**

```c
int main()
{
    int rows;
    printf("Number of rows: ");
    scanf("%d", &rows);

    for (int i = 1; i <= rows; i++) {
  for (int j = 1; j <= i; j++) {
  printf("%d ", i);
 }
        printf("\n");
    }
    return 0;
}
```

OUTPUT:

Number of rows: 5
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5 | |