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SEC-III-B

Lab-1

1.Union of two sets

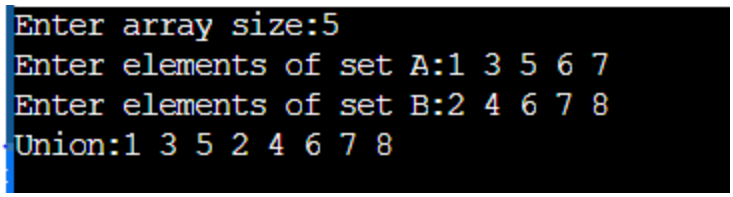
Code:

```
#include <stdio.h>


int main()

{

   int a[100],b[100],c[200],d[200];

   int n,i,j,k,l=0,r=0,m=0;

   printf("Enter array size:");

   scanf("%d",&n);

   printf("Enter elements of set A:");

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

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

   printf("Enter elements of set B:");

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

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



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

   {
```

```
    k=0;
    for(j=0;j<n;j++)
    {
       if(a[i]==b[j])
       {
          k++;
          break;
       }
    }
     if(k!=0)
     c[l++]=a[i];
}
for(i=0;i<n;i++)
{
    if(m<l )
    {
       if(a[i]==c[m])
       m++;
       else
       d[r++]=a[i];
    }
    else
    {
       d[r++]=a[i];
    }
```

```
    }
    for(i=0;i<n;i++)
    {
       if(m<l )
       {
          if(b[i]==c[m])
          m++;
          else
          d[r++]=b[i];
       }
       else
       {
          d[r++]=b[i];
       }
    }
     printf("Union:");
    for(i=0;i<r;i++)
    printf("%d ",d[i]);
    printf("\n");

    return 0;
}
```

Output:



2.Intersection of two sets

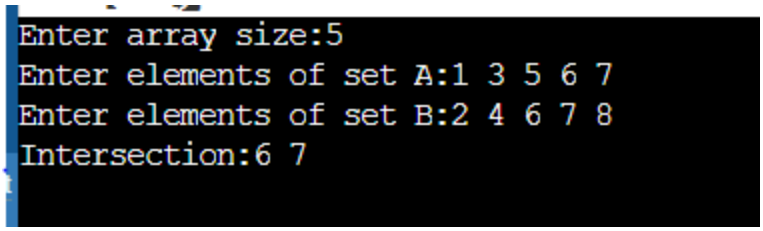
Code:

```
#include <stdio.h>


int main()

{

   int a[100],b[100],c[200],d[200];

   int n,i,j,k,l=0,r=0,m=0;

   printf("Enter array size:");

   scanf("%d",&n);

   printf("Enter elements of set A:");

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

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

   printf("Enter elements of set B:");

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

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



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

```
{
   k=0;
   for(j=0;j<n;j++)
   {
      if(a[i]==b[j])
      {
         k++;
         break;
      }
   }
    if(k!=0)
    c[l++]=a[i];
}
for(i=0;i<n;i++)
{
   if(m<l )
   {
      if(a[i]==c[m])
      m++;
      else
      d[r++]=a[i];
   }
   else
   {
      d[r++]=a[i];
```

```
        }
    }
    for(i=0;i<n;i++)
    {
        if(m<l )
        {
            if(b[i]==c[m])
            m++;
            else
            d[r++]=b[i];
        }
        else
        {
            d[r++]=b[i];
        }
    }


     printf("Intersection:");
    for(i=0;i<l;i++)
    printf("%d ",c[i]);
    printf("\n");
    return 0;
}
```

Output:


Enter array size:5
Enter elements of set A:1 3 5 6 7
Enter elements of set B:2 4 6 7 8
Intersection:6 7