

Complete each section of this project plan completely and professionally. This should be a living document that gets updated as appropriate. After it is complete you should upload this document to your private channel on Teams, so all members have access to it. You should also upload a PDF version to the documents folder in your GitHub repository. Each version you upload to GitHub should have the version number appended to the name of the file.

Section 1 – Product Overview: This should be a more refined version of the original elevator pitch.

- Flow Free is a logic puzzle game where you connect dots in a grid with many different variations and restrictions. Our product will be a collaborative version this game: a website where you can race Flow Free against your friends, where you can play the same puzzle and your friends' progress is displayed live, and the website will compare the times and make a leaderboard after you're done.

Section 2 - User Personas: A detailed summary of your main target user groups. How many are there? What are each one's characteristics (age, lifestyle etc.) and key goals.

- Ages 5+
- 100,000,000+ people who have downloaded Flow Free (as of 2022) will enjoy this game.
- Our market generally enjoys solving challenging puzzles.
- Goal is to have fun with their friends – a social way to play their favorite game!

Section 3 – User Stories: Short, simple descriptions of a feature told from the user perspective. As a <type of user>, I want <some goal> so that <some reason>.

Problems that having a timer/leaderboard set up solves:

- As a competitive Flow Free player, I want to be able to play Flow Free against my friends in real time so that we can determine who the best player is.
- As a competitive Flow Free player, I want a leaderboard so that I can compare my performance against my friends.
- As a competitive Flow Free player, I want a timer while solving Flow Free puzzles so that I can see how fast I can solve them and work to improve my performance.

Problems that having a playable game solves:

- As a competitive Flow Free player, I want multiple puzzles of different difficulties so that I can see how proficient I am in Flow Free.
- As a competitive Flow Free player, I want to be able to improve my puzzle solving skills by being able to play a Flow Free level multiple times to improve my accuracy and speed.

Section 4 – Development Tools: Must be something all team members you can use on the classroom computers and with the school Wi-Fi. No personal computers and no personal hot spots. Must be something where the source code can be tracked with GitHub.

- TypeScript programming language
- GitHub repository to store the code
- [React](#) and [Vite](#) for front-end, making the website and handling typed input
- [p5.js](#) for making the Flow Free game part to embed in the website
- [Firebase - Realtime Database](#) or [SQLite](#) for storing data and live updates
- [Nodemon](#) for hot reloading of project while developing

Section 5 – Minimum Viable Product (MVP): What is the key minimum feature set that you will need to build to make your product successful.

- A working Flow Free level (solvable, can connect all pipes, etc.)
- Start screen that allows you to join a game with another friend
- A way to interact with other Flow Free players and compare the time it takes for you to solve the same level, not necessarily displaying a live update of friend's screen.
- A scoreboard database with stored names and times