Write a program to print the below pattern?

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 1 |  |  |  |  |
|  |  |  | 1 |  | 1 |  |  |  |
|  |  | 1 |  | 2 |  | 1 |  |  |
|  | 1 |  | 3 |  | 3 |  | 1 |  |
| 1 |  | 4 |  | 6 |  | 4 |  | 1 |
|  |  |  |  |  |  |  |  |  |

Code:

import java.util.Scanner;

public class Pattern {

// Function to calculate binomial coefficient C(n, k)

public static int binomialCoeff(int n, int k) {

if (k == 0 || k == n)

return 1;

return binomialCoeff(n - 1, k - 1) + binomialCoeff(n - 1, k);

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of rows: ");

int numRows = scanner.nextInt();

// Loop through each row

for (int i = 0; i < numRows; i++) {

// Print spaces for alignment

for (int j = 0; j < numRows - i - 1; j++) {

System.out.print(" ");

}

// Print numbers for the current row

for (int j = 0; j <= i; j++) {

System.out.printf("%-4d", binomialCoeff(i, j));

}

// Move to the next line after printing numbers for each row

System.out.println();

}

scanner.close();

}

}

OUTPUT:

C:\javap>javac Pattern.java

C:\javap>java Pattern

Enter the number of rows: 5

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

