EXPERIMENT NO:-03

AIM:- Implementation of Non-Comparison Sort (Counting Sort).

```
import java.util.Arrays;
public class CountingSort {
    public static void countingSort(int[] arr) {
        int max = Arrays.stream(arr).max().orElse(0);
        int[] count = new int[max + 1];
        for (int num : arr) count[num]++;
        int index = 0;
        for (int i = 0; i < count.length; i++)
            while (count[i]-- > 0) arr[index++] = i;
    }

    public static void main(String[] args) {
        int[] arr = {4, 2, 2, 8, 3, 3, 1};
        countingSort(arr);
        System.out.println(Arrays.toString(arr));
    }
}
```

OUTPUT:-

```
"C:\Program Files\Java\jdk-22\bin\java.exe" "-javaagent:C:\Users\Ankit raj\IntelliJ IDEA Community Edition 2023.2.4
[1, 2, 2, 3, 3, 4, 8]

Process finished with exit code 0
```

EXPERIMENT NO:-04

AIM:- Implementation of solution of Activity Selection problem using Greedy method.

```
import java.util.*;

class ActivitySelection {
    public static void printMaxActivities(int s[], int f[], int n) {
        int i = 0;
        System.out.println("Activities are selected:");
        System.out.print(i + " ");
        for (int j = 1; j < n; j++) {
            if (s[j] >= f[i]) {
                System.out.print(j + " ");
                i = j;
            }
        }
    }

    public static void main(String[] args) {
        int s[] = {1, 3, 0, 5, 8, 5};
        int f[] = {2, 4, 6, 7, 9, 9};
        int n = s.length;
        printMaxActivities(s, f, n);
    }
}
```

OUTPUT:-

```
"C:\Program Files\Java\jdk-22\bin\java.exe" "-javaagent:C:\Users\Ankit raj\IntelliJ IDEA Community Edition 2023.2.4"
Activities are selected:
0 1 3 4
Process finished with exit code 0
```