

# Team Project (100 Points, 30% of Course Grade)

For the team project you will work together in a team of three or four. This project will give you essential practice working with teams to develop software. You will decide together on a project, collaborate on creating it, and demo your results in a group presentation. Teams will be assigned based on student schedules.

The emphasis is on methods and tools, not on fully completing what you set out to do. We will be working with web applications in this course, but you can choose almost anything for your software project (you may want to run it by the instructor first). Ask the instructor or fellow students if you need inspiration.

## Project Milestone 1: Project Proposal (15 points)

Due Monday February 18th, 23:59 Mountain time.

- Create a github repository with all team members as collaborators
- Add your team information to a README.md file in the repository:
  - Project title
  - Team members' names
  - Vision statement: what would you tell potential customers?
  - Motivation: why are you working on this project?
  - Risks to project completion, possibly including
    - new language or working environment
    - no prior experience working with these team members
    - lack of some needed resources
  - Mitigation Strategy for above risks
  - Development method: scrum, kanban, waterfall: with specifics!
  - Project Tracking Software (Trello is most common)
  - Everyone must submit to moodle the link to their github repo and their username

## Project Milestone 2: Agile meeting (15 points)

Schedule for the week of February 25 The team must schedule a 20 to 30 minute group Zoom meeting. All group members and the instructor must attend. The meeting will have three parts:

- Weekly standup (5 minutes)
  - What did you do last week?
  - What are you doing this week?
  - Are any obstacles stopping you?
- End-of-sprint Demonstration (10 minutes)
  - Show what you have for the sprint
  - Do NOT show code or database, your client is not a programmer!
- Sprint Retrospective
  - What went well
  - What didn't work
  - How can we improve

## Project Milestone 3: Testing (15 points)

You will commit this Milestone to the team repository.

One team member must commit to github a TESTING.md with the following:

- Project Title
- Team members' names

- **Automated Test Cases:** Explain how to run the test cases and the expected output. The instructor should be able to clone your repository and replicate your test results. You should have at least three automated tests.
- **User Acceptance Testing** The purpose of these tests is to have a formatted plan that you could provide to users to go through the steps in using your application and report whether it was successful or not.

Provide at least three test cases in TESTING.md formatted similar to the following:

```
Use case name
    Verify login with valid user name and password
Description
    Test the Google login page
Pre-conditions
    User has valid user name and password
Test steps
    1. Navigate to login page
    2. Provide valid user name
    3. Provide valid password
    4. Click login button
Expected result
    User should be able to login
Actual result
    User is navigated to dashboard with successful login
Status (Pass/Fail)
    Pass
Notes
    N/A
Post-conditions
    User is validated with database and successfully signed into their account.
    The account session details are logged in database.
```

## Project Milestone 4: Individual interview (15 points)

Due Friday November 9th, 18:00 Mountain time.

An individual meeting so that we can discuss your contributions to the project. Signup on Moodle.

## Project Milestone 5: Presentation (15 points)

Your team will give a 5-10 minute presentation of your project through Zoom. All members must talk during the presentation. Your presentation should cover the following:

- Project Title
- Team members' names
- All the tools your team used
  - Name of the tool and purpose
  - Your team's evaluation of the tool: excellent? Useless?
  - Example Tools:
  - Project tracker
  - Version control
  - database
  - testing
  - auto-documenter
  - deployment environment
  - programming languages and frameworks

- code editors
- Challenges you encountered, how you overcame them, how your plans changed
- Demonstrate your project

## Project Milestone 6: Final Submission (15 points)

Submit a markdown file with the following:

- Project Title
- Team members' names
- Project tracker link (Instructor can access)
- (Optional) Link to 5 minute video: a demo for a potential customer
- Version control repository link (Instructor can access)
- Inside repository:
  - Source code
  - Test cases
  - documentation, and auto-doc files
  - video of demo (optional)
  - REAMDE.md
  - Project presentation files from Milestone 5
- Deployment Link (Heroku or similar)

## Project Milestone 7: Peer Evaluation & Project Reflection (10 points)

Due Friday December 14, 18:00 Mountain time.

- Download the spreadsheet.
- Fill in evaluation information about your group members, including the text boxes. Note: putting all the same # in everything or per person or the like does not count as filling out a peer evaluation and will receive a zero.
- Choose one of the following to answer in a short paragraph in the spreadsheet. Grading will be based on the quality of your answer and how well you handle team dynamics. Be honest. An interviewer can always tell if you are being genuine. The goal of this exercise is to prep you for interviewing.
  - Give an example of when you worked in a team and there was conflict or disagreement. How did you handle it? Did you reach a consensus? What would you do differently next time?
  - Give an example of when you worked in a team and one member always dominated the meetings and discussions. What did you do to help the rest of the team become more involved? What would you do differently next time?
  - Give an example of when you worked in a team and one member refused to do any work. How did you handle the situation? What would you do differently next time?
- Your grade for this milestone will have 5 points for your evaluation, and 5 points for the team's evaluation of you.

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