PHASE 1

Group 8 - Sequence Game

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1.Use-Case Model

Login Page:

In the screenshot below shows the main login screen. Before a user can play Sequence, he/she must have an account. To sign into an account the user must provide a username and password. If the user is new to game, he/she must create an account. To get to the new user register page, the user must click the "New user?" link.
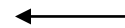
Sequence

Username
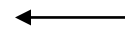
| Username | ← ── 25. Username

Password

| Password | ← ── 26. Password

| Sign in | ← ── 27. User Sign in

New user? ← ── 28. New User Register

1. Username – This field allows users to type their username to login into.
2. Password – This field will allows the users to type their password to login.
3. User Sign in – After completing the username and password fields, the user can click the "Sign in" button to continue the sign in process and move on to the main page.
4. New User Register – If the user does not already have an account, he/she can press the "New user?" link to bring the user to the register new user account.

Register New User Page:

On this page the user can create a new account. The user needs to provide their first name, last name, username, email address, password, and confirmation of password to sign up. After completing this form, the user is taken to the login page.
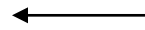
Register

First Name

| First name | ←————   17. First Name

Last Name

| Last name | ←————   18. Last Name

Username

| Username | ←————   19. Username

Email Address

| Email | ←————   20. Email

Password

| Password | ←————   21. Password

Confirm Password

| Re-enter password | ←————   22. Confirm Password

| Sign up | ←————   23. Sign up

Back   ←————   24. Back

5. First Name – In this field, the user types their first name in order complete the registry process.
6. Last Name – In this field, the user types their last name in order complete the registry process.
7. Username – In this field, the user types a username they would like to use for the login process.

8. Email – In this field, the user types their email address in order complete the registry process.
9. Password – In this field, the user types a password they would like to use for the login process.
10. Confirm Password – In this field, the user retypes the password to ensure the users password.
11. Sign up – This button submits the new user registry form. Once this button is clicked, it puts the new user's information into a database, and then takes the user back to sign in page.
12. Back – This link will take the user back to the sign in page.

Main Page:

After the user logs in, the user is taken to the Sequence main page. Here the user has a few linked pages they can navigate through. There are links to a new game, a current game, current high scores and standings, and a help page. Also as you can notice from the image below, on the top right corner of the page the user can look at his/her account information. By clicking the account name, a dropdown menu appears with the option to go to the account settings page or to log out.
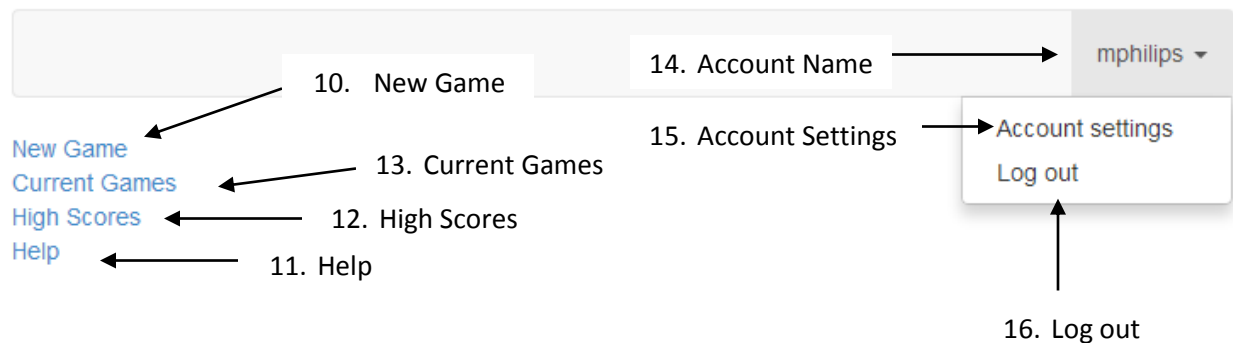
13. New Game – This link takes the user to a new game page.
14. Current Games – This link takes the user to all of his/her current games in session.
15. High Score – This link takes the user to the current high score leaders page.
16. Help – This link takes the user to the "Help" page which explains how the game is played and common FAQ questions and answers.
17. Account Name – On the top right of the page will indicate which user is currently signed in. When the user clicks the account name a dropdown menu appears with options to select "Account settings" or "Log out".
18. Account Settings – this dropdown link takes the user to the Account setting's page.
19. Log out – When the user clicks this dropdown link, it logs out the user and takes them back to the log in page.

Account Settings Page:

On this page, the user can change their current password to a new password. Also the user has the option to receive email notifications. Notification emails indicates a friend's move and when is the user's turn.

