

**Write a program to implement the following operations on strings:**

- a. Read a string, replace string, perform pattern matching, find and replace any occurrences of a pattern

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**Subject Name: Data Structures Lab**

**Subject Code: 20CSP-236**

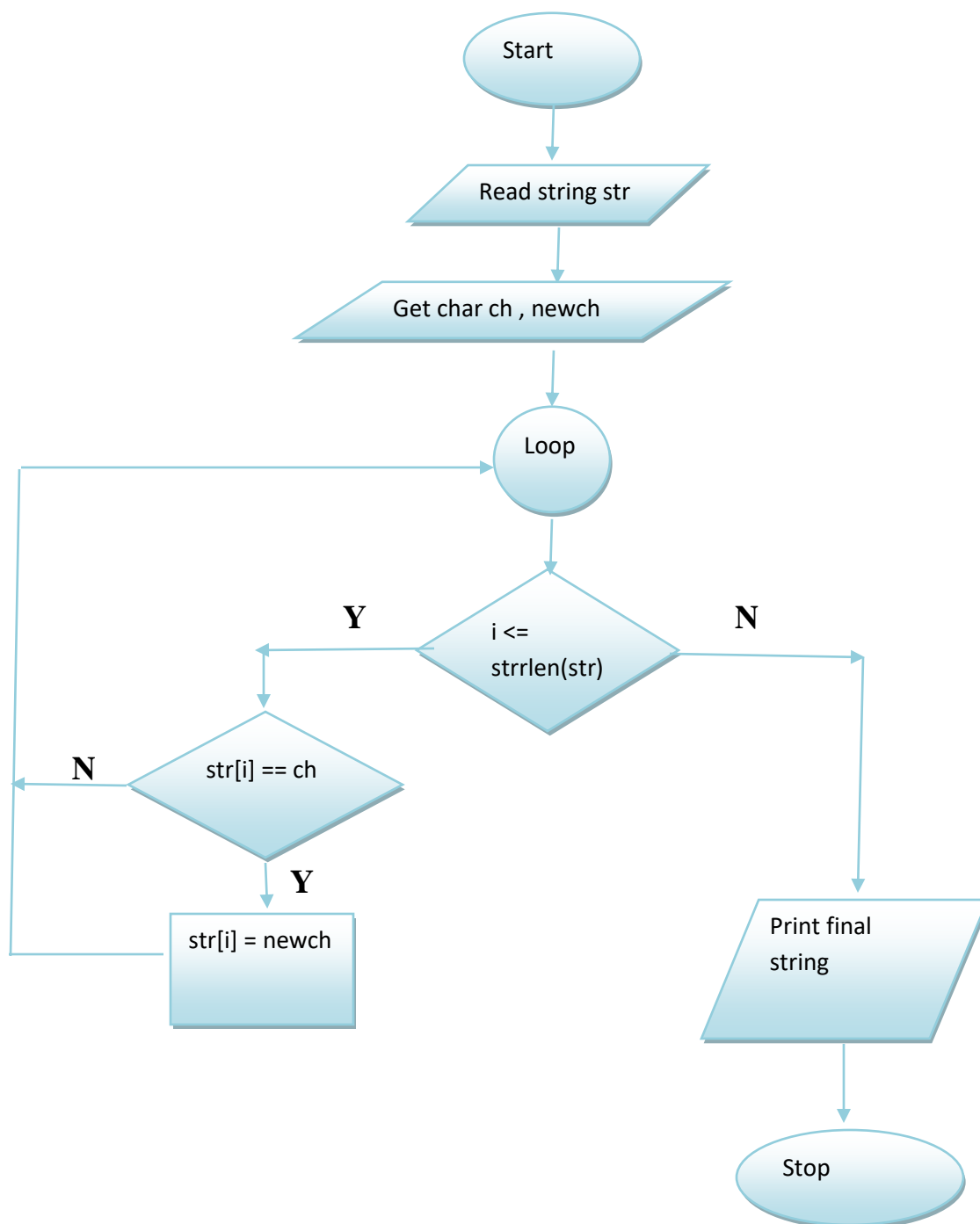
## **1. Aim/Overview of the practical:**

To Write a program to implement various operations on strings.

## **2. Task to be done:**

- Read a string and char from the user
- Search char in string.
- Replace if found
- Print final string

### 3. Algorithm/Flowchart:



#### 4. Source Code:

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

char str[100], ch, Newch;
void Search()
{
    printf("\n Please Enter the Character that you want to Search for : ");
    fflush(stdin);
    scanf("%c", &ch);
    for (int i = 0; i <= strlen(str); i++)
    {
        if (str[i] == ch)
        {
            printf("%c is present in %s\n", ch, str);
        }
    }
}

void Replace()
{
    Search();
    printf("\n Please Enter the New Character : ");
    fflush(stdin);
    scanf("%c", &Newch);
    for (int i = 0; i <= strlen(str); i++)
    {
        if (str[i] == ch)
        {
            str[i] = Newch;
        }
    }
    printf("\n Final String after Replacing All Occurrences of '%c' with '%c' = %s ", ch, Newch, str);
}
```

```
int main()
{
    int choice = 0;
    printf("\n Please Enter any String : ");
    gets(str);
    while (choice != 3)
    {
        printf("\n1. Search\n2. Replace\n3. Exit\nEnter your choice: ");
        scanf("%d", &choice);
        switch (choice)
        {
            case 1:
                Search();
                break;

            case 2:
                RePlace();
                break;
            case 3:
                exit(1);
                break;
            default:
                break;
        }
    }
    return 0;
}
```

## 5. Output:

```
Please Enter any String : Prince

1. Search
2. Replace
3. Exit
Enter your choice: 1

Please Enter the Character that you want to Search for : r
r is present in Prince

1. Search
2. Replace
3. Exit
Enter your choice: 2

Please Enter the Character that you want to Search for : r
r is present in Prince

Please Enter the New Character : R

Final String after Replacing All Occurrences of 'r' with 'R' = PRince
1. Search
2. Replace
3. Exit
Enter your choice: 3
```

## Learning outcomes (What I have learnt):

1. Able to understand the effective and efficient use of strings in the programming.
2. Able to perform various operation on a string.
3. Able to search a character in the string.
4. Able to replace a character from the string by new one.

**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			