Pascal's Triangle ★

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For a given integer K, print the first K rows of Pascal's Triangle. Print each row with each value separated by a single space. The value at the n^{th} row and r^{th} column of the triangle is equal to $n!/(r! * (n - r)!)$ where indexing starts from 0. These values are the binomial coefficients.

The Pascal Triangle

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
....
```

Input Format

A single line of input, integer K.

Constraints

$2 <= K <= 10$

Output Format

Output the first K rows of Pascal's triangle.

Sample Input

```
4
```

Sample Output

```
1
1 1
1 2 1
1 3 3 1
```

Change Theme Language Haskell

```
1  import Control.Monad
2
3  generate :: Int -> [[Int]]
4  generate 0 = []
5  generate 1 = [[1]]
6  generate 2 = [[1,1],[1]]
7  generate n = let a = generate (n-1)
8                in f (head a):a
```

```
9               where f xs = 1:(uncurry (+) <$> zip (init xs) (drop 1 $ cycle xs)) ++ [1]
10
11
12  main = do
13      n <- read <$> getLine
14      forM (reverse $ generate n) (\i -> putStrLn $ unwords $ show <$> i)
15
```

Line: 15 Col: 1

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