

/*array union & intersection*/

```
#include <stdio.h>
```

```
void printUnion(int array1[], int size1, int array2[], int size2)
```

```
{
```

```
    int index1 = 0, index2 = 0;
```

```
    while(index1 < size1 && index2 < size2)
```

```
    {
```

```
        if (array1[index1] < array2[index2])
```

```
            printf("%d ", array1[index1++]);
```

```
        else if (array2[index2] < array1[index1])
```

```
            printf("%d ", array2[index2++]);
```

```
        else
```

```
        {
```

```
            printf("%d ", array2[index2]);
```

```
            index1++;
```

```
            index2++;
```

```
        }
```

```
    }
```

```
    while(index1 < size1)
```

```
        printf("%d ", array1[index1++]);
```

```
    while(index2 < size2)
```

```
        printf("%d ", array2[index2++]);
```

```
}
```

```
void printIntersection(int array1[],int n,int array2[],int m)
```

```

{
    int i,j,k=0,count=0;
    int b[k];
    for(i=0;i<n;i++)
    {
        for(j=0;j<m;j++)
        {
            if(array1[i]==array2[j])
            {
                b[k]=array1[i];
                k++;
                count++;
            }
        }
    }
    printf("after intersection the result is\n");
    for(k=0;k<count;k++)
    {
        printf("%d\t",b[k]);
    }
}

int main()
{
    int n,m;
    printf("Enter number of 1st array elements\n");
    scanf("%d",&n);
    printf("Enter number of 2nd array elements\n");
    scanf("%d",&m);
    int array1[n] ;
    int array2[m] ;
    printf("Enter 1st array elemets\n");

```

```

for(int i=0;i<n;i++)
{
    scanf("%d",&array1[i]);
}

printf("Enter 2nd array elemets\n");
for(int j=0;j<m;j++)
{
    scanf("%d",&array2[j]);
}

printf("New array elements are\n");

printUnion(array1, n, array2, m);

printIntersection(array1, n, array2, m);

return 0;
}

```

The screenshot shows a Windows command prompt window titled "C:\Users\HP\OneDrive\Desktop\unsolved123\ARRAY UNION AND INTERSECTION.exe". The program prompts the user to enter the number of elements for two arrays. The first array has 5 elements (1, 2, 3, 4, 5) and the second array has 6 elements (6, 7, 8, 9, 10, 10). The program then displays the union of the two arrays: "New array elements are 1 2 3 4 5 6 7 8 9 10 after intersection the result is 9". The window also shows the process exit time and a prompt to press any key to continue.

```

C:\Users\HP\OneDrive\Desktop\unsolved123\ARRAY UNION AND INTERSECTION.exe
Enter number of 1st array elements
5
Enter number of 2nd array elements
6
Enter 1st array elemets
1
2
3
4
5
Enter 2nd array elemets
6
7
8
9
10
New array elements are
1 2 3 4 5 6 7 8 9 10 after intersection the result is
9
-----
Process exited after 10.89 seconds with return value 0
Press any key to continue . . .

```