

Lab Assignment 1: Creating and storing Pascal's Triangle in a Triangular Array.

user will give n as input. You will have to create a triangular array using dynamic memory allocation having just sufficient space to hold the Pascal's Triangle corresponding to n . After this follow the procedure described below to fill the entries in the triangular array that corresponds to the Pascal's Triangle. Finally you will have to output the triangular array that looks similar to the Pascal's Triangle corresponding to n .

Creating Pascal's Triangle : First we start with

Pascal's Triangle for $n=0$:

For $n=1$, we add a row below having 1 1 :

1 1

For $n=2$, we add a row below having first and last numbers as 1 and in between, the numbers are sums of two consecutive numbers in the above row.

1 2 1

Similarly we repeat the process:

$n=3$

1 3 3 1

$n=4$

1 6 6 4 1

and so on.