

Summary

Your final project is an opportunity to explore a topic of your choice in a more comprehensive way than you have tackled so far in various assignments. The idea is for you to have some creative fun and apply the knowledge and skills you have acquired this year in developing an application of your choice.

You should use the final project to expand your knowledge and learn some new aspects of computer science. Another goal is to experience the larger challenge (and satisfaction) of software engineering and system design and development.

I encourage you to be ambitious in this project, but not set yourself such a large challenge that you can't finish it or succeed. Part of software engineering is getting calibrated to be able to estimate how long things will take and budget your project time and resources appropriately. You need to produce a tangible result for this project.

You are welcome to work in groups of between one and three people, as long as each person's role is clear and meaningful, and you get my approval of your team and project.

The final project is divided into phases, with certain deliverables (intermediate assignments) for each phase. They are as follows:

#	Deliverable	Description	Due Date	Points
1	Proposal	Concept & team	May 15	5
2	Prototype Check	Work in progress	May 24	5
3	Poster/Demo	Presentation	June 8	5
4	Implementation	Final code / system	June 14 (seniors) June 22 (others)	20
5	Documentation	Project summary	June 14 (seniors) June 22 (others)	5
TOTAL				40

Further details for each deliverable will be found on the assignments page of the course website.

FINAL PROJECT: PROPOSAL

To begin this project, you are to write a proposal document that summarizes the project concept, goals, and implementation strategy and plan.

First, conclude the brainstorming about project ideas, settle on your project and team members. Discuss all of this with me and get approval.

Then create a document that summarizes the project concept and plans. Include the following sections and information in this document:

- **Title & Tag Line:** Title of your project and “tag line,” a short phrase that encapsulates the project concept
- **Team :** List of team members working on the project.
- **Description:** Summary and description of the project concept, goals, purpose, function, or use. This should be a general description of the project, just a paragraph or two, and should describe what the project is or does and why it is useful or interesting or relevant.
- **Client:** Who is the target user(s) for this project? What purpose does it serve or problem does it solve? Describe briefly how the project will be used by the client.
- **Implementation:** Give an overview of how you intend to implement the project. Describe briefly the language, classes, modules, or other implementation details, in overview. A rough system diagram is very useful in this.
- **Plan:** Explain briefly the tasks and timeline you envision for your implementation. Explain who will do what and by when in the overall schedule.
- **Risks:** What are the unknowns for your team in tackling this project? What will you have to learn that you don’t already know? How will you get that knowledge? What could go wrong?
- **Resources:** What do you need from me or other people to succeed?

This document should be written professionally and thoroughly and will be graded accordingly, both on form and content.

FINAL PROJECT: POSTER/DEMO

For this project milestone, we will have engineers from Amazon.com as guests in class. We will set up the lab as an open house to show your projects to these software developers. They will be interested to hear what your projects are all about and will give you some feedback on your work.

Each team will be expected to demonstrate their project, even if it is not yet finished. You should also have the code available for them to review — print out a copy, neatly formatted!

In addition, each team will create a poster that summarizes the highlights of your project so that you can then discuss it with the Amazon.com staff and classmates. Below is a list of information you should have on your poster and/or be ready to discuss during the presentation. Be creative on the poster, use images and color to express yourself as well as the project.

Also be ready to ask the Amazon.com engineers questions about working in the computer field and programming — this day is about sharing your project as well as helping you better understand the wonderful world of computer science. They are here to help inform and hopefully inspire you.

Poster items:

- **Title & Tag Line:** Title of your project and “tag line,” a short phrase that encapsulates the project concept
- **Team :** List of team members working on the project.
- **Description:** Summary and description of the project concept, goals, purpose, function, or use. This should be a general description of the project, just a paragraph, and should describe what the project is or does and why it is useful or interesting or relevant.
- **Client:** Who is the target user(s) for this project? What purpose does it serve or problem does it solve? Describe briefly how the project will be used by the client.
- **Implementation:** How is your program structured? Diagram the major objects/classes and data structures (e.g., ArrayLists) that you used to implement the project.
- **Reflection:** What have you learned from working on this project?
- **Challenges:** What challenges did you face and how did you overcome them? Did you make as much progress as you thought you would?
- **Next Steps:** What is next? What further improvements or plans do you have for the project?



AP CS Project Reflection

Please answer the following questions regarding your project. This reflection is part of your final assessment on the project.

*** Required**

Your name *

Project Name *

What was your personal success accomplished in this project? *

For example: I better understand using Object classes, I learned to use Swing, I worked well with my teammates

What were the biggest challenges in your project? *

Obstacles to success, things that slowed you down, stuff you didn't anticipate



What did you learn by pretty much needing to solve problems on your own? *

Using API docs, researching online, finding other people who knew the issue, etc.



If you had more time to perfect this project, what would you do differently (i.e. change data design) or add to it?



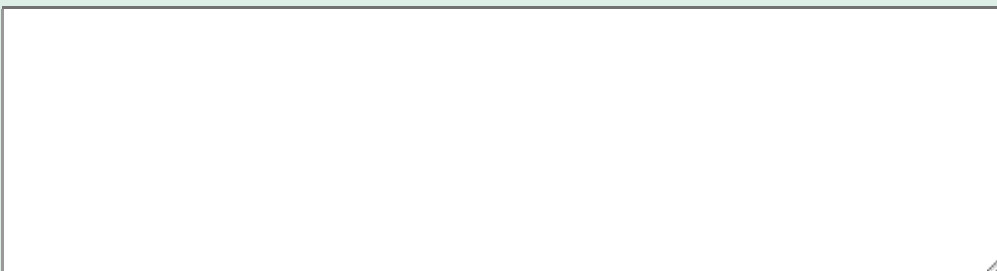
If you worked on a team, how was the experience? *

1 2 3 4 5

Terrible ☐ ☐ ☐ ☐ ☐ Great

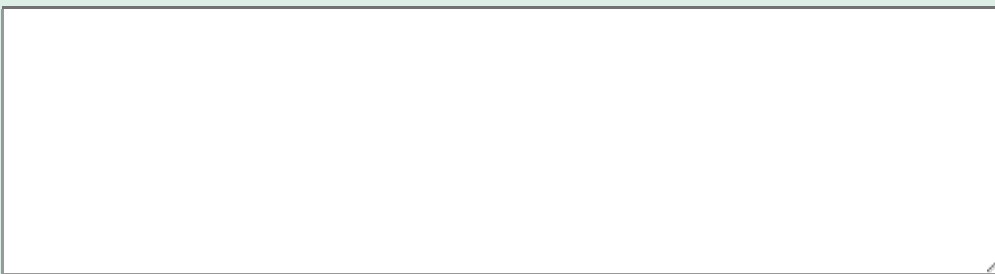
How was the collaborative experience? *

What did you learn about team dynamics or organizing work in a group?



Suggestions for next year?

Any ideas or suggestions for how this part of the course might be improved for next year?

A large, empty rectangular box with a thin black border, intended for users to write their suggestions for the next year. It occupies the upper half of the form area.

Submit

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