Account Settings

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Current password

| Current password | ← | 6.   Current Password |

New Password

| New password | ← | 7.   New Password |

☐ Recieve email notifications   ←   8.   Receive Notifications

Update   ←   9.   Update

Back

20. Current Password – The user types his/her current password in this field.
21. New Password – The user types his/her new password that they would like to have in this field.
22. Receive Notifications – This is an optional checkbox that indicates whether the user would like to receive email notifications. These notification emails indicates a friend's move and when is the user's turn.
23. Update – Once the user is ready to confirm the change in password, the user clicks the "Update" button.

New Game Page:

When the user clicks the "New Game" link on the main page, the user is taken to the page below. On the "Start a New Game" page the user has an option to either invite a friend, or find a random opponent to a new game.

Start a New Game

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Account settings

Log out

Invite a Friend ← ——— 4. Invite a Friend
Find a Random Opponent ← ——— 5. Find a Random Opponent

Back
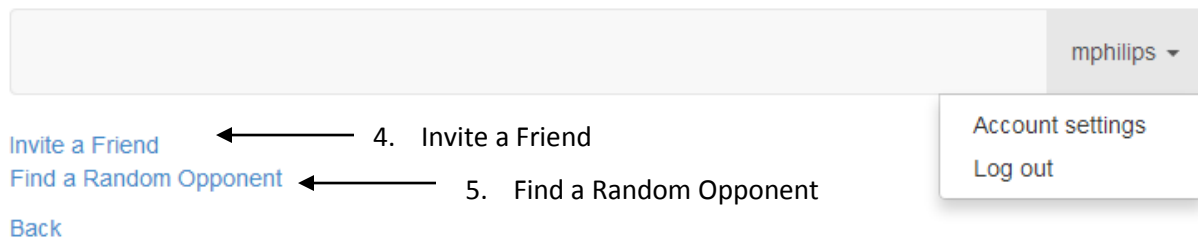
24. Invite a Friend – When the user clicks this like, a window will pop up where the user can search and invite a friend to the game.
25. Find a Random Opponent – If the user does not know any friend, he/she can find a random opponent.

Current Game Page:

If the user selects "Current Game" from the main page, it takes the user to the page shown in the screenshot below. On this page the user can see all the games that are currently in session and decide which game he/she could select to continue to play.

Continue an Existing Game

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Game against gaben
Game against sbasu ← ——— 3. Select Game to Resume

Back
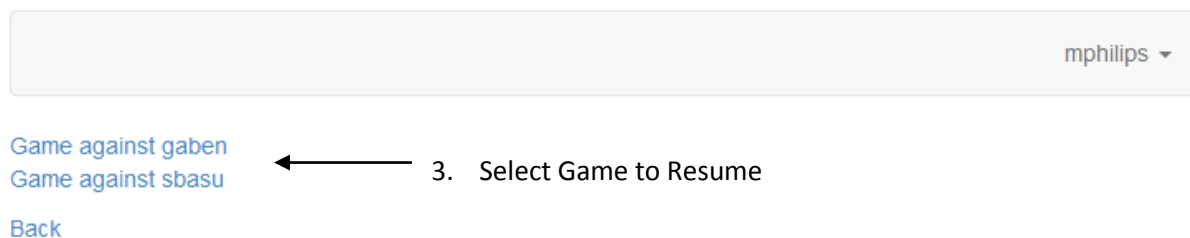
26. Select Game to Resume – The user has a choice of which game he/she would like to resume.

High Scores Page:

If the user selects "High Score" from the main page, it takes the user to the High Score standings page. This page contains a list of the top scorers in the Sequence game showing the username and score.

Help Page:

If the user selects "Help" from the main page, he/she are taken to help page. On this page the user can learn the rules of the game along with any frequently asked questions.

27. Rules – When the user clicks this link, the user is taken to the top of the rules section of the Help page.
28. FAQ – When the user clicks the "FAQ" or frequently asked questions link, the user is taken to the top of the FAQ section of the Help page.

2. Non-functional properties of your interface

Portability
- The application will be developed for cross browser on mobile and desktop, with a primary focus on Android mobile browsers.

Security
- All sensitive user data put into the system will be secured first. Passwords will be hashed using the md5 algorithm.
- Only the admin to the system has the ability to change permissions and access the system and its data.
- The application will use server side security libraries and will not implement its own security system.

Performance
- Any view on the application should have a loading time of less than 2 seconds, with the exception of the initial loading screen and connecting to players across the internet.
- The application will be scalable.
- The application will have higher than a 99% availability rate.

Process
- Source code will follow web standards and best practices.
- Source code will follow OOP practices, and code redundancy will be avoided.

Interface
- The interface will include user friendly manuals, help information, and instruction on first use of the application.
- It will be usable by any age group who uses a smart phone on a regular basis.
- The learning rate of the interface should be less than a few minutes.
- The interface designed to avoid user error, and when error occurs the interface will smoothly handle it by presenting helpful message, move the user to a safe location.

