EXPERIMENT NO: 10

TITLE: Write functions to implement string operations such as compare, concatenate, string length. Convince the parameter passing techniques.

6. PROCEDURE / PROGRAMME / ACTIVITY:

```
#include<stdio.h>
void stringlength(char str1[100])
{
        int i=0;
        while(str1[i]!='\0')
          {
            i++;
          }
        printf("The length of %s is %d\n",str1,i);
}
void stringcompare(char str1[100], char str2[100])
{
        int i, flag=1;
        for(i=0; str1[i]!='\0'|| str2[i]!='\0'; i++)
        {
                if(str1[i] != str2[i])
                {
                        flag = 0;
                        printf("Strings are different\n");
                        break;
                }
        }
        if(flag)
        {
                printf("Strings are equal\n");
        }
}
void stringconcatenate(char str1[100], char str2[100])
{
        int i, j;
        for(i=0;str1[i]!='\0';i++);
        for(j=0;str2[j]!='\0';j++,i++)
        {
                str1[i]=str2[j];
        }
        str1[i]='\0';
        printf("Concatenated string is %s\n",str1);
}
void main()
{
        char str1[100], str2[100];
        printf("Enter string1\n");
        scanf("%s",str1);
        printf("Enter string2\n");
        scanf("%s",str2);
        stringlength(str1);
        stringlength(str2);
```

```
        stringcompare(str1,str2);
        stringconcatenate(str1,str2);
}
```

OUTPUTS:

```
Enter string1
vivekananda
Enter string2
College
The length of vivekananda is 11
The length of college is 7
Strings are different
Concatenated string is vivekanandacollege
---------------------------------------------------------------------------------------------------------------
Enter string1
C
Enter string2
Laboratory
The length of c is 1
The length of laboratory is 10
Strings are different
Concatenated string is claboratory
---------------------------------------------------------------------------------------------------------------
Enter string1
program
Enter string2
Program
The length of program is 7
The length of program is 7
Strings are same
Concatenated string is programprogram
---------------------------------------------------------------------------------------------------------------
Enter string1
Very
Enter string2
Good
The length of program is 4
The length of program is 4
Strings are same different
Concatenated string is verygood
```

ALGORITHM:

STEP 1: START

STEP 2: READ str1(First String)

STEP 3: READ str2(Second String)

STEP 4: Call the functionstringlength(str1)

STEP 4: Call the function stringlength(str2)

STEP 4: Call the function stringcompare(str1,str2)

STEP 4: Call the function stringconcatenae(str1,str2)

STEP 5: STOP

ALGORITHM TO FIND STRING LENGTH

STEP 1: Start

STEP 2: Initialize **i=0**

STEP 3: check **(str1[i]!= '\0')**

if yes **i = i + 1 got STEP 3**

if no display the length of the string stored in variable **i**

STEP 4: Stop

ALGORITHM TO FIND STRING COMPARE

STEP 1: Start

STEP 2: Initialize **flag=1**

STEP 3: Initialize **i=0**

STEP 4: check **(str1[i] != '\0'|| str2[i] != '\0')**

if yes check **(str1[i] != str2[i])**

if yes **flag = 0**, display "Strings are different" **goto STEP 5**

if no **goto STEP 4**

STEP 5: check **(flag ==1)**

if yes display "Strings are equal"

