ASSIGNMENT NO.7

1. Declare a single-dimensional array of 5 integers inside the `main` method. Traverse the array to print the default values. Then accept records from the user and print the updated values of the array.
Ans:package Array;

```
import java.util.Arrays;
import java.util.Scanner;

public class Question1A {

    public static void main(String[] args) {
            // TODO Auto-generated method stub
            Scanner sc= new Scanner(System.in);
            System.out.println("Enter the five Digit Number :");

            int[] arr=new int[5];
            for(int i=0;i<arr.length;i++) {
                    arr[i]=sc.nextInt();
            }
            System.out.println(Arrays.toString(arr));



    }

}
```

2. Declare a single-dimensional array of 5 integers inside the `main` method. Define a method named `acceptRecord` to get input from the terminal into the array and another method named `printRecord` to print the state of the array to the terminal.
Ans; package Question2;

```
import java.util.Arrays;
import java.util.Scanner;

public class Question2a {
    public static void accept(int [] arr) {
            Scanner sc= new Scanner(System.in);
            System.out.println("Enter the five Digit Number :");

//
            for(int i=0;i<arr.length;i++) {
                    arr[i]=sc.nextInt();
            }

    }

    public static void print(int[] arr) {
```

```
		System.out.println(Arrays.toString(arr));

	}
	public static void main(String[] args) {
		int[] arr=new int[5];
		Question2a.accept(arr);
		Question2a.print(arr);


	}

}
```

3. Write a program to find the maximum and minimum values in a single-dimensional array of integers.

Ans:

```
package question3;

import java.util.Arrays;
import java.util.Scanner;



public class Question3a {
		public static void accept(int [] arr) {
			Scanner sc= new Scanner(System.in);
			System.out.println("Enter the five Digit Number :");

//
			for(int i=0;i<arr.length;i++) {
				arr[i]=sc.nextInt();
			}

		}
		public static void print(int[] arr) {
//			System.out.println(Arrays.toString(arr));
			Arrays.sort(arr);
			int n=arr[arr.length-1];
			int y=arr[0];
			System.out.print("Maxmanum Number is :" + n + " :MIN number is
:"+ y);


		}

		public static void main(String[] args) {
			// TODO Auto-generated method stub
			int[] arr=new int[5];
```

```
		Question3a.accept(arr);
		Question3a.print(arr);


	}


}
```

4. Write a program to remove duplicate elements from a single-dimensional array of integers.

Ans:

```
package Question4;

import java.util.Arrays;
import java.util.HashMap;
import java.util.Scanner;

public class Question4a {
	public static void accept(int [] arr) {
		Scanner sc= new Scanner(System.in);
		System.out.println("Enter the five Digit Number :");

//
		for(int i=0;i<arr.length;i++) {
			arr[i]=sc.nextInt();
		}

	}

	public static int print(int[] arr) {
//		System.out.println(Arrays.toString(arr));
	    HashMap<Integer, Integer> hashMap = new HashMap<>();

		for(int i=0;i<arr.length;i++) {
		  hashMap[arr[i]]++;
		}
	 for(int it:hashMap) {
	  if(it.second<=1) {
		return it.second;
	  }
	 }


	}

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int[] arr=new int[5];
```

```
                Question4a.accept(arr);
                Question4a.print(arr);

        }

    }
```

5. Write a program to find the intersection of two single-dimensional arrays.

6. Write a program to find the missing number in an array of integers ranging from 1 to N.

7. Declare a single-dimensional array as a field inside a class and instantiate it inside the class constructor. Define methods named `acceptRecord` and `printRecord` within the class and test their functionality.

8. Modify the previous assignment to use getter and setter methods instead of `acceptRecord` and `printRecord`.

9. You need to implement a system to manage airplane seat assignments. The airplane has seats arranged in rows and columns. Implement functionalities to:

    - Initialize the seating arrangement with a given number of rows and columns.
    - Book a seat to mark it as occupied.
    - Cancel a booking to mark a seat as available.
    - Check seat availability to determine if a specific seat is available.
    - Display the current seating chart.