Assignment 3

1. Implement a C program to assist students in solving different mathematical and logical problems based on their input. The students can choose from the following operations to be performed on their input number:
2. **Sum of Digits**: Calculate the sum of the digits of the number.
3. **Reverse the Number**: Reverse the digits of the number.
4. **Check if the Number is Palindrome**: Check if the input number is the same when read forwards and backwards.
5. **Count the Number of Digits**: Count how many digits the input number has.

**Assignment Tasks**:

1. Write a C program that implements the following functionality:
   * Prompts the user to input a number.
   * Displays a menu with the options for performing different operations.
   * Based on the user’s choice, performs the appropriate operation (sum of digits, reverse the number, check palindrome, or count digits).
   * Continues to prompt the user for additional operations until they choose to exit.
2. Write a C program that prints the following pattern based on user input for the number of rows (n):