STEP 6: Stop

ALGORITHM TO STRING concatenation

STEP 1: Start

STEP 2: Initialize **i=0**

STEP 3: check **(str1[i] != '\0')**

if yes **i = i + 1 goto STEP 3**

if no **goto STEP 4**

STEP 4: Initialize **j=0**

STEP 5: check **(str2[j] != '\0')**

if yes **str1[i] = str2[j], i=i+1 j=j+1 goto STEP 5**

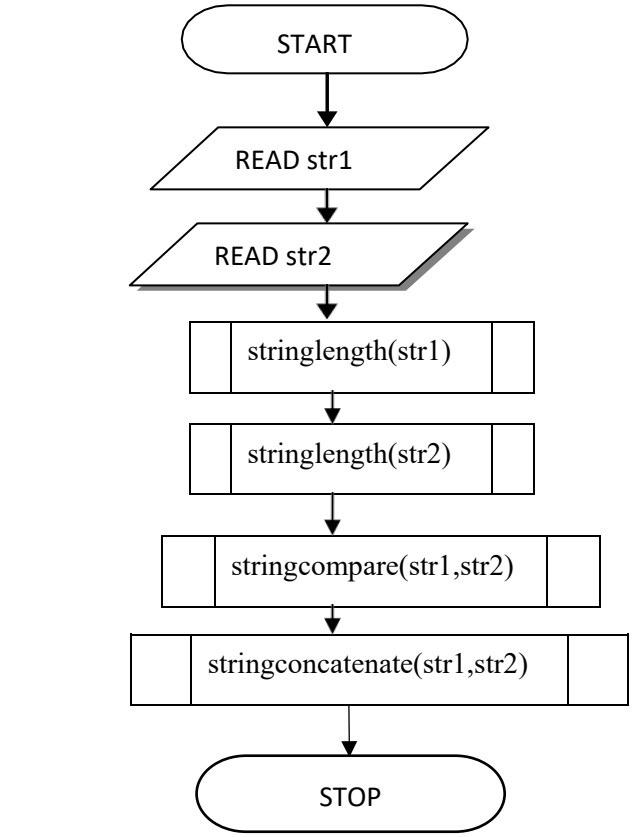
if no **goto STEP 6**

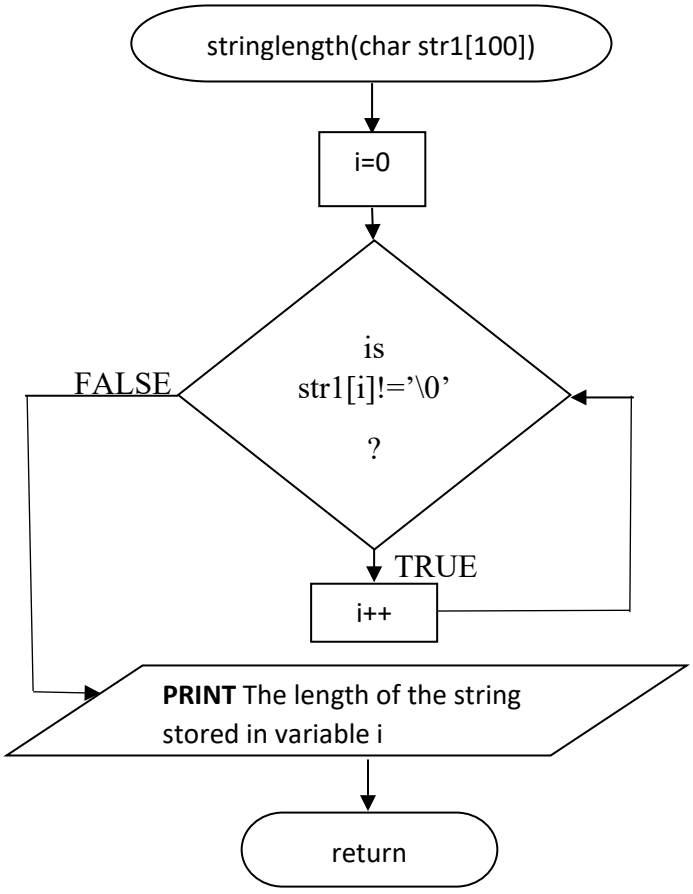
STEP 6: str1[i] = '\0' (place NULL character at the end of string str1)

