# CPSC 224 Software Development

# Project

## Objectives

At the conclusion of this project assignment, participants should be able to:

* Write a project proposal
* Utilize all JAVA related components covered in class
* Design and implement a GUI application
* Present the app idea and demo the GUI application

## Overview and Requirements

For the final project in CPSC 224, you are going to design and implement your own idea for an app *in pairs*. As long as you conform to the requirements specified in this document, you will have the freedom to define the project idea, design, and the implementation performed.

The overview of the project timeline is as follows:

1. Brainstorm an app with your partner
2. Write a project proposal (PDF due April 3rd @ midnight)
3. Application should include
4. Demo a mid-project app that implements (demo due anytime April 17-19)
5. Design and implement the app
6. Present your app (during finals week May 7th or May 8th )
7. Turn in your source code (zip due May 8th @ midnight)

More details about these topics are in the following sections.

### Brainstorm a Project

With your partner, identify three topics that interest the both of you. Next, brainstorm GUI JAVA application ideas related to those topics that could be implemented.

The app idea should adhere to the following requirements:

* Is work/school appropriate
* Supports community
  + This doesn’t have to mean the GU community, though this would be great!
  + App ideas that support the GU mission statement are especially great!
* Is sufficiently complex
  + Your app should have multiple event handling components
  + Your app should should be at least 3x the size of average coding assignment in terms of complexity
* Bonus: Utilizes a JAVA topic beyond the scope of what was covered in class

### Propose the Project

Formally write up your proposed project. Your write-up should be single spaced, at least two page long, and submitted to Blackboard by the deadline specified in the course schedule.

Content to be included in the proposal:

1. Names of team members
2. Project name (you pick!)
3. Project description
   1. Motivation
   2. Stakeholders
   3. The sources of any necessary data/content
   4. Impact
4. Implementation
   1. UML Design
      1. Use Case
      2. Sequence Diagram
      3. Class Diagram
   2. Functionalities
5. Proposed demo
   1. What is your app’s core functionality?
   2. What will a user be able to do with your app?
   3. What will your app look like?
   4. What will be completed for the mid project demo.

### Design/Implement the GUI Application

This part is fairly straightforward. Your GUI should deliver on the functionality described in your project proposal.

### Present the Project

During dead week, each team will present their project during a 5 minute presentation. The presentation should include:

* Motivation
* Demo
* What did you learn?
  + Key components of the code
  + Ideas for future work
* Breakdown of what each partner contributed to the implementation

To minimize time between presentations, your presentation needs to be made using Google Slides and a shareable link needs to be sent to me at least 4 hours before your presentation. I’ll pre-open the presentations in order so we can present projects rapid-fire. Also, the demo is to be pre-recorded, using desktop screen capture software (such as Kaltura, which Gonzaga has a site license for, follow [these GU-Kaltura instructions](https://online.gonzaga.edu/lms/wp-content/uploads/sites/10/2016/12/Kaltura-User-Guide.pdf) to use it) Embed this video in your presentation.

After the presentation, there will be approximately one minute for the attendees of the presentation to ask questions.

In addition to presenting your project, you will peer review your fellow students' projects and presentations. The peer review presentation rubric is available in the Google Drive Project folder.

### Bonus (10 pts)

Make a 3-4 minute quality video that showcases your project. The video should include the following information about your project:

* Motivation
* Context
* Implementation description
* Demo
* Impact

While you may include slides in your video, these should be *kept to a minimum*. Include footage of each team member speaking, describing key code snippets, interacting with the app, and presenting the motivation/impact.

### Submitting Assignments

1. Use the Blackboard tool <https://learn.gonzaga.edu> to submit your assignment. You will submit your code to the corresponding programming assignment under the "PA & RQ Submission" tab. You must upload your solution as <your last name>\_project\_proposal.pdf and <your last name>\_project.zip by the due date and time.
2. Before zipping, go to Build->Clean Project. Your .zip file should contain your entire Android Studio project folder zipped up.

### Grading Guidelines

This assignment is worth 100 points + 10 points bonus. Your assignment will be evaluated based on a successful compilation and adherence to the program requirements. We will grade according to the following criteria:

* 10 pts for project proposal
* 10 pts for mid-project check
* 65 pts for implementation
  + 15 pts for usefulness/originality of application
  + 25 pts for technical rigor and complexity
  + 25 pts for GUI component design
* 15 pts for presentation
  + 5 pts average of peer reviewer's evaluations
  + 10 pts instructor evaluation
* Note: there are no points assigned for adherence to proper programming style and comments established for the class. That does not mean you can write ugly code! Write your code so it adheres to the style guidelines anyways, because this is a great project to put up on Github to showcase your skills to future employers!!