1. Find the largest among 3 user entered nos. at the command prompt using Java

```
class Lab02Q1 {
  public static void main(String[] args) {
    int largest = Integer.parseInt(args[0]);

    for (int i=1; i<args.length; i++) {
      int x = Integer.parseInt(args[i]);
      if (largest < x) largest = x;
    }

    System.out.println("Largest: " + largest);
  }
}
```

Output:

```
java Lab02Q1.java 3 9 4
Largest: 9
```

2. Accept 10 numbers from command line and check how many of them are even and how many are odd.

```
public class Lab02Q2 {
  public static void main(String[] args) {
    int even = 0;
    int odd = 0;

    for (int i=0; i<args.length; i++) {
      int x = Integer.parseInt(args[i]);
      if (x % 2 == 0) even++;
      else odd++;
    }

    System.out.println("No of even: " + even);
    System.out.println("No of odd: " + odd);
  }
}
```

Output:

```
java Lab02Q2.java 3 9 4 5 8 3 6 1 0 2
No of even: 5
No of odd: 5
```

3. Program to sort the user entered list of numbers of any size.

```
import java.util.Arrays;

public class Lab02Q3 {
  public static void main(String[] args) {
    int[] arr = new int[args.length];

    for (int i=0; i<args.length; i++) arr[i] = Integer.parseInt(args[i]);
    Arrays.sort(arr, 0, arr.length);

    System.out.print("Sorted Array: ");
    for (int i=0; i<arr.length; i++) {
      System.out.print(arr[i]+ " ");
    }
  }
}
```

Output:

```
java Lab02Q2.java 3 9 4 5 8 3 6 1 0 2
Sorted Array: 0 1 2 3 3 4 5 6 8 9
```

4. Program to find no. of objects created out of a class using ‘static’ modifier.

```
public class Lab02Q4 {
  static int noOfCalls = 0;

  Lab02Q4() {
    noOfCalls++;
  }

  public static void main(String[] args) {
    Lab02Q4 lab1 = new Lab02Q4();
    Lab02Q4 lab2 = new Lab02Q4();
    Lab02Q4 lab3 = new Lab02Q4();

    System.out.println(“No of calls: ” + noOfCalls);
  }
}
```

Output:

```
No of calls: 3
```

5. Find the no. of occurrence of each element in a user entered list of nos.

```
public class Lab02Q5 {
  public static void main(String[] args) {
    int[] arr = new int[100];
    for (int i=0; i<arr.length; i++) arr[i] = 0;

    for (int i=0; i<args.length; i++) {
      int x = Integer.parseInt(args[i]);
      ++(arr[x]);
    }

    for (int i=0; i<arr.length; i++) {
      if (arr[i] > 0) {
        System.out.println("Occurrence of " + i + ": " + arr[i]);
      }
    }
  }
}
```

Output:

```
java .\Lab02Q5.java 15 63 87 42 63 15 42 87 15 63
Occurrence of 15: 3
Occurrence of 42: 2
Occurrence of 63: 3
Occurrence of 87: 2
```

6. Find sum of each diagonal (left & right) elements separately of a user entered 3 X 3 matrix in Java.

```
public class Lab02Q6 {
  public static void main(String[] args) {
    int[] arr = new int[args.length];

    for (int i=0; i<args.length; i++) arr[i] = Integer.parseInt(args[i]);

    int leftDiag = 0;
    int rightDiag = 0;

    for (int i=0; i<3; i++) {
      for (int j=0; j<3; j++) {
        if (i == j) leftDiag += arr[i*3 + j];
        if ((i+j) == (3-1)) rightDiag += arr[i*3 + j];
      }
    }

    System.out.println("Sum of left diagonal: "+leftDiag);
    System.out.println("Sum of right diagonal: "+rightDiag);
  }
}
```

Output:

```
java .\Lab02Q6.java 2 5 1 7 8 3 9 4 6
Sum of left diagonal: 16
Sum of right diagonal: 18
```