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Experiment 16 :

Write C program to count the number of lines, words and characters in a given text .

Aim :

Study of string to find the number of lines, words and characters in a given text

Code :

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
   int count1=0,count2=0,count3=0,i=0;
   char str[100];
   printf("Enter a string/text :\n");
   gets(str);
   puts(str);
   while(str[i]!='\0'){
      if(str[i]=='\n'){
         count1++;
      }
      else if(str[i]==' '){
         count2++;
      }
      else if(str[i]!='\n' || str[i]!=' '){
         count3++;
      }
```

```
    i++;
  }
  if(count3>0){
    count1++;
    count2++;
  }
  printf("\nNumber of lines is %d",count1);
  printf("\nNumber of words is %d",count2);
  printf("\nNumber of characters is %d",count3);
  getch();

}
```

Output :

```
Enter a string/text :
Anish Ashok Sharma
Anish Ashok Sharma

Number of lines is 1
Number of words is 3
Number of characters is 16
```

```
Enter a string/text :
Hello guys welcome to my youtube channel
Hello guys welcome to my youtube channel

Number of lines is 1
Number of words is 7
Number of characters is 34
```

Conclusion :

Through this experiment we learn string and how it work .

Experiment 17 :

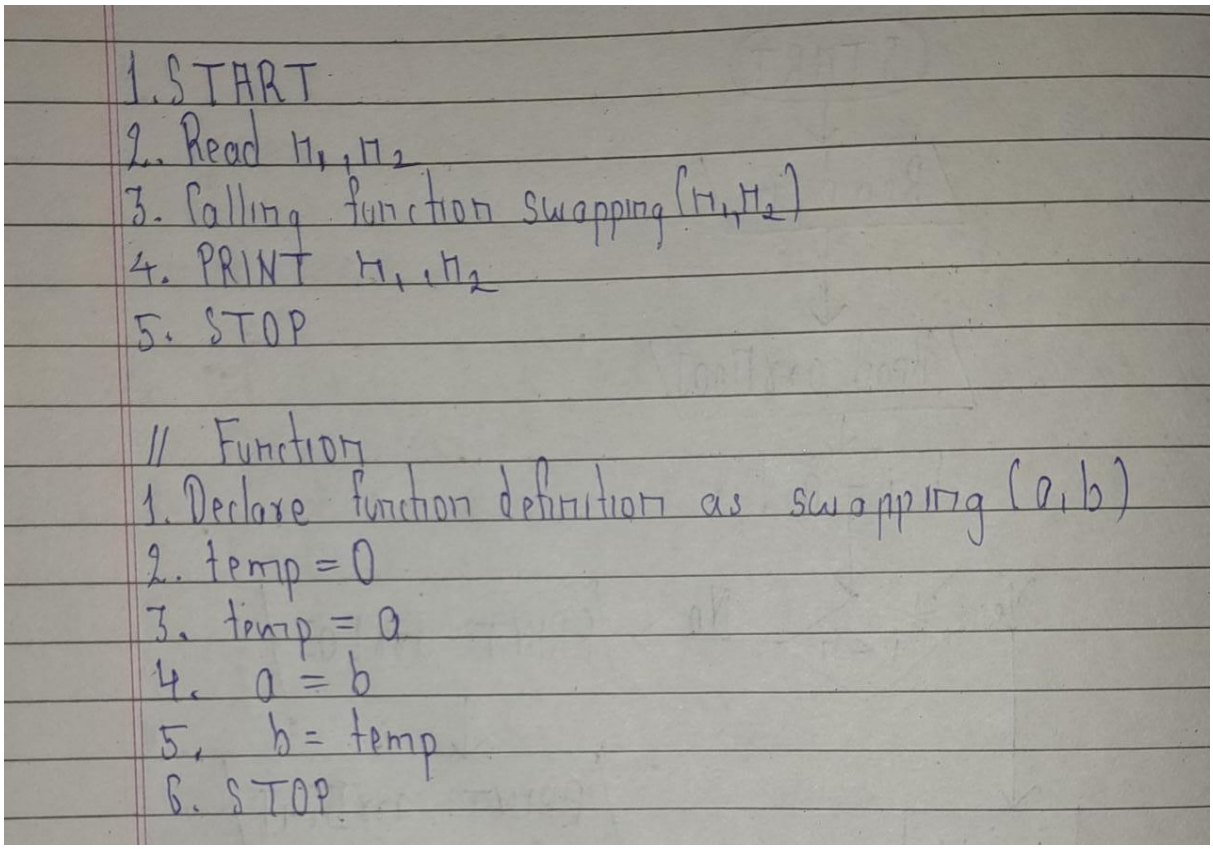
Write a program to swap two numbers using a function. Pass the values to be swapped to this function using the call-by-value method and call-by-reference method. Write algorithm and draw flowchart for the same.

Aim :

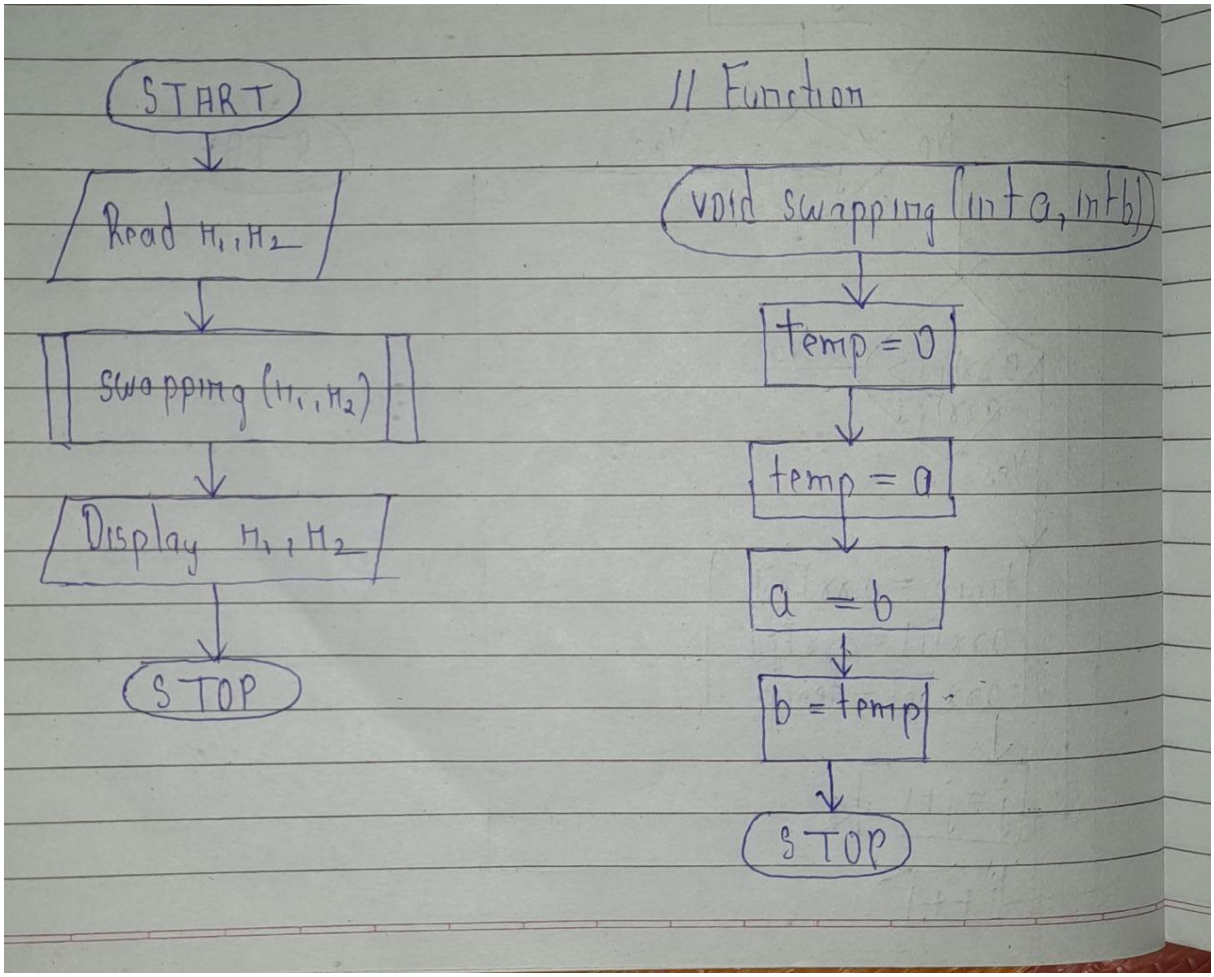
swap two numbers using a function

1. Pass By value
2. Call By Reference

Algorithm :



Flowchart :



Code :

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void swapping(int a,int b)
{
   int temp=0;
   temp=a;
   a=b;
   b=temp;
}
```