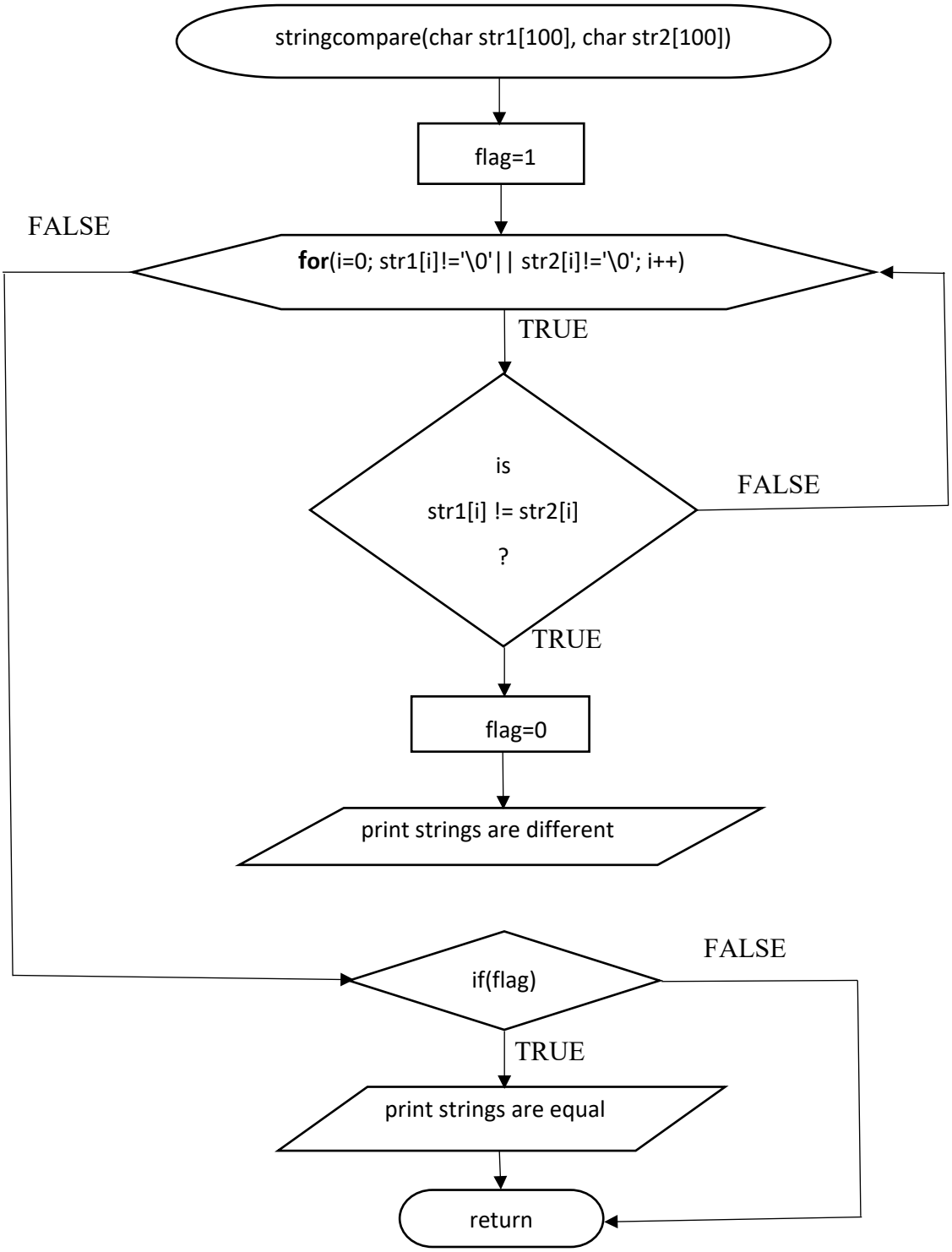
STEP 7: display concatenated string present in character array str1

