CSCI 3308-200: Software Dev Methods and Tools
Project Milestone 2
9/25/2020

Team Number: 205-2
Team Name: Phat Data Squad
Team Members: Aidan Aarts, Alexandra Charland, Ryan William Coe, Connor Duff,
Jess Hamlin

Features:
- Main Menu
  - The selection screen from where the user can select from multiple options of games or settings. This will include sorting games in different ways and altering the games for accessibility in some way. The option to quit out of the application will also be available on the screen.
- Game selection and launching
  - Users will be able to select one of five video games and play them. These games will include:
  - Snake game
    - Typical snake game where the player must move around the play area while collecting pellets to increase their length. They must avoid the edges as well as running into themselves. May add in bonus power ups that can affect the way of play. Also plan on adding a high-score menu for players to log their beset scores.
  - Helicopter game
    - The player must maneuver a flying object (a helicopter, plane, etc.) to dodge an infinite scroll of walls and obstacles using mouse pressure to go up and gravity to go down.
  - Black Jack
    - Playing blackjack against the computer, the player is dealt a card as well as the computer using a random number generator from 1 to 13. Player gets the choice of whether to hit or stand, assuming the player doesn't bust the dealer then hits if he is below 17 and stands if he is greater than or equal to 17. Could incorporate a chip component.
  - Walking Simulator 3000
    - A three dimensional walking focused game in which a player will navigate a procedurally generated environment.
  - The fifth game is still being debated.
- Sign In and Out

- ○ Users will be able to create accounts and sign into them. Once signed in, they will have access to game saving and loading and statistics viewing.
- Saving and Loading
  - ○ Where applicable, some games will allow users to save their progress and return to them later from a similar position and game state. This will only be available to signed in users.
- Statistics Viewing
  - ○ On both a local and global scale, users will be able to view various statistics regarding the provided games like high scores and milestones. Being included in global statistics will require users to be signed in.

Requirements:
- Main Menu: As a user, I want an intuitive and easy way to navigate and select games so that I can quickly play the games I wish to.
  - ○ Functional: The games should be stored all on one website with all the games visible through a menu.
  - ○ Non-Functional: This menu should be organized through a navigation tag in HTML and displayed as a horizontal bar at the top of the screen using CSS.
- Game selection: As a user, I want to play games that I know I will like so that I enjoy what I play.
  - ○ Functional: Users should be able to pick games based on genres and get a sense of what the game is about through game summaries.
  - ○ Non-Functional: Each game should have a search tag that indicates the genre so that when this tag is selected, the user can see all the games corresponding to this tag. Furthermore, each game should have an individual page dedicated to its gameplay and summary.
- Game launching: As a user, I expect the game to be entirely browser-based so that I don't need to download game files.
  - ○ Functional: Users should be able to launch the games within the browser and not be required to download the entire game file.
  - ○ Non-functional: Any games coded using languages such as Java, C++, or any language not based in online game frameworks, should be embedded in the website using the appropriate plug-ins.
- Accounts: As a user, I want access to an account so that I can access exclusive features when using this application.

- ○ Functional: Users should be able to save their scores from all the games and get access to other features through a free account on the game website.
  - ○ Non-functional: Account information should be stored on a database, and an individual page for user account creation should be made to display the user's information.
- Saving/Loading: As a game player, I want to save and load my game so I can return to it later from a similar state.
  - ○ Functional: Data from each game, such as the user's game state and progress, must be stored on a database for long-term data retention and retrieval.
  - ○ Nonfunctional: A database such as SQL should be connected to the website and regularly retrieve and store information such as a user's game state and current game data.
- Statistics: As a game player and user of The Game Pod, I want to save statistics about my gameplay so that I can reflect on them later and see how my skills have changed.
  - ○ Functional: A database should be implemented to save at least three relevant statistics about each game, and allow them to be viewed by users.
  - ○ Nonfunctional: Allow numerous random statistics that users may like to see like steps taken or occurrences of other trivial actions to be recorded and viewed.

Project Plan:
- Jira Board: https://csci-3308-fa20-205-2.atlassian.net/secure/RapidBoard.jspa?rapidView=1&projectKey=GP2&view=planning.nodetail&selectedIssue=GP2-23&epics=visible&issueLimit=100

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Wireframe:
3 screenshots of the wireframe, sign up page, menu/game page, and a demo of playing an embedded game.