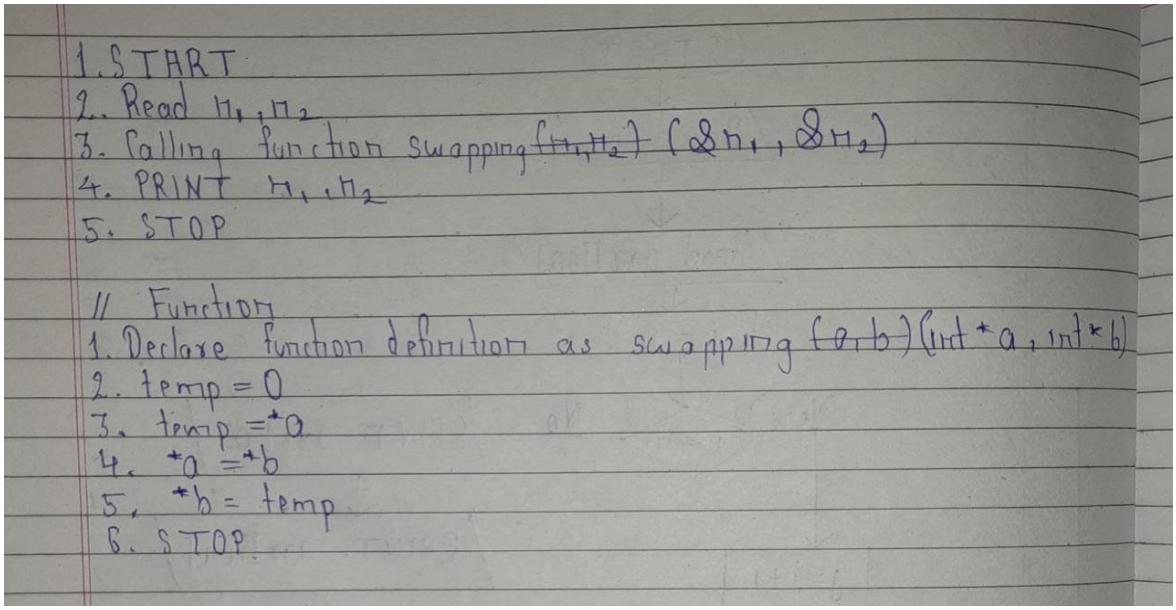
```
void main()
{
   int n1,n2;
   printf("Call by value....\n");
   printf("Enter two number :\n");
   scanf("%d %d",&n1,&n2);
   swapping(n1,n2);
   printf("After swapping ,n1 and n2 be %d and %d respectively",n1,n2);
   getch();
}
```

Output :

