

HATFD1035

### Print Pascal's Triangle

Write a program to generate and print the first n rows of Pascal's triangle without using built-in math or array functions. For n = 5, the output should be:

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

Solution:

//Print pascal's triangle

```
#include <stdio.h>
```

```
void generatePascalsTriangle(int n) {
    for (int i = 0; i < n; i++) {
        int number = 1; // Start with 1 at the beginning of each row
        for (int k = 0; k < n - i - 1; k++) {
            printf(" ");
        }
        for (int j = 0; j <= i; j++) {
            printf("%d ", number);
            number = number * (i - j) / (j + 1); // Compute the next element
        }

        printf("\n"); // Move to the next row
    }
}
```

```
int main() {
    int n = 5; // Set the number of rows for Pascal's triangle
    generatePascalsTriangle(n);
    return 0;
}
```

Output Screenshot:-

```
Output Clear  
/tmp/tTVSNH1GW4.o  
  1  
 1 1  
1 2 1  
1 3 3 1  
1 4 6 4 1  
  
=== Code Execution Successful ===|
```