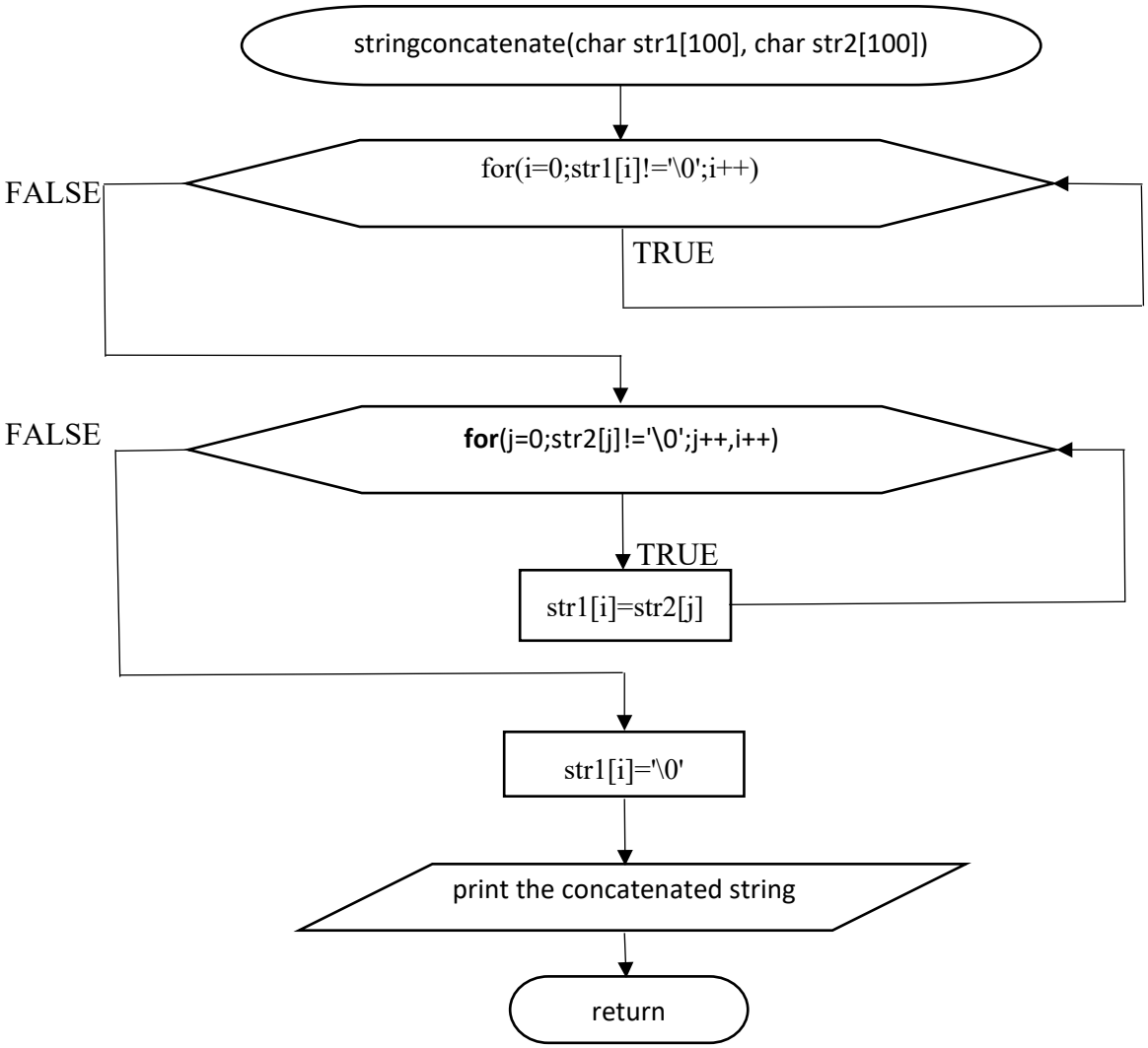
STEP 8 : Stop

FLOWCHART:


START
READ str1
READ str2
stringlength(str1)
stringlength(str2)
stringcompare(str1,str2)
stringconcatenate(str1,str2)
STOP


stringlength(char str1[100])
i=0
is
str1[i]!='\0'
?
FALSE
TRUE
i++
PRINT The length of the string
stored in variable i
return


stringcompare(char str1[100], char str2[100])
flag=1
FALSE
for(i=0; str1[i]!='\0'|| str2[i]!='\0'; i++)
TRUE
is
str1[i] != str2[i]
?
FALSE
TRUE
flag=0
print strings are different
FALSE
if(flag)
TRUE
print strings are equal
return


stringconcatenate(char str1[100], char str2[100])
for(i=0;str1[i]!='\0';i++)
FALSE
TRUE
FALSE
for(j=0;str2[j]!='\0';j++,i++)
TRUE
str1[i]=str2[j]
str1[i]='\0'
print the concatenated string
return