Day-43 of the #101 days of coding challenge------

Problem:- Write a C++ program to find the two repeating elements in a given array of integers.

Code:-

```
#include <iostream>

using namespace std;


void findTwoRepeatnumber(int *arr, int n)

{

   int i, j, count = 0;

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

   {

      count = 0;

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

      {

         if(arr[i] == arr[j])

         {

            count++;

            if(count == 2)

            {

               cout<<arr[i];

               break;
```

```
            }
          }
        }
        cout<<"  ";
    }
}
int main() {

    int n;
    cout<<"Enter the size of the array"<<endl;
    cin>>n;

    int arr[n];
    cout<<"Enter the elements"<<endl;
    for(int i = 0; i<n; i++)
    {
        cin>>arr[i];
    }
    cout<<"Solved"<<endl;
    findTwoRepeatnumber(arr,n);

    return 0;
```

}

Output:-

```
Enter the size of the array
7
Enter the elements
1 2 3 1 2 3 4
Solved
1  2  3
```

2nd Method:-

Replace the logic only:-

```
void findTwoRepeatnumber(int *arr, int n)
{
   int i, j, count = 0;
   for(i = 0; i<n; i++)
   {
      for(j = i+1; j<n; j++)
      {
         if(arr[i] == arr[j])
           cout<<arr[i]<<" ";
      }
   }
}
```

Problem2:- Write a C++ program to find the missing element from two given arrays of integers except one element.

Code:-

```
#include <iostream>
using namespace std;


void findmisingElementTwoarray(int *arrFirst, int *arrSecond, int n, int n1)
{
   int i, j, count = 0;
   // only we need to check till first array
    for(i = 0; i<n; i++)
    {
      if (arrFirst[i] != arrSecond[i])
         cout<<arrFirst[i]<<" ";
    }
}
int main() {


   int n, n1;
   cout<<"Enter the size of the array two arrays"<<endl;
   cin>>n;
```

```
    int arrFirst[n], arrSecond[n1];
    cout<<"Enter the elements of first array"<<endl;
    for(int i = 0; i<n; i++)
    {
        cin>>arrFirst[i];
    }

    cout<<"Enter the elements of second array"<<endl;
    for(int i = 0; i<n; i++)
    {
        cin>>arrSecond[i];
    }

    cout<<"Solved"<<endl;
    findmisingElementTwoarray(arrFirst, arrSecond,n, n1);

    return 0;
}
```

Output:-

```
Enter the size of the array two arrays
4 4
Enter the elements of first array
1 2 3 4
Enter the elements of second array
4 5 6 7
Solved
1 2 3
```

Problem:- Write a C++ program to find and print all common elements in three sorted arrays of integers.

Code:-

```
#include <iostream>

using namespace std;


void findmisingElementThreesortedArray(int *arrFirst, int *arrSecond,
int *arrThird, int n1, int n2, int n3)

{

   int i, count = 0;


   // finding the minimum length of the array

   int minLength;


   if (n1 < n2 && n1 < n3)
```

```
        minLength = n1;
    else if (n2 < n1 && n2 < n3)
        minLength = n2;
    else
        minLength = n3;

    // only we need to check up to the minimum length
    for (i = 0; i < minLength; i++)
    {
        if (arrFirst[i] == arrSecond[i] && arrSecond[i] == arrThird[i])
        {
            cout << arrFirst[i] << " ";
            count++;
        }
    }

    if (count == 0)
        cout << "No matching element is found" << endl;
}

int main() {
```

```
int n1, n2, n3;
cout << "Enter the size of the three arrays" << endl;
cin >> n1 >> n2 >> n3;

int arrFirst[n1], arrSecond[n2], arrThird[n3];

cout << "Enter the elements of the first array" << endl;
for (int i = 0; i < n1; i++)
{
   cin >> arrFirst[i];
}

cout << "Enter the elements of the second array" << endl;
for (int i = 0; i < n2; i++)
{
   cin >> arrSecond[i];
}

cout << "Enter the elements of the third array" << endl;
for (int i = 0; i < n3; i++)
{
   cin >> arrThird[i];
```

```
    }


    cout << "Solved" << endl;
    findmisingElementThreesortedArray(arrFirst, arrSecond, arrThird, n1,
n2, n3);


    return 0;
}
```

Output:-