

## General

At the top of the every document that you create (word processing files or source files) include:

```
/**
 * Description of the class or document.
 *
 * @author YOUR NAME
 * @version CS162 Final Project, mm/dd/yyyy (use your last edit date)
 */
```

Submit this lab via Moodle using the "Final Project" link. Your assignment must be uploaded by the assignment due date and time. Moodle will automatically close the link at that time. It is strongly recommend you do not wait until the very last minute to submit your work.

## Concepts

The intent of this assignment is for you to bring together all of the concepts you have learned this term and put them into a cohesive program. We encourage students to collaborate, form study groups, and share ideas. However, you will need to turn in ***your own unique design and code*** for this project.

## Background

This lab contains the specs for your final project. At this point you should be able to use the Java libraries, your text book and Google to figure things out by yourself. Input from instructors should be minimal.

Review Chapters 8 - 14 of the course textbook - Objects First With Java, A Practical Introduction Using BlueJ (5th Edition).

This is a comprehensive project that you get to design and implement with only a general problem domain for you to work in. However, you must demonstrate usage of most of the syntax that we have studied this term.

## Project Specifications


1. Your project must implement a GUI to run your application.
2. Your GUI must have proper layouts.
3. Your GUI should have a distinct look and feel.
4. You must use a variety of components. At least 3 out of the following list
  - a. Button
  - b. Slider
  - c. Progress Bar
  - d. Spinner
  - e. Radio Buttons
  - f. Check Boxes
  - g. Popup Menu
  - h. Color Chooser
  - i. Other (check with me if you have other ideas)
5. You need a menu bar with at least one menu and two menu items.
6. You must use at least one text component.

7. You must implement file I/O.
8. You must use try catch blocks and write at least one Exception class that is used by your project.
9. Use inheritance and include either one abstract class or one interface.
10. You must write your application using proper programming:
  - a. Document your code.
  - b. If classes have duplicate code use inheritance, abstract classes or interfaces.
  - c. The GUI should be separate from the rest of the program.
  - d. **AND you must copy the list of requirements above. Next to each requirement you must list the class the requirement is in and the line number within the class where it can be found.**

**Additional requirement:** This project **MUST** be completely coded from an empty project by you. You are **NOT** allowed to start with other projects, or code found on the internet. This must be a unique design and original and unique code that you create on your own. Campus academic honesty policies will be strongly enforced. If you are not sure if something you are doing is OK or not, then bring in your code/idea and discuss it with your lecture instructor.

## **Submission Instructions**

**TURN IN** your entire project folder, your entire should be properly commented and formatted, including the identifying information noted in the “general section”. **NOTE:** You must write JavaDoc style comments for EACH public CLASS and EACH public METHOD that you create or modify. It is required that you run the code formatter (BlueJ Auto-layout) over ALL of the classes before you Zip and submit your lab.

- 1) ZIP the entire project folder, DO NOT delete any of the files. You will upload the single ZIP compressed file. Please ONLY submit Zip formats. Other compression formats require the grader to spend more time opening various tools to handle other formats, so only ZIP will be accepted.
- 2) Submit any required document as a separate file.
- 3) Log in to Moodle.
- 4) Click the Lab # link in the week # activity block in the class Moodle site, then browse to your document and upload the document you created.
- 5) If you need to submit an updated version, click on the submit link and you will see the file you previously uploaded, click the edit these files button. On the right of the file name you will see this icon . Click on the icon, delete your previous submission, and then upload your updated version.