CSA0985 – PROGRAMMING IN JAVA FOR MOBILE APPLICATIONS

ASSIGNMENT :

1.
```
public class RemoveDuplicateInArrayExample{
public static int removeDuplicateElements(int arr[], int n){
      if (n==0 || n==1){
         return n;
      }
      int[] temp = new int[n];
      int j = 0;
      for (int i=0; i<n-1; i++){
         if (arr[i] != arr[i+1]){
            temp[j++] = arr[i];
         }
       }
      temp[j++] = arr[n-1];
      for (int i=0; i<j; i++){
         arr[i] = temp[i];
      }
      return j;
   }

   public static void main (String[] args) {
      int arr[] = {10,20,20,30,30,40,50,50};
      int length = arr.length;
      length = removeDuplicateElements(arr, length);
      for (int i=0; i<length; i++)
        System.out.print(arr[i]+" ");
   }
}
```

2.
```
public class SecondSmallestInArrayExample{
public static int getSecondSmallest(int[] a, int total){
int temp;
for (int i = 0; i < total; i++)
      {
         for (int j = i + 1; j < total; j++)
```

```
        {
          if (a[i] > a[j])
          {
            temp = a[i];
            a[i] = a[j];
            a[j] = temp;
          }
        }
      }
     return a[1];//2nd element because index starts from 0
}
public static void main(String args[]){
int a[]={1,2,5,6,3,2};
int b[]={44,66,99,77,33,22,55};
System.out.println("Second smallest: "+getSecondSmallest(a,6));
System.out.println("Second smallest: "+getSecondSmallest(b,7));
}}
```

3.
```
import java.util.Arrays;
public class LargestNumberSample {
  public static void main(String args[]){
    int array[] = {10, 20, 25, 63, 96, 57};
    int size = array.length;
    Arrays.sort(array);
    System.out.println("sorted Array ::"+Arrays.toString(array));
    int res = array[size-2];
    System.out.println("2nd largest element is ::"+res);
  }
}
```

4.
```
import java.io.*;
import java.util.*;

class GFG {
        private static void FindCommonElemet(String[] arr1,String[] arr2)
        {
                Set<String> set = new HashSet<>();
                for (int i = 0; i < arr1.length; i++) {
                        for (int j = 0; j < arr2.length; j++) {
                                if (arr1[i] == arr2[j]) {
                                        set.add(arr1[i]);
```

```
                                        break;
                                    }
                                }
                            }
                        for (String i : set) {
                                System.out.print(i + " ");
                        }
                }
                public static void main(String[] args)
                {
                        String[] arr1
                                = { "Article", "in", "Geeks", "for", "Geeks" };
                        String[] arr2 = { "Geeks", "for", "Geeks" };
                        System.out.println("Array 1: "+ Arrays.toString(arr1));
                        System.out.println("Array 2:+ Arrays.toString(arr2));
                  System.out.print("Common Elements: ");
                        FindCommonElemet(arr1, arr2);
                }
}
```

5.
```
public class Vowel_Check {
  public static void main(String[] args) {
    try {
      String text = "Java handling and managing exceptions ";
      System.out.println("Original string: " + text);
      checkVowels(text);
      System.out.println("String contains vowels.");
    } catch (NoVowelsException e) {
      System.out.println("Error: " + e.getMessage());
    }
  }
public static void checkVowels(String text) throws NoVowelsException {
    boolean containsVowels = false;
    String vowels = "aeiouAEIOU";
 for (int i = 0; i < text.length(); i++) {
      char ch = text.charAt(i);
      if (vowels.contains(String.valueOf(ch))) {
        containsVowels = true;
        break;
      }
    }
```

```
    if (!containsVowels) {
      throw new NoVowelsException("String does not contain any vowels.");
    }
  }
}
class NoVowelsException extends Exception {
  public NoVowelsException(String message) {
    super(message);
  }
}
```