1)Write a java program to display duplicate elements from given array?
input:
3 6 1 1 5 9 9 3 7
output:
3 1 9

sol:
----

```
public class Test {
    public static void main(String[] args) {
        int[] arr = {3, 6, 1, 1, 5, 9, 9, 3, 7};

        System.out.print("Duplicate elements: ");

        for (int i = 0; i < arr.length; i++) {
            boolean isDuplicate = false;
            for (int j = 0; j < i; j++) {
                if (arr[i] == arr[j]) {
                    isDuplicate = true;
                    break;
                }
            }
            if (isDuplicate) {
                boolean alreadyPrinted = false;

                for (int k = 0; k < i; k++) {
                    if (arr[i] == arr[k]) {
                        alreadyPrinted = true;
                        break;
                    }
                }
                if (!alreadyPrinted) {
                    System.out.print(arr[i] + " ");
                }
            }
        }
    }
}
```

2)Write a java program to display unqiue elements from given array?
input:
3 6 1 1 5 9 9 3 7
output:
6 5 7

sol:
----

```
public class Test {
    public static void main(String[] args) {
        int[] arr = {3, 6, 1, 1, 5, 9, 9, 3, 7};
```

```
        System.out.print("Unique elements: ");

        for (int i = 0; i < arr.length; i++) {
            boolean isUnique = true;

            for (int j = 0; j < arr.length; j++) {
                if (i != j && arr[i] == arr[j]) {
                    isUnique = false;
                    break;
                }
            }

            if (isUnique) {
                System.out.print(arr[i] + " ");
            }
        }
    }
}
```

3)Write a java program to segregate given array?

input:

```
1 0 1 1 0 0 1 0 1 0
```

output:

```
0 0 0 0 0 1 1 1 1 1
```

sol:

```
----

public class Test {
    public static void main(String[] args) {
        int[] arr = {1, 0, 1, 1, 0, 0, 1, 0, 1, 0};
        int left = 0;
        int right = arr.length - 1;

        while (left < right) {
            while (arr[left] == 0 && left < right) {
                left++;
            }
            while (arr[right] == 1 && left < right) {
                right--;
            }

            if (left < right) {
                arr[left] = 0;
                arr[right] = 1;
                left++;
                right--;
            }
        }

        System.out.print("Segregated array: ");
        for (int i = 0; i < arr.length; i++) {
```

```
            System.out.print(arr[i] + " ");
        }
    }
}
```

4)Write a java program to display prime elements from given array?
input:
4 2 7 9 11 18 20 5
output:
2 7 11 5

sol:
---

```
public class Test {
    public static void main(String[] args) {
        int[] arr = {4, 2, 7, 9, 11, 18, 20, 5};

        System.out.print("Prime elements: ");
        for (int i = 0; i < arr.length; i++) {
            if (isPrime(arr[i])) {
                System.out.print(arr[i] + " ");
            }
        }
    }
    public static boolean isPrime(int num) {
        if (num <= 1) return false;
        for (int i = 2; i <= num / 2; i++) {
            if (num % i == 0) {
                return false;
            }
        }
        return true;
    }
}
```

5)Write a java program to find out most repeating element from given array?
input:
3 6 1 2 1 8 9 1 2 2 4 7 2 2
output:
element 2 repeating for 5 times

sol:
---

```
public class Test {
    public static void main(String[] args) {
        int[] arr = {3, 6, 1, 2, 1, 8, 9, 1, 2, 2, 4, 7, 2, 2};

        int mostFrequentElement = arr[0];
        int maxCount = 0;

        for (int i = 0; i < arr.length; i++) {
            int count = 0;
```

```
            for (int j = 0; j < arr.length; j++) {
                if (arr[i] == arr[j]) {
                    count++;
                }
            }

            if (count > maxCount) {
                maxCount = count;
                mostFrequentElement = arr[i];
            }
        }

        System.out.println("Element " + mostFrequentElement + " repeating for "
+ maxCount + " times");
    }
}
```