

Final Project Details

Created by Triphol "Pao" Nilkuha (admin), last modified by Liu, Miranda on Oct 14, 2021

Overview

You will be doing a final project for this course.

1. You need to submit a project proposal by a given due date.
2. This proposal would be counted as 1 non-droppable assignment of the semester.
3. Final Projects will comprise the final weeks of the course.
4. There will be a showcase of interesting projects on the last lecture date.
5. Choose something you will enjoy.
6. No project weeks can be used as your lowest score to drop.
7. You will have peer review for final projects (3 weeks in total)

Expectations

1. You will submit a proposal to the TA and your moderator. Your moderator may expect you to make changes or reject it for being too difficult for the time frame or too easy for your ability.
2. The proposal should contain a plan that outlines the details of your efforts for all 3 weeks of your project.
3. Do your best to follow that plan while maintaining good code practices, this means you will need to:
 - a. comment your code,
 - b. plan your design and
 - c. show code that has minimal bad code smells.
 - d. You WILL be expected to create high-quality, well-defined methods or routines.

As always, good code scores higher than more functionality.

Policies

1. If you are unsure of what to do with the final project or whether a project is accepted, post on Piazza, ask a moderator or TA.
2. No Works for Hire: You may not use a work-for-hire as a final project.
3. **No Projects from Other Courses:** You may not use a project for which you are currently getting credit in another course. Using a project for which you are currently getting credit in another course is a violation of the student code.
4. **No project from another course UNLESS:**
 - a. you have already completed that project for a previous semester (and)
 - b. you commit all existing code to GitLab when you submit your final plan (and)
 - c. you list all existing functionality and distinguish the new work you will do
5. Ok to work on an open-source project:
 - a. Talk to your moderator/TA beforehand.
 - b. Set your goals accordingly. The point is to write a significant amount of code each week.
 - c. If your problem is particularly difficult (which is usually the reason that something has not been added or the bug still exists) then plan accordingly - mention it in your submitted plan.
6. **Final Project allows up to groups of two and requires** prior approval by at least one TA **AND** moderator:
 - a. you should have the same copy of the proposal and both of you must submit the proposal
 - b. you should have two separate rubrics in the proposal where each rubric corresponds to the work done by one person
 - c. you must clearly indicate your division of labor in advance in your rubric
 - d. you should allocate enough work for the two of you so that the amount of work each person does is equivalent to a previous assignment
 - e. your design shows exactly where everyone's responsibility begins and ends
 - f. you show only code from those files or classes for which you have previously indicated your responsibility during your discussion session
 - g. moderators from all sections affected must receive **the exact same set of plans** which indicates the responsibilities. You must do this in a single email cc'ed to the group.

Scope

1. This project should take you three to four weeks to complete.
2. Your moderator and TA will decide if they believe this is a reasonable undertaking for you.
3. If you plan to use technology such as a game engine or elaborate library, you should already be familiar with it. If you have never installed nor tried to work with this library or engine, you should think of a different project. The purpose is for you to write code rather than just learning something new.
4. If your progress does not meet your plan because you overestimated your ability to meet your goals, **rewrite your plan one week prior to the submission.** (Details below)

Final Project Proposal

Submission Guideline

Please create a GitLab repository named "fa21-cs242-project" and submit your proposal to the branch "project-proposal".

Please write your proposal in a markdown file. After committing your proposal, please create a merge request as before.

Please give your moderators and all TAs the correct permission to your repository.

