



CSCI 4620U / SOFE 4850U

## Lab 4



### Purpose

Processing is a graphical programming environment designed to support rapid prototyping of novel interface ideas. The purpose of this lab is to practice your Processing skills by implementing a custom-designed interactive display.

### Tasks

1. Access the Google Spreadsheet at <http://is.gd/dataset> and add to it five numbers of your choice in the interval [1, 100] along with your name.
2. Unzip lab4sketch.zip (available on Blackboard) in your Processing sketchbook folder.
3. Run the sketch. It should display a rudimentary bar chart with the frequency distribution of the numbers inputted by the class in the spreadsheet.
4. **Implement the following interactive features on top of this sketch:**
  - a. Details on demand:
    - i. Display a tooltip with the value of a bar when the mouse is over it.
  - b. Selection:
    - i. When clicking on a bar, select it. You can change its color or add a border. A click on a selected bar should unselect it (return to its original visual state).
    - ii. Display in a tooltip the names of people who chose the selected number (see `groupNamesByNumber()`).

### Tips

Use the official Processing documentation: <http://processing.org/reference/>. The tutorials might also be useful: <http://processing.org/learning/>

Processing provides the position of the mouse pointer in two global variables: `mouseX` and `mouseY`. You can also implement the method `mouseClicked()`, which will automatically be called when the mouse is clicked.

## Submission

Submit a .zip file containing your Processing sketch to the Lab 4 assignment dropbox.

This activity is **individual**. Due at 11:59pm the end of the day