

CSCI 3308-102 Project Milestone 1

1. **Team Name:** Team Cupcakes
2. **Team Members:** Tucker Eckhoff, Liam McCarthy, Melissa Pollich, Jacob Reed
3. **Description of Project:** Our project is going to be a simple game and will take user login/password then compare that to a database. For our game, we plan to create a variety of puzzles to test the user's skills and abilities. For example, we may have a puzzle where the player must create pixel-art by filling in the pixels based on numbers given for each row and column, or have them move blocks in a specific order to escape a level. The database will also store which puzzles a user has finished so they can safely log out and keep their progress. While we plan to make our project a simple puzzle game, some of our stretch goals include: adding a multiplayer feature or scoreboard for players to compare their scores/completion times, creating a level selection menu, and allowing players to unlock and select different appearances for the game. Our game will not only challenge the player's problem solving skills, it will also provide a fun and engaging way for players to exercise their brain.
4. **Vision Statement:** "Challenging consumers and ourselves to grow beyond what we think we can do."
5. **Motivation:** Learning and gaining experience with front- and back-end development. Our team is fairly inexperienced with many of the components we'll be using in our project, so our motivation is to develop skills and create something that works, even if it is simple.
6. **Risks:**
 - a. Lack of experience with the necessary components, tools, and skills
 - b. Time management as it relates to project milestones and deliverables
7. **Risk Management Plan:**

In order to minimize the risk involved with lack of experience, our team plans to incorporate the agile development method which will allow us to break down each component into small, deliverable parts allow us to learn and gain experience as we go in manageable chunks. To minimize the risk of time management our group plans to use our weekly meetings as well as Slack to both organize and plan our time accordingly to meet our personal and group deadlines. With the plans above we believe we can succeed in spite of these risks because it will allow us to tackle each problem we face in an organized and controllable manner.
8. **Version Control:** We will be using GitHub repositories.
9. **Development Method:** Agile. The agile methodology has a focus in being able to adapt to change in demands at any point in development with the key measure for progress being working code. To follow this, our group plans to focus on delivering working code in short intervals (1-2 weeks) as the project develops and allows us to constantly reevaluate our scope. This code will be delivered at weekly meetings which will allow us to consistently assess our progress towards our goals and allow us to adapt to any changes or difficulties we may encounter.

10. Collaboration: Slack

11. Proposed Architecture:

- a. **Front End:** Create a locally-run instance of the game which accesses the database to compare user data. If the user exists, allow them to continue from the previous level. Due to overall team experience, we will likely be working in C++ when creating the front-end.
- b. **Integration Layer:** The integration layer will be done using NodeJS since that is what we will learn in class and no one on the team has experience with anything else
- c. **Back End:** Back-end will be done using SQL as it will be the focus of the class. It will contain a user's name and password data, as well as their level completion data