

Program to generate Pascal's Triangle

Problem Statement: This problem has 3 variations. They are stated below:

Variation 1: Given row number r and column number c . Print the element at position (r, c) in Pascal's triangle.

Variation 2: Given the row number n . Print the n -th row of Pascal's triangle.

Variation 3: Given the number of rows n . Print the first n rows of Pascal's triangle.

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class Solution(object):
    def generate(self, n):
        if n==1:
            return [[1]]
        res=[]
        res.append([1])
        for i in range(1,n):
            temp=[0]+res[-1]+[0]
            col=[]
            for j in range(len(temp)-1):
                col.append(temp[j]+temp[j+1])
            res.append(col)
        return res
```