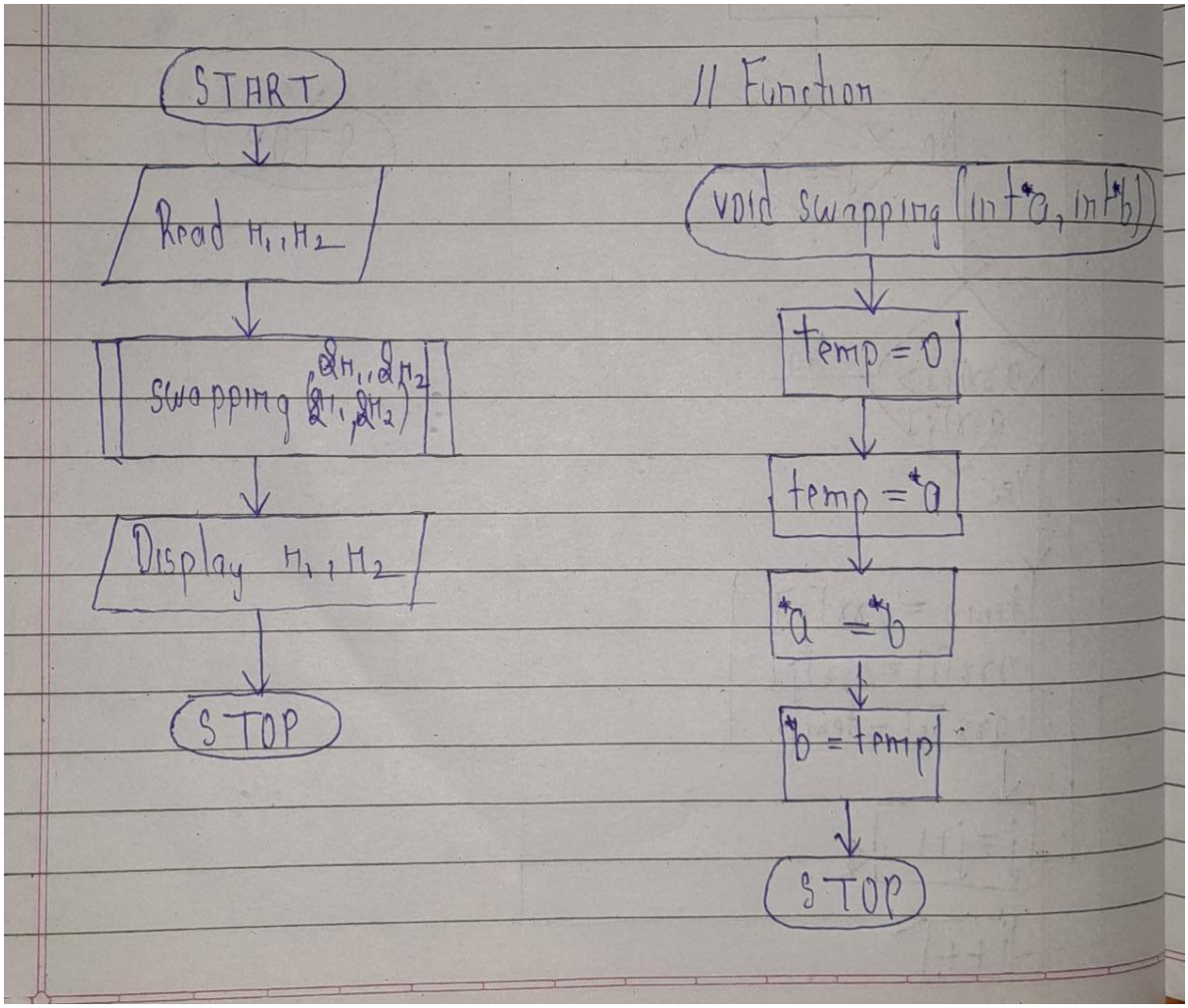
```
Call by value....
Enter two number :
23
56
After swapping ,n1 and n2 be 23 and 56 respectively
```

2.

Algorithm :



Flowchart :



Code :

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void swapping(int *a,int *b)
{
   int temp=0;
   temp=*a;
   *a=*b;
   *b=temp;
```

```
}
void main()
{
   int n1,n2;
   printf("Call by reference....\n");
   printf("Enter two number :\n");
   scanf("%d %d",&n1,&n2);
   swapping(&n1,&n2);
   printf("After swapping ,n1 and n2 be %d and %d respectively",n1,n2);
   getch();
}
```

Output :

```
Call by reference....
Enter two number :
34
87
After swapping ,n1 and n2 be 87 and 34 respectively
```

Conclusion :

Through this experiment we learn pass by value and call by reference .

Experiment 18 :

Write a C program to find the length of the string using Pointer.

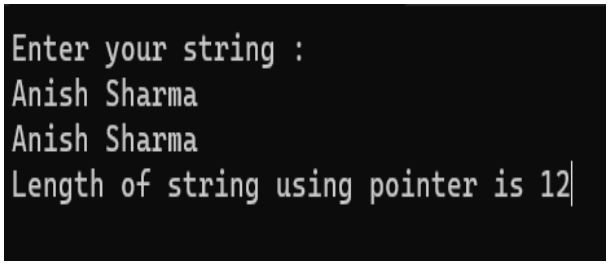
Aim :

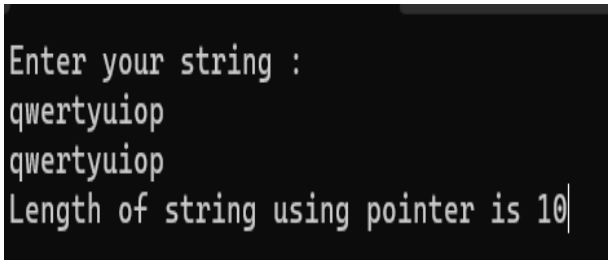
Study of pointers in string .

Code :

