

Paired and Group Project Student Expectations

The expectation for students on all paired and group projects is they are to put in the full effort on the problem solving, designing, planning, and coding of the project. Any student who does not put in a full effort, and instead decides to stand by and watch their team member(s) do the work, will receive a lesser grade (see grading subsection below).

It is important to be able to work with other developers, especially when considering this is the expectation on the job. The collaborative process includes sharing ideas, asking questions, writing code, and testing code as a team.

Two Different Approaches to Tackling Projects

There are two different approaches to tackling paired and group projects: divide and conquer or pair programming. Both are good approaches, with pair programming being the more popular of the two when it comes to working in a professional environment.

- Divide and conquer
 - o Team members split up user stories and/or tasks and work on each individually. The idea is to work in parallel on project features and reach the minimal viable product (MVP) quicker.
 - o The expectation is students still need to review their code together. This will ensure complete understanding of the code as well as make sure that code is being tested thoroughly. In the divide and conquer approach, it is unacceptable for any student to refuse to review code with a team member.
- Pair programming
 - o By definition, pair programming consists of two programmers sharing a single workstation (laptop/desktop, keyboard, mouse, etc.). The “driver” is the programmer at the keyboard who is responsible for the typing of code. The “navigator”, who is equally involved in the task, is the other programmer(s) who is(are) focused on providing overall direction.
 - o For this approach to be effective, it is important that team members are actively engaged with the task throughout the coding session. This means there needs to be good communication among the team members.
 - o It is required for students to swap roles frequently throughout the development of the project -- recommended time is every 20 minutes.
 - o One of the popular gains of pair programming is an increase in code quality. This is achieved through communication, writing, testing, and refactoring of code.

Grading

Given the importance of all students putting forth an effort on the project, it is important that students get graded based on the effort they put into the work. On all pair and group projects, students will be graded based off of the following criteria:

- Project user story point values
- GitHub commits
 - o Quantity

- Total number of commits
 - Merge conflict commits do not count towards total number of commits
- Quality – quality of commit message and code
 - Commit messages must be descriptive
 - Usable code contributing to the final project
- Comments in code
 - Ideal for pair programming situations where two or more team members are working together but only one person is committing the code to GitHub. The comment above the committed code should state that pair programming was done among the named team members.
 - Example: “The below code was written by John Smith and Jane Doe in a pair programming effort”
- Team lead feedback, if the case there is an assigned team lead

Instructor Discretion

The instructors reserve the right to put a student on a solo project despite the class working in pairs or in a group for the following reasons:

- The student did not meet the stated student expectations, which includes not putting forth a full effort on project work and standing by and only watching team members work on the project.
- The student caused problems with team members, including being disrespectful to others, not communicating with others, or not being online to work.
- The student is having technical difficulties that are preventing collaboration e.g., Internet issues, computer issues, video issues
- The student is excelling in the course work, and the instructors want to challenge the student by having them do the project solo.