## Matching Game (Scope Document)

### Problem Statement

This project aims to create a Java-based matching game where players match pairs of squares on a grid, with difficulty levels that scale the board size. The game will encourage players to clear the board with the fewest moves possible and track scores on a leaderboard for a competitive experience.

**Users** - Users that will be users on the code repository service Github and I will introduce this game to family members and friends to play.

**StakeHolders** - Stakeholder is the developer of this program, OVS teacher as a mentor.

**Risks** - This program does not have any risk as it is not too complicated to develop as one developer can accomplish this in a reasonable time. And does not have any risk to users as the code is not calling any OS APIs or driver APIs and is not storing any user data other than time.

### Vision Statement

The system I am planning on creating is a matching game. You need to match two squares on a grid. The size will be based on difficulty and the goal is to clear the board in as least amount of moves as possible. The game is going to be used for fun by players that have a computer and can run compiled java programs.

### List of Features for MVP

* UX/UI - The UI and UX will work by having square elements in a grid when the user presses on a square it will reveal what they need to match it with, then the user needs to press another square. If the squares are the same then the squares disappear if they don't match they will both hide again.
* Levels - Data that the user will need to input is the difficulty and then what squares they press, based on that the grid will change its size and the squares will hide and disappear. Data that the game will store when the application is open is the grid size, what elements are hidden by the square and the amount of moves, when the applicant is closed it will store the time of a game and the score of that game to have a leaderboard.
* Landing page - The landing page will show the name of the game as well as what difficulty you want to play with. Depending on the difficulty the grid will increase.
* Leaderboard - A leaderboard will be stored as a JSON format on the local computer.

### List of of Features for Second Release

In the future a REST API can be built that will store the leaderboards information making the leaderboards a world wide service.