Project 1

CMPT220L - Software Development I
Due on Oct 9, 2020 by 11:59PM
Points: 100

Description

The goal of this project is to create a Java program that creates a histogram from a sequence of numbers. A histogram is an approximate representation of the distribution of numerical data. The x-axis represents the values that we want to display the frequency for. The y-axis represents the number count of occurrences in the data for each column and can be used to visualize data distributions.

For this project, the value entered represents both, the label for the x-axis as well as the value that represents the frequency.

Hint: Read all the values at once using a scanner, with the `nextLine()` method. Make sure that your output matches the output of the two examples in Figure 1 and Figure 2.

Submission

Place your `.java` files under the corresponding folder in your local copy of the GitHub repository, commit and push it to the remote repository. Make sure that the professor has access to the repository (`jfac65-marist`).

```
cmpt220lastname\
   prj\
      1\
         Project1.java
```
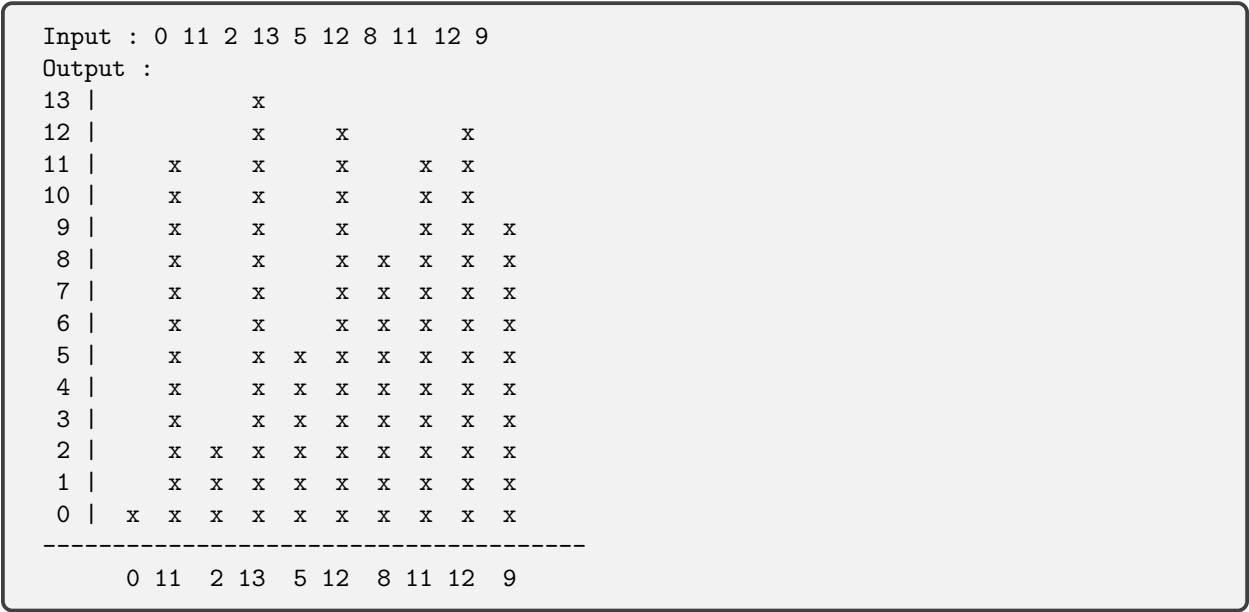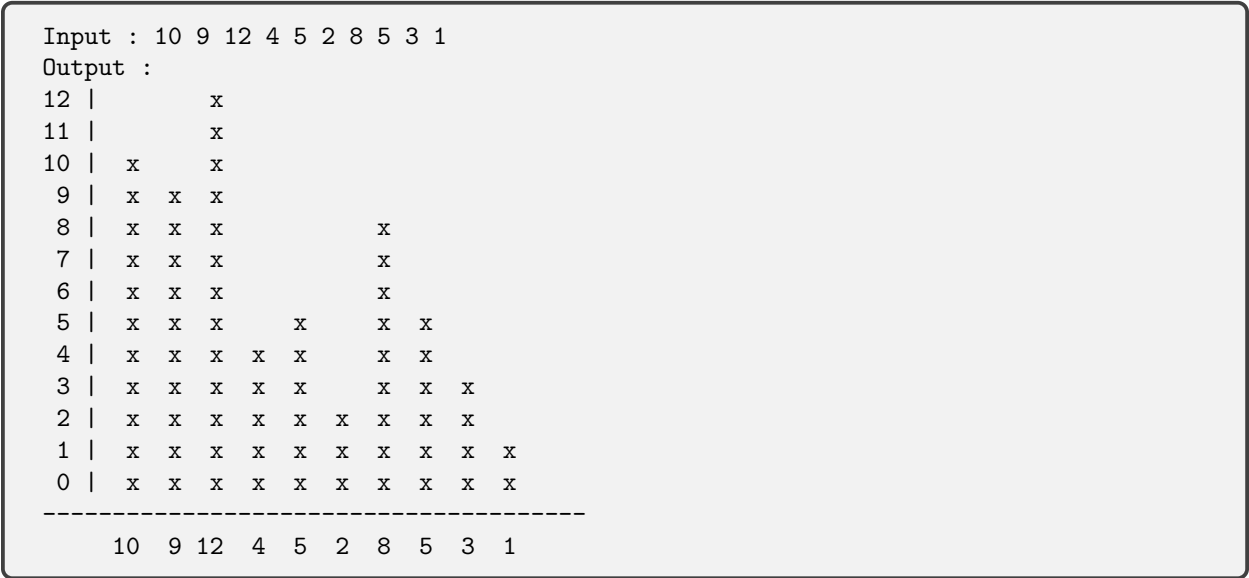
```
Input : 0 11 2 13 5 12 8 11 12 9
Output :
13 |           x
12 |           x       x           x
11 |     x     x       x     x   x
10 |     x     x       x     x   x
 9 |     x     x       x     x   x   x
 8 |     x     x     x   x   x   x   x
 7 |     x     x     x   x   x   x   x
 6 |     x     x     x   x   x   x   x
 5 |     x     x   x   x   x   x   x   x
 4 |     x     x   x   x   x   x   x   x
 3 |     x     x   x   x   x   x   x   x
 2 |     x   x   x   x   x   x   x   x   x
 1 |     x   x   x   x   x   x   x   x   x
 0 |   x   x   x   x   x   x   x   x   x   x
----------------------------------------
      0 11   2 13   5 12   8 11  12   9
```

Figure 1: Example 1

```
Input : 10 9 12 4 5 2 8 5 3 1
Output :
12 |         x
11 |         x
10 |   x     x
 9 |   x   x   x
 8 |   x   x   x               x
 7 |   x   x   x               x
 6 |   x   x   x               x
 5 |   x   x   x       x       x   x
 4 |   x   x   x   x   x       x   x
 3 |   x   x   x   x   x       x   x   x
 2 |   x   x   x   x   x   x   x   x   x
 1 |   x   x   x   x   x   x   x   x   x   x
 0 |   x   x   x   x   x   x   x   x   x   x
------------------------------------------
     10   9 12   4   5   2   8   5   3   1
```

Figure 2: Example 2