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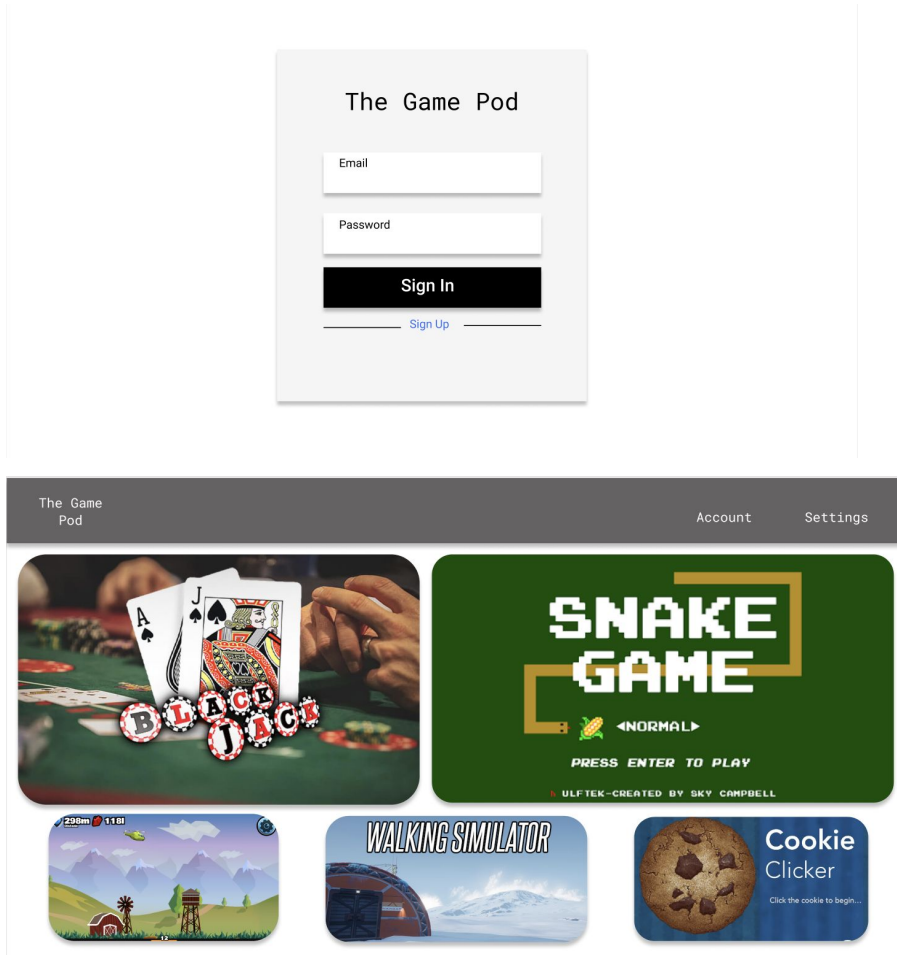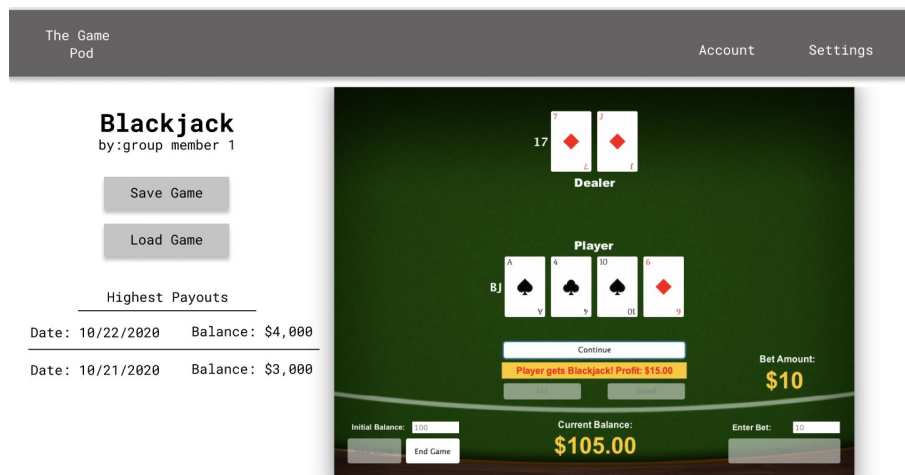
Individual Contributions:
- Connor Duff: I will develop the snake game and also help develop additional features such as the menu and other features if needed. I will look towards making the snake game work then add on additional features if needed, such as bonus power ups and modes.
- Alexandra Charland: I will be building the Helicopter Game, and also plan to contribute to the Game Pod's overall website and database design.
- Aidan Aarts: I will be developing the blackjack game, as well as working with the login page and saving the users account to the database.
- Jess Hamlin: My contribution to this project will be in the form of a walking simulator in which a player can explore a nice and calming procedurally generated scene. As I work with databases for my job and have a lot of experience with them, I will also probably contribute to the back end of this project a lot as well.
- Ryan Coe: Working on developing a game for the site as well as a way to save high scores to a site wide database. I also plan on working on the site's backend.

https://github.com/CSCI-3308-CU-Boulder/F20-Phat-Data-Squad.git