

## Milestone 4

### List of Features

#### Games:

Game 1- Boat Game

Game 2- Notecards Game

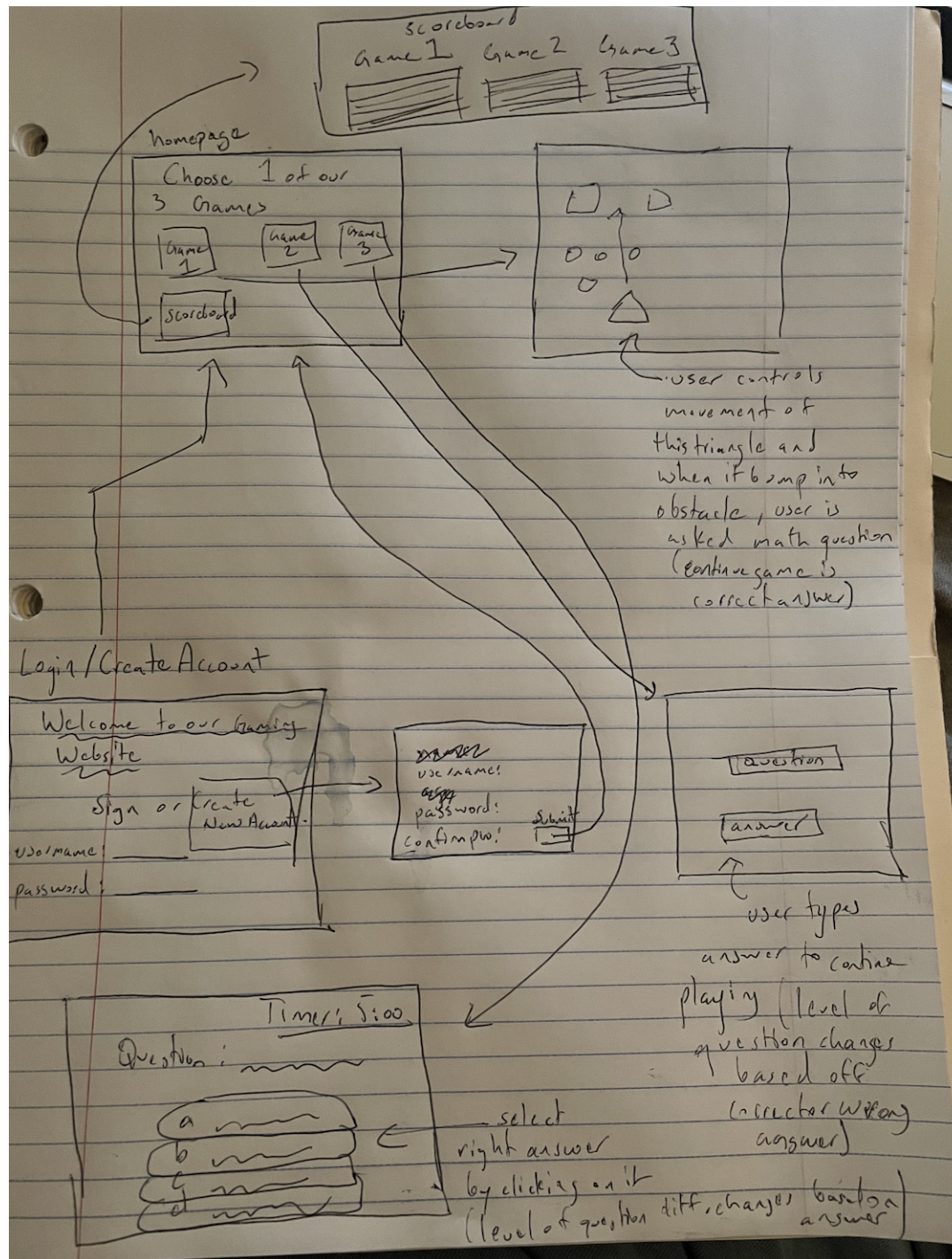
Game 3- Word problems

- Skill levels that will show questions within a range of the user's current score.
- Levels will be taken from a database as to secure from attacks (most prominently of them changing the score in their browser and submitting it back to our database.
- Countdown clock to time the games and ensure that they do not go over a given time.
- If the page were to refresh the game would reset, score would go back to starting point and nothing would be written to the database.
- Once finished, the game will write the score, and increment the number of attempts to the user database.
- Scoring for games
  - Section of high scores for each game along with number of attempts for each game.
  - Leaderboard of top 3 users and their scores for each game.

