

COM S/SE 319 : Software Construction and User Interfaces

Spring 2019

Group No. 11: Final Release Report

1. Successful Implemented Story Cards for Final Demo:

- Story Card 20: Add Username to highscores
 - Name of the Story: Add Username to highscores
 - Assigned Team Member: Minji Park
 - Tasks accomplished for this story card:
 - i. Add method to take in username, update the leaderboards table, and send it back
 - ii. Write test codes
- Story Card 21: Delete User Data from database.
 - Name of the Story: Delete User Data from database.
 - Assigned Team Member: Andrew Smith
 - Tasks accomplished for this story card:
 - i. Method to delete user data from database given the game ID
- Story Card 22: Add bomb visualization
 - Name of the Story: Add bomb visualization
 - Assigned Team Member: Shivam Vashi
- Story Card 23: Add API's for all backend methods
 - Name of the Story: Add API's for all backend methods
 - Assigned Team Member: Andrew Smith, Minji Park
 - Tasks accomplished for this story card:
 - i. Add APIs for each method in the server code
- Story Card 24: Add number values to grid
 - Name of the Story: Add number values to grid
 - Assigned Team Member: Shivam Vashi
- Story Card 25: Finish all game methods
 - Name of the Story: Finish all game methods
 - Assigned Team Member: Shivam Vashi, Andrew Smith, Minji Park, Stamatios Morellas
 - Tasks accomplished for this story card:
 - i. update leaderboard on UI
 - ii. send new score to server when the game ends
- Story Card 26: Finish counting time while playing a game
 - Name of the Story: Finish counting time while playing a game

- Assigned Team Member: Stamatios Morellas
- Story Card 27: Finish startup sequence for the game
 - Name of the Story: Finish startup sequence for the game
 - Assigned Team Member: Shivam Vashi, Minji Park
- Story Card 28: Prompt for difficulty
 - Name of the Story: Prompt for difficulty
 - Assigned Team Member: Stamatios Morellas
- Story Card 29: Terminate the game
 - Name of the Story: Terminate the game
 - Assigned Team Member: Andrew Smith, Shivam Vashi
- Story Card 30: Reveal all empty squares when clicking on an empty square
 - Name of the Story: Reveal all empty squares when clicking on an empty square
 - Assigned Team Member: Shivam Vashi

2. Design Documentation (UML Diagram for Story Cards):

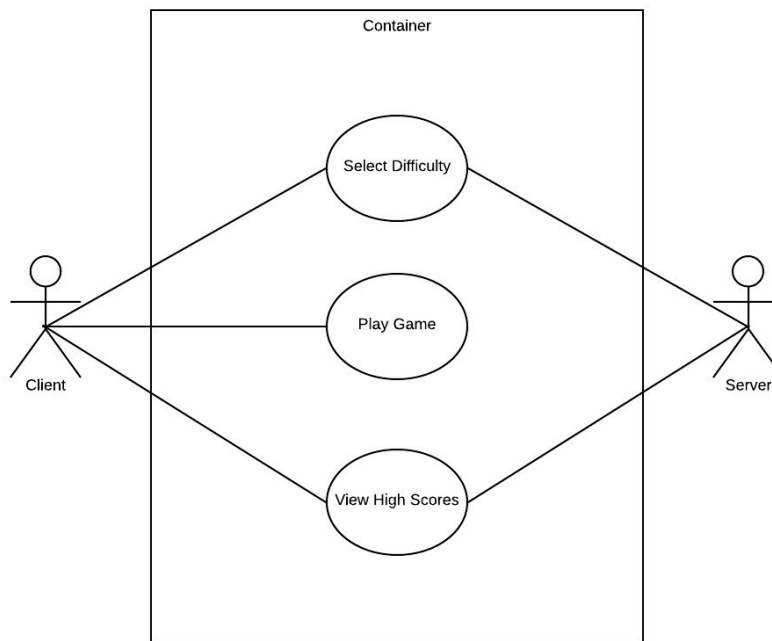


Figure 1: Use case diagram of what the user can access currently

3. Implementation Outline:

Platform: React web application running on cs319-121.misc.iastate.edu:3000

Frontend: ReactJS, CSS, HTML

Backend: Node.js, ExpressJS, Mocha, Chai (for testing)

