20BCS042 MOHD ADIL

PROGRAM:

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

char string[100];
int strlength(char string[])
{
   int count = 0;
   while (string[count] != '\0')
   {
      count++;
   }
   return count;
}
void reverse(char string[])
{
   int len = strlength(string);
   for (int i = 0; i < len / 2; i++)
   {
      char temp = string[i];
      string[i] = string[len - i - 1];
      string[len - i - 1] = temp;
   }
   printf("The reversed string is %s\n", string);
}

void strcopy(char string[], char new[])
{
   int len = strlength(string);
   int i;
   for (i = 0; i < len; i++)
```

```
    {
        new[i] = string[i];
    }
    new[i] = '\0';
    printf("String Copied-> %s\n", new);
}
void strcompare(char string1[], char string2[])
{
    int len1 = strlength(string1);
    int len2 = strlength(string2);
    if (len1 != len2)
    {
        printf("Strings are not Equal\n");
    }
    else
    {
        int flag;
        for (int i = 0; i < len1; i++)
        {
            if (string1[i] == string2[i])
            {
                flag = 1;
            }
            else
            {
                flag = 0;
            }
        }
        if (flag == 0)
        {
            printf("Strings are not Equal\n");
        }
        else
```

```
        {
            printf("Strings are Equal\n");
        }
    }
}
void strappend(char string[], char Append[])
{
    int len = strlength(string);
    int len1 = strlength(Append);
    int i;
    for (i = 0; i < len1; i++)
    {
        string[len + i] = Append[i];
    }
    string[len + i] = '\0';
    printf("The new string is %s\n", string);
}
void checkpalindrome(char string[])
{
    int len = strlength(string);
    int flag;
    for (int i = 0; i < len / 2; i++)
    {
        if (string[i] == string[len - i - 1])
        {
            flag = 1;
        }
        else
        {
            flag = 0;
        }
    }
    if (flag == 1)
```

```
    {
        printf("Yes\n");
    }
    else
    {
        printf("No\n");
    }
}

int findsubstring(char string[], char substring[])
{
    int m = strlength(string);
    int n = strlength(substring);
    for (int i = 0; i <= m - n; i++)
    {
        int j;
        for (j = 0; j < n; j++)
        {
            if (string[i + j] != substring[j])
            {
                break;
            }
        }
        if (j == n)
            return i;
    }
    return -1;
}
int main()
{
    while (1)
    {
        int ch;
```

```
printf("\n1->String Length\n");
printf("2->To reverse a string\n");
printf("3->To copy one string to another\n");
printf("4->To compare two strings\n");
printf("5->To Append one string to another\n");
printf("6->Palindrome\n");
printf("7->Search Substring\n");
printf("8->To Exit\n");
printf("Enter your Choice: ");
scanf("%d", &ch);
getchar();
switch (ch)
{
case 1:
   printf("Case 1\n\n");
   printf("Enter the string: ");
   gets(string);
   printf("Length is %d\n", strlength(string));
   break;
case 2:
   printf("Case 2\n\n");
   printf("Enter the string: ");
   gets(string);
   reverse(string);
   break;
case 3:
   printf("Case 3\n\n");
   printf("Enter the string: ");
   gets(string);
   char new[100];
   strcopy(string, new);
   break;
case 4:
```

```
    printf("Case 4\n\n");
    printf("Enter the string1: ");
    char string1[100];
    gets(string1);
    printf("Enter the string2: ");
    char string2[100];
    gets(string2);
    strcompare(string1, string2);
    break;
case 5:
    printf("Case 5\n\n");
    printf("Enter the string: ");
    gets(string);
    printf("Enter the new string to append: ");
    char Add[100];
    gets(Add);
    strappend(string, Add);
    break;
case 6:
    printf("Case 6\n\n");
    printf("Enter the string: ");
    gets(string);
    checkpalindrome(string);
    break;
case 7:
    printf("Case 7\n\n");
    printf("Enter the string: ");
    gets(string);
    printf("Enter the substring: ");
    char substring[100];
    gets(substring);
    if (findsubstring(string,substring)!=-1)
        printf("\"%s\" is a substring of \"%s\" at index %d\n",substring,string,findsubstring(string,substring));
```

```
        else
            printf("String is not present\n");
        break;
    case 8:
        printf("\nExiting\n");
        exit(0);
    default:
        printf("Wrong Input\n");
    }
  }
  return 0;
}
```

OUTPUT:

```
PS C:\Users\aadil\Desktop\CSE\clab> cd "c:\Users\aadil\Desktop\CSE\clab\" ; if ($?) { gcc program6.c -o program6 }

1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 1
Case 1

Enter the string: mohd adil
Length is 9

1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 2
Case 2

Enter the string: mohd adil
The reversed string is lida dhom

1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 3
Case 3

Enter the string: hello sir
String Copied-> hello sir
```

```
1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 4
Case 4

Enter the string1: mohd
Enter the string2: adil
Strings are not Equal

1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 4
Case 4

Enter the string1: mohd adil
Enter the string2: mohd adil
Strings are Equal
```

```
1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 5
Case 5

Enter the string: mohd
Enter the new string to append:  adil
The new string is mohd adil

1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 6
Case 6

Enter the string: malayalam
Yes
```

```
1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 7
Case 7

Enter the string: hello sir this is mohd adil
Enter the substring: this
"this" is a substring of "hello sir this is mohd adil" at index 10

1->String Length
2->To reverse a string
3->To copy one string to another
4->To compare two strings
5->To Append one string to another
6->Palindrome
7->Search Substring
8->To Exit
Enter your Choice: 8

Exiting
PS C:\Users\aadil\Desktop\CSE\clab>
```

THANK YOU.