EXPERIMENT :1 DATE:23-11-21

AIM: WRITE A PROGRAM TO MERGE AND SORT TWO ARRAY

PROGRAM:

#include<stdio.h>

void main()

{

int i,n,m,j,k,a[10],a2[20],temp=0,s,a3[20],index=0;

printf("enter the number of values:");

scanf("%d",&n);

printf("\nEnter the values of first array:\n");

for(i=0;i<n;i++)

{

scanf("%d",&a[i]);

}

printf("The first sorted array is");

for(i=0;i<n;i++)

{

for(j=i+1;j<n;j++)

{

if(a[i]>a[j])

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

for(i=0;i<n;i++)

{

printf("%3d",a[i]);

}

temp=0;

printf("\nenter the number of values:");

scanf("%d",&m);

printf("\nenter the values of second array:");

for(i=0;i<m;i++)

{

scanf("%d",&a2[i]);

}

printf("the second sorted array is:\n");

for(i=0;i<m;i++)

{

for(j=i+1;j<m;j++)

{

if(a2[i]>a2[j])

{

temp=a2[i];

a2[i]=a2[j];

a2[j]=temp;

}

}

}

for(i=0;i<m;i++)

{

printf("%3d",a2[i]);

s=m+n;

}

printf("\nThe output of the two merged sorted array is:\n");

for(i=0;i<n;i++)

{

a3[i]=a[i];

}

k=n;

for(i=0;i<m;i++)

{

a3[k]=a2[i];

k++;

}

for(i=0;i<s;i++)

{

for(j=i+1;j<s;j++)

{

if(a3[i]>a3[j])

{

temp=a3[i];

a3[i]=a3[j];

a3[j]=temp;

}

}

}

for(i=0;i<s;i++)

{

printf("%3d",a3[i]);

}

}

Output:

enter the number of values:5

Enter the values of first array:

5

3

1

2

4

The first sorted array is 1 2 3 4 5

enter the number of values:5

enter the values of second array:9

6

0

7

8

the second sorted array is:

0 6 7 8 9

The output of the two merged sorted array is:

0 1 2 3 4 5 6 7 8 9

Set output:

enter the number of bits:

6

enter the bits:

1

1

0

1

1

0

enter the second bits:

1

0

1

1

0

0

###########enter the choice!!!#########

1.Union

2.Intersection

3.Difference

4.Equality

5.Exit

please select a choice!!

1

Union of the set is:

111110

###########enter the choice!!!#########

1.Union

2.Intersection

3.Difference

4.Equality

5.Exit

please select a choice!!

2

Intersection of the set is:

100100

###########enter the choice!!!#########

1.Union

2.Intersection

3.Difference

4.Equality

5.Exit

please select a choice!!

3

Difference of the set is:

010010

###########enter the choice!!!#########

1.Union

2.Intersection

3.Difference

4.Equality

5.Exit

please select a choice!!

4

Equality of the set is:

False\_\_The both set are not same

Disjoint -------

How many elements ?

4

\_\_\_MENU\_

1. Union

2.Find

3.Display

4.Exit

enter choice

1

Enter elements to perform union

9

8

\_\_\_MENU\_

1. Union

2.Find

3.Display

4.Exit

enter choice

1

Enter elements to perform union

5

4

\_\_\_MENU\_

1. Union

2.Find

3.Display

4.Exit

enter choice

3

Parent Array

0 1 2 3

Rank Array

0 0 0 0

\_\_\_MENU\_

1. Union

2.Find

3.Display

4.Exit

enter choice

2

Enter elements to check if connected components5

4

Connected components

\_\_\_MENU\_

1. Union

2.Find

3.Display

4.Exit

enter choice