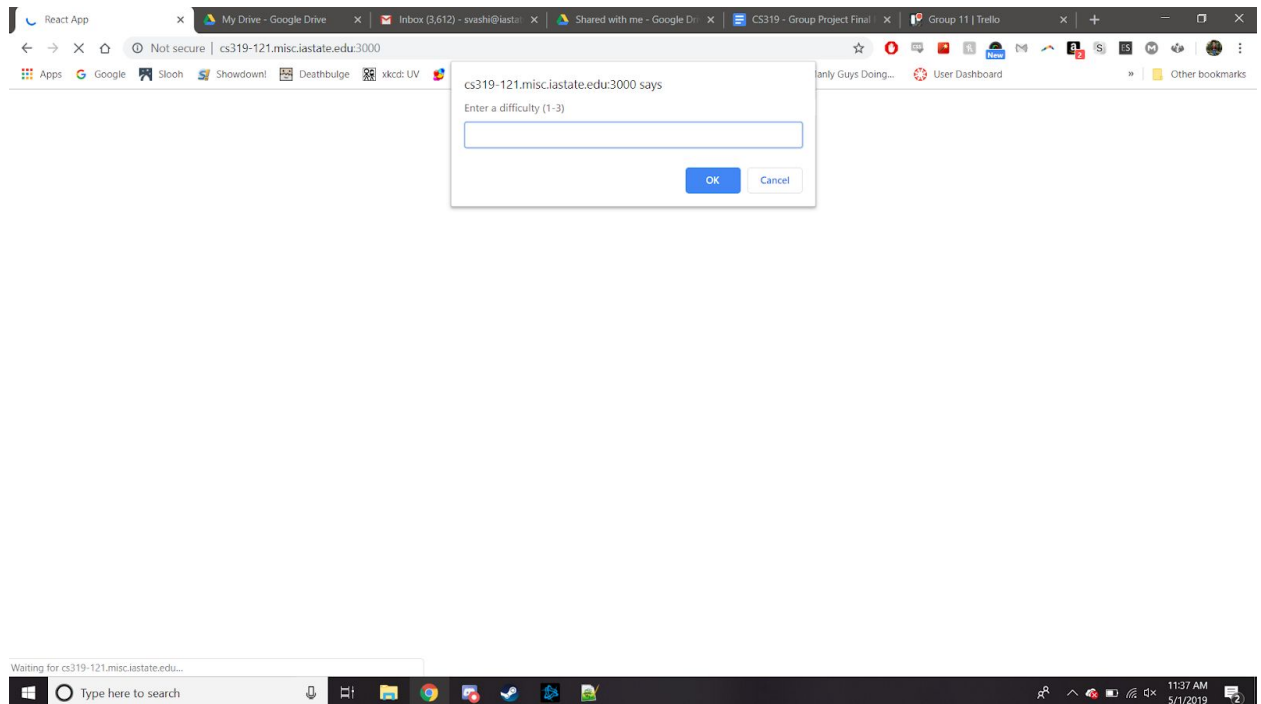
Database/Server/IDE: MySQL database, Node.js with Express, Visual Studio

Code

4. UI description with Screens

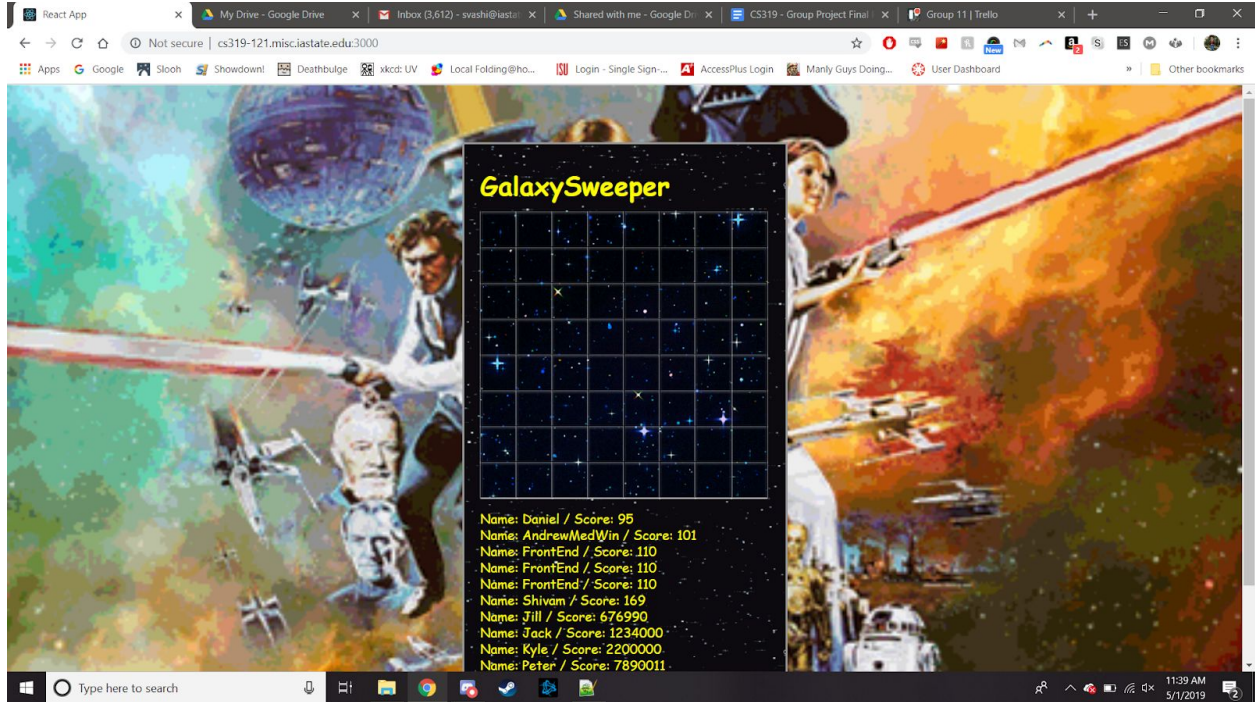
Story Card 28: Prompt for difficulty

The user should be prompted for difficulty on startup



Story Card 10: Updated CSS

Updated CSS with Star Wars theme



5. Testing:

We tested the GUI by manually playing for each case to determine if it worked.

Unit tests for server APIs

- GET leaderboard API: more unit tests are add for each difficulty (easy, medium, and hard), and the unit test checks if the api returns correct response status code (200 OK) and a data of the top 10 highest scores from the database table.
- POST check score API: unit tests for each difficulty to check if new score is going to be in Top 10 scores. The tests validate if the api returns correct response code (200 OK) and the result that shows whether the score is in Top 10.
- POST insert score API: unit tests for each difficulty to check if the new score is stored in the database and return updated leaderboard data with response code (200 OK).

6. Summary:

The original vision was to have a main menu that you could see a leaderboard screen or play the game. We couldn't get the functionality to work with the leaderboard screen or the play game screen, so we just used the index for it all. Otherwise everything is as planned. Can select difficulty, play the game, win the game, lose the game, and see the leaderboards for the selected difficulty. We would like to have our original design working, where we have a

main menu, leaderboards, and play game screen. For future extensions we might add more css to make it look even better.