```
#include<stdio.h>
#include<conio.h>
#include<conio.h>
void main()
{
   char str[100];
   char *ptr=&str,i=0,len=0;
   //clrscr();
   printf("Enter your string :\n");
   gets(str);
   puts(str);
   while(*ptr!='\0'){
      len++;
      ptr++;
   }
   printf("Length of string using pointer is %d",len);
   getch();
}
```

Output :





Conclusion :

We learn how to use pointer in string .

Experiment 19:

Aim :

Write a program to copy one array to another using pointer.

Code :

```
#include<stdio.h>
#include<conio.h>
void main()
{
   int arr1[10],arr2[10],i,n;
   int *ptr=&arr1;
   //clrscr();
   printf("Enter array size :\n");
   scanf("%d",&n);
   printf("Enter array element :\n");
   for(i=0;i<n;i++){
      scanf("%d",&arr1[i]);
   }printf("\nPrinting array element:\n");
   for(i=0;i<n;i++){
      printf("%d ",arr1[i]);
   }
   for(i=0;i<n;i++){
      arr2[i]=*ptr;
      ptr++;
   }
   printf("\nPrinting copying array:\n");
   for(i=0;i<n;i++){
```

```
        printf("%d ",arr2[i]);
    }
    getch();
}
```

Output :

```
Enter array size :
5
Enter array element :
11
22
33
44
55

Printing array element:
11 22 33 44 55
Printing copying array:
11 22 33 44 55
```

```
Enter array size :
4
Enter array element :
-9
8
-2
777

Printing array element:
-9 8 -2 777
Printing copying array:
-9 8 -2 777
```

Conclusion :

Through this experiment we learn use of pointers in array and how to copy one array element into another array.

Experiment 20 :

Write a program to compare two strings using pointers.

Aim :

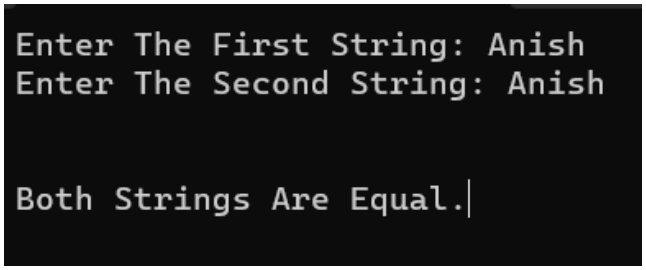
Study of string using pointer .

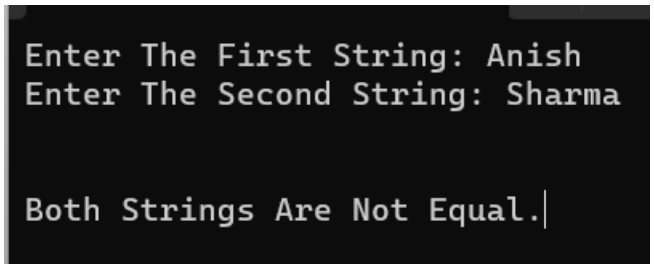
Code :

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
   int i,equal = 0;
   char string1[50],string2[50];
   char *ptr1=string1;
   char *ptr2=string2;
   //clrscr();
   printf("Enter The First String: ");
   scanf("%s",string1);
   printf("Enter The Second String: ");
   scanf("%s",string2);
   ptr1 = string1;
   ptr2 = string2;
   while(*ptr1 == *ptr2)
   {
   if ( *ptr1 == '\0' || *ptr2 == '\0' )
   break;
   ptr1++;
```

```
    ptr2++;
    }
    if( *ptr1 == '\0' && *ptr2 == '\0' )
    printf("\n\nBoth Strings Are Equal.");
    else
    printf("\n\nBoth Strings Are Not Equal.");
    getch();
}
```

Output :





Conclusion :

Through this experiment we learn pointers in string and how to operate pointer in string.