What Proposals should contain

1. A one-page description of the project
 - a. A motivation section
 - b. Technologies, Tools, and Style guides to follow
 - c. High-level functionalities to complete
 - d. If it is software with a GUI, a sketch of what it would look like (pencil sketch is good enough)
2. Weekly functional goals that you intend to add each week.
 - a. Functional Scores should add up to 15 points
 - b. Test Scores should add up to 10 points
 - c. Breakdown of these points should be present, and each breakdown category should be at most 5 points
 - d. Feel free to refer to rubrics for Assignment 1~3
3. Link to the grading calculator of each week's rubric
 - a. Please create copies of the google sheet from the template [here](#), and update the functional and testing requirements correspondingly
 - b. Please give your moderator the correct access to the google sheet. Your moderator will use the sheets to grade your assignment

Grading

The grading of the rubric will be split into 2 parts

- Initial Submission (45%):
 - + 5% submitting to the right place with the correct file name with correct permissions to moderator and TAs
 - + 5% submitting the proposal on time
 - + 10% containing all functional for each week
 - + 10% containing all tests for each week
 - + 5% containing clearly written first page
 - + 5% following the template of the sample
 - + 5% for containing a link to the grading calculator of each week, and the grading calculator is correct
- Second Submission (55%):
 - - 5% not submitting the updated proposal on time
 - - 5% for each additional feedback
- Your rubrics will be graded by your moderator.
- If your second version has more than 3 feedback, there will be an 80% penalty on the final score of each of your project weeks.

Tips of Writing Proposal

Here are several requirements that we have for the proposal and rubric

- **Category Breakdown**
 - A single grading category should not have too many points (try to allocate no more than 5 points for each category)
 - In each category, requirements must be broken down to at least 3 items if the point is greater than or equal to 3 points.
- **Point Allocation**
 - If testing in your code cannot be easily measured by line coverage, please allocate unit test 0.5 pt/test; However, in your implementation of testing, your moderator has the right to deduct points on low-quality tests.
 - If your test involves manual testing, please allocate manual/snapshot 1pt/test, and at most 5 points can be allocated.
 - Please do not assign the score based on the amount of data. Instead, the score should depend on the amount of code that needs to be written. For example, if you are scraping Reddit, please do not say "+1 pt for scraping 1 week of data; +2 pt for scraping 2 weeks of data"
 - Please do not allocate points for Doxygen Generation.
 - Please do not allocate points for refactoring
 - Please do not allocate bonus points for your project. If you feel a strong need to have a bonus because a feature that you want to implement is very challenging, please email your moderator and TAs for approval.
- **UI Design**
 - If you are building some application that has an interface, please include a sketch in your proposal. The sketch should contain the name of each screen, as well as the main components in the screen
 - When you are writing a rubric for your UI components, please clearly state the points allocation for each component or functionality. For example, "+1 pt for allowing the user to update their user information", or "+1 pt for stop button of the music player." Please do not say something like "+1 pt for basic UI implementation; +2 pt for awesome UI implementation"
- **If your project involves data...**
 - If your rubric suggests you will get the data by web scraping, but in the project implementation you get the data by making some API calls, the points of that category will be 50% off
 - If your project involves displaying some data (like displaying quizzes), please clearly state how you will get that data. If you plan to use hardcoded data, please state that in the rubric as well
- **If your project involves Machine Learning...**
 - Your project can use existing libraries for applying ML. Please specify what library you will use in the proposal.
 - However, it should not be a project about training the model or implementing certain algorithms.
- **Note: If your moderator thinks that your actual work is much more trivial than what is expected on the rubric, they have the right to deduct points on those items.**

[Template \(Click me\)](#)

[Sample \(Click me\)](#)

Submission

Submit your proposal to the final project repository **fa21-cs242-project** with the filename **fa21-cs242-[netid]-[moderator-netid]-proposal.md** (ie. cs242fa21-bob999-tcheng10-proposal.md)

Making changes to your proposal

1. Changes can be made toward the proposal under the moderator or TA's approval.
2. These changes need to be committed to the repository **BEFORE** your discussion session. You can discuss the changes to the proposal with the moderators through email before the session.
3. **Please do not make changes to your rubric without discussing it with TAs and your moderator! Otherwise, a penalty of 80% can be applied to your grade for that week.**

Due Dates

- Project proposal first submission: Same Day as Assignment 3.0
- Project proposal second submission: Same Day as Assignment 3.1
- Project Week 1: Nov 1
- Project Week 2: Nov 8
- Project Week 3: Nov 15

No labels