//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;

}