Final Project and Presentations
Rose-Hulman Institute of Technology
CSSE 473: Winter 2022-2023

For your final projects, you will form groups of 2 or three people to explore and learn a new algorithm and present your findings to the class. We'll do this in stages with a deliverable at each stage. Each deliverable will be graded with the most emphasis on the final report and final presentations (mostly the presentations).

This group final project is worth 10% of your class grade.

For this project, your team must:

- Research and select an algorithm not covered in class (or by our textbook).
- Explore your selected algorithm by using textbooks, online articles, and other resources.
- Analyze the runtime of the algorithm, including best and worst case runtimes.
- Locate a real-world problem this algorithm can be used to solve.
- Place your selected algorithm in context with the algorithms we have learned in class. Which algorithms is it similar to? Does it improve upon another algorithm? etc.
- Teach the class what you've learned!

Deliverable 1: Proposals
DUE: February 1st, 11:59pm

For this, you must have your team and algorithm topic selected.   Write a one-paragraph overview of your plan. Make it clear which algorithm you have chosen, and cite at least one source you have found about this algorithm. Put all your team members' names on this document and have *one person* submit it via Moodle.

Note: Wikipedia, StackOverflow, etc. are **not** to be used as sources. These can be good starting points, but you should seek out actual/primary sources.

Your professor will use this document to approve (or deny) your chosen algorithm topic. If you need help identifying potential topics, reach out to professor well in advance of this deadline for suggested resources.

Deliverable 2: Final presentation materials
DUE: Week 10 (February 13th **11:59pm sharp**)

Turn in ONE copy of your final presentation materials (see below) with all team members' names on it. This should include any materials you will use during your presentation, including (but not limited to): slides, handouts, demo outlines, multimedia, etc. You must also include a bibliography with **ALL** sources used by your team to develop your presentation. Your materials clearly written, easy to read, and something that wouldn't make your English teacher pull their hair out.

When developing your presentation materials, make sure they are clearly organized and contain all project components. You will use these materials for your presentation, so make sure they are polished

and complete! No edits will be allowed between this deliverable deadline and your team's presentation slot.

Deliverable 3: Presentation
DUE: Week 10 (February 14, 16, 17)

During week 10 you will present your findings. 10% of your class grade is a combination of this presentation and the other project deliverables (mostly this presentation). Day/time slots for presentations will be chosen at random. The criteria for a good presentation are:

- All team members **must** participate in the presentation.
- It should be organized: give us a quick summary up front and then show us details in a way the class can follow.
- You should teach the class an algorithm we haven't covered in class, discuss it's runtime, and place the algorithm within the context of our course topics.
- It should be 10 minutes long.
- Have a little fun. This should be fun.