**LAB EXERCISES**

**EX.NO:07**

**LENGTH AND REVERSE OF A STRING USING POINTERS**

**AIM:**

**To write a C program to find the length of a string and reverse a string using pointers.**

**PROCEDURE:**

**1. Start the program.**

**2. Declare the necessary variables:**

* **A character array str[100] to store the input string.**
* **A pointer ptr to traverse the string.**
* **Integer variables length, i, j for logic and indexing.**

**3. Get the input string from the user using gets() or fgets().**

**4. Initialize the pointer ptr to point to the first character of the string:**

**ptr = str;**

**5. Find the length of the string using the pointer:**

* **Set length = 0` .**
* **While ptr != '\0':**
* **Increment length.**
* **Move the pointer to the next character (ptr++)**

**6. Display the length of the string.**

**7. Reverse the string using pointers:**

* **Initialize two pointers:**
* **start = str;**
* **end = str + length - 1;**
* **While start < end:**
* **Swap the characters pointed by start and end`**
* **Increment start, decrement end.**

**8. Display the reversed string.**

**9. Print the factorial result in the paper.**

**10. End the program.**

**PROGRAM:**

**#include <stdio.h>**

**void main()**

**{**

**char str[20];**

**char \*start, \*end, temp;**

**int length = 0;**

**clrscr();**

**printf("Enter a string:\n");**

**scanf("%s", str);**

**start = str;**

**while (\*start != '\0') {**

**length++;**

**start++;**

**}**

**printf("\nLength of the given string \"%s\" is %d", str, length);**

**start = str;**

**end = str + length - 1;**

**while (start < end) {**

**temp = \*start;**

**\*start = \*end;**

**end = temp;**

**start++;**

**end--;**

**}**

**printf("\nThe reversed string is \"%s\"", str);**

**getch();**

**}**

**RESULT:**

**Thus the above C program is executed and the output is obtained.**