

Programming Lab (September 25, 2023)

Q.1 Write a C program that uses a loop to output Pascal's triangle up to n rows.

Input

Input rows: 5

Output

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

Q. 2 Write a program to do following number system conversion:

- Binary to Octal number system.
- Octal to Hexadecimal number system.
- Hexadecimal to Binary number system.

Q.3. You are given an array containing n distinct numbers taken from 0 to n. However, one number is missing from the array. Your task is to write a C program to find and print the missing number.

Q.4 Write a C program to perform various operations on a 1-D array of integers. The program should take an array of integers as input and provide a menu-driven interface for the user to choose from a set of operations.

Input:

The user should provide the size of the array and the elements of the array.

Menu-Driven Interface:

1. Display a menu with the following options:
2. Find the sum of all elements in the array.
3. Find the largest element in the array.
4. Find the smallest element in the array.
5. Calculate the average of all elements in the array.
6. Display the array in reverse order.
7. Exit the program.

Continuously prompt the user for their choice until they choose to exit.