| **TITLE:**  Write a program in C to demonstrate use of looping control structures |
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**AIM:** Write a menu driven program for following option

a.To find whether a number is palindrome or not. (e.g. 1221 is palindrome) using while loop

b. To calculate the sum of the Fibonacci series up to ‘n’ terms(use do-while loop only)

c. Write a program in C to make such a pattern like a right angle triangle with a number which will repeat a number in a row. [(Pattern is given below)](https://www.w3resource.com/c-programming-exercises/for-loop/index.php#editorr)

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**Expected OUTCOME of Experiment:**

Apply basic concepts of C programming for problem solving.(CO1 and CO2).

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**Books/ Journals/ Websites referred:**

1. Programming in C, second edition, Pradeep Dey and Manas Ghosh, Oxford University Press.
2. Programming in ANSI C, fifth edition, E Balagurusamy, Tata McGraw Hill.
3. Introduction to programming and problem solving , G. Michael Schneider ,Wiley India edition.

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**Problem Definition:**

The program accepts a choice from the user using a switch case statement and generates output accordingly.

**Choice a**: The program checks whether a given numbered by user is palindrome or not.If a number remains same, even if we reverse its digits then the number is known as palindrome number. For example, 12321 is a palindrome number because it remains same if we reverse its digits.

**Choice b:** Sum of Fibonacci series up to n terms will be generated. Fibonacci series is a series in which each number is the sum of the last two preceding numbers. The first two terms of a Fibonacci series are 0 and 1.(use while loop only)

**Example:**

Input: n = 5

Output: 7

Explanation: 0 + 1 + 1 + 2 + 3 = 7

Choice c: Write a program in C to make such a pattern like a right angle triangle with a number which will repeat a number in a row.

The pattern like :

1

 22

 333

 4444

**Algorithm:**

**Implementation details:**

**Output(s):**

**Conclusion:**

**Post Lab Descriptive Questions**

* Write a program to enter numbers till the user wants. At the end it should display the count of positive, negative and zeros entered.
* Write a program to print all the ASCII values and their equivalent characters using a while loop. The ASCII values vary from 0 to 255.

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Signature of faculty in-charge**