30. Pascals Traingle

#include <stdio.h>

void printPascalTriangleIterative(int rows) {

int triangle[rows][rows];

// Initialize first and last values of each row

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

triangle[i][0] = 1;

triangle[i][i] = 1;

}

// Calculate remaining values using the formula

for (int i = 2; i < rows; i++) {

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

triangle[i][j] = triangle[i - 1][j - 1] + triangle[i - 1][j];

}

}

// Print the triangle

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

// Print leading spaces for better formatting

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

printf(" ");

}

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

printf("%d ", triangle[i][j]);

}

printf("\n");

}

}

int main() {

int rows = 5;

printf("Pascal's Triangle using Iterative Approach:\n");

printPascalTriangleIterative(rows);

return 0;

}