#### Pages:

- High scores page
  - Includes personal scores
  - Choose scores to see based on game
  - If admin user logs in they will be able to edit the score board (take player out if score is not feasible)
- Login page
  - Create account here as well
- Home page
- Game 1 page
- Game 2 page
- Game 3 Intro page
- Game 3 play page

## Frontend Design:

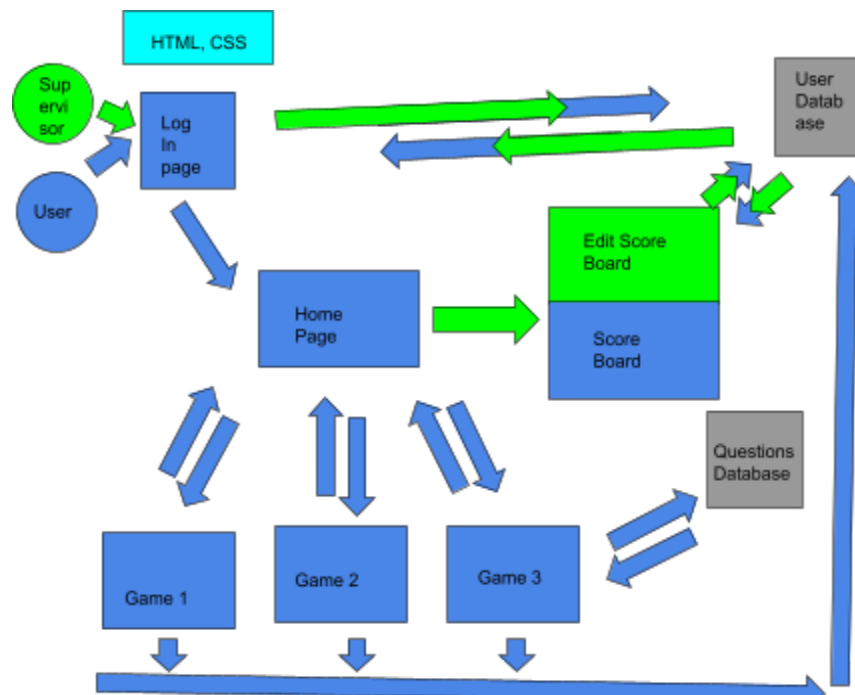


## Database Design:

- Using postgresSQL

- Currently in the process of developing the database / backend
- Storage of usernames and correlated passwords
  - High scores stored for each user
- Organization of highest scores in order to list on scores page
- Database for questions in game 3
  - Level, Question, correct answer, response 1,2,3,4
- Database for questions in game 2
  - Level, Question, correct answer
- Database for questions in game 1
  - Obstacles encountered, correct answer, correct answered questions

### Architectural Diagram



### Challenges:

- Time-management: This might not technically count as a challenge - but we as a team have struggled over the past two weeks to dedicate the proper time to this project. While we have the majority of our frontend working, we have yet to implement any of our backend - that being said, we have been

planning and discussing what we will be doing for the backend, and our plan is to use postgresSQL along with nodeJS, similar to the previous labs. We really need to get started implementing the backend asap, and we hope to have major progress in the next week. Backend development: None of us have experience in backend development, and each of us have struggled mightily with lab7 and lab8, in that we are trying to put everything together, yet don't have a great conceptual nor technical understanding of what a backend requires for our website. This can be resolved, we just need to work together and get a lot of hours in, within the next week.

- Developing the right database: As a team we need to figure out what we need to include in our database other than username, password and scores. We need to go over how each game will be connected to the database.

### **Individual Contributions:**

P.s. We haven't committed anything to our repository since our last meeting with Adam, so it doesn't really make sense to include our latest commits. Sorry ... school is really breaking our bones right now, but we're getting through it and I think as a team we have been able to figure out the labs 7 and 8 more (as of this past week), which will help us greatly in making the backend.

Davis: I have worked on the front end design of game 3 (it looks good, but is still missing some functionality - need to work on the javascript a bit more). I haven't been able to work on the project since our last meeting with our ta (Adam) when we showed up what our games were looking like.

Riley: I have worked on the front end design of game 3 as well, including a lot of work on the javascript for the game. Also created the style sheet for our website. Haven't been able to work much since our meeting with Adam - like Davis and the rest of us - have been really occupied with labs in this class as well as other coursework.

Duke: I worked on game 1 through pure javascript. I haven't been able to make progress since making the game (like our whole team).

Chelsea: I have worked on helping Duke's game look better (style wise), and I have worked on creating the database (nowhere near where it needs to be). I haven't been able to get much progress done since our last meeting with Adam either.

Jules and Kylie: We have worked collaboratively on game 2. It's working as we want it to be, however we need to still implement more of the functionality in javascript. Like the rest of our team, we haven't made progress since our last meeting with Adam.

## Project Board:

