6)Disjoint sets and the associated operations (create,union,find)

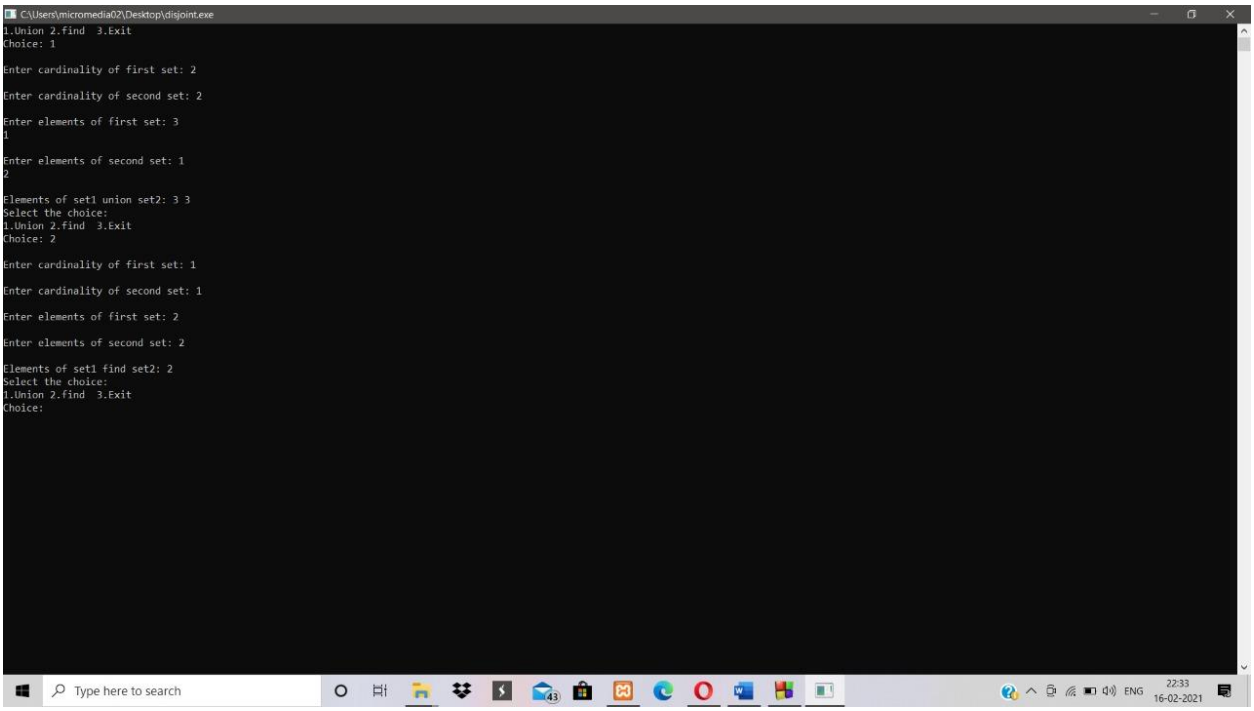
```
#include<stdio.h>
#include<stdlib.h>
void main()
{
 int ch,A[50],B[50],C[50],m,n,i;
 do
 {
   printf("\nSelect the choice: ");
   printf("\n1.Union\t2.find\t3.Exit");
   printf("\nChoice: ");
   scanf("%d",&ch);
  switch(ch)
  {
   case 1:printf("\nEnter cardinality of first set: ");
          scanf("%d",&m);
         printf("\nEnter cardinality of second set: ");
 scanf("%d",&n);
 if(m!=n)
 {
 printf("\nCannot perform union!");
 break;
      }
    printf("\nEnter elements of first set: ");
    for(i=0;i<m;i++)
 {
  scanf("%d",&A[i]);
  }
```

```
printf("\nEnter elements of second set: ");
   for(i=0;i<n;i++)
{
 scanf("%d",&B[i]);
 }
printf("\nElements of set1 union set2: ");
for(i=0;i<m;i++)
{
 C[i]=A[i]|B[i];
 printf("%d ",C[i]);
 }
break;
  case 2:printf("\nEnter cardinality of first set: ");
        scanf("%d",&m);
       printf("\nEnter cardinality of second set: ");
scanf("%d",&n);
if(m!=n)
{
printf("\nCannot perform find!");
break;
    }
   printf("\nEnter elements of first set: ");
   for(i=0;i<m;i++)
{
 scanf("%d",&A[i]);
 }
printf("\nEnter elements of second set: ");
   for(i=0;i<n;i++)
{
```

```
 scanf("%d",&B[i]);
 }
printf("\nElements of set1 find set2: ");
for(i=0;i<m;i++)
{
 C[i]=A[i]&B[i];
 printf("%d ",C[i]);
 }
       break;

  case 4:printf("\nProgram exit successfully!");
        exit(0);
       break;
  default:printf("\nInvalid choice!");
  };
 }while(1);
}
```

OUTPUT


C:\Users\micromedia02\Desktop\disjoint.exe
1.Union 2.find 3.Exit
Choice: 1
Enter cardinality of first set: 2
Enter cardinality of second set: 2
Enter elements of first set: 3
1
Enter elements of second set: 1
2
Elements of set1 union set2: 3 3
Select the choice:
1.Union 2.find 3.Exit
Choice: 2
Enter cardinality of first set: 1
Enter cardinality of second set: 1
Enter elements of first set: 2
Enter elements of second set: 2
Elements of set1 find set2: 2
Select the choice:
1.Union 2.find 3.Exit
Choice:
Type here to search
ENG
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