Maintainability
- Unit testing suites will be written for front end JavaScript and back end PHP.
- The application will create a flexible architecture by not using any type of framework to allow technology changes such as the addition of libraries or language changes. It will also allow for easy addition of features.

Documentation
- Source code will be documented using documentation standards, or using tools such as jsdoc and phpdocumentor.
- The application's use will documented for the users to reference.

3. Interaction Model
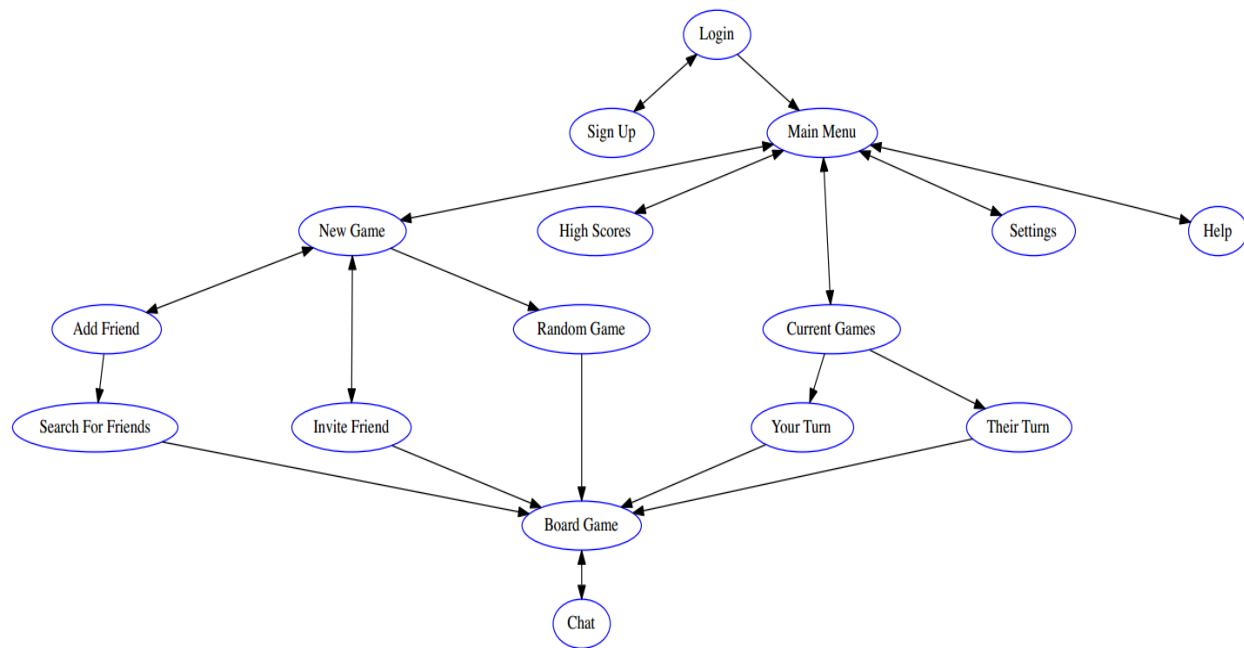
This modified sequence diagram shows the control flow of our project. Bubbles correspond to pages in our mock UI. Arrows between bubbles show how and in what order processes interact with one another. Paths through the directed graph will be traceable by users when they are using our software.

Every path ends with the game board and game chat: this is because users will log in to our application to make a single game play at a time (like Words With Friends.) When they come back, they'll follow another path to the game board and make another single play.

4. Modules

Overview:

The user interface of every module will be separate from the data and factory. The data will store information, while the factory will put components together and control how they interact with one another.

Login module: Adriana

This module will keep track of who has created a user login by accessing a database. Every user will have a password associated with their login. This modular will also be in control of creating new user logins. The login module will interact with every module, because every part of the game will require a user to be logged in. The login will know about menu and only the menu. The user name will be passed to the main menu.

Main menu/navigation Module: Max, Caleb

Other than the login, every module will be accessed through this module. This module will control the flow of things and how the user navigates through the software. From this module you will be able to create a new game, access current games, see the high scores, and access the rules of the game. This module will have interaction with the login, game board, and friend tracker. The main menu will not know about the login only that it needs user information to move forward, it will pass this user information on to any module that needs it. The menu will act as the factory; it will control when things are created and how they interact with one another. It will be in control of creating new games and keeps the state of games that have already been created. In order to create new games it will have to know who the player is playing against, therefore it will have direct interaction with the friend tracker to establish who the user is playing against.

Game Board Module: Cimone

Everything associated with the game board will be controlled by this module. The module will keep track of whose turn it is, where the players have played, the color of each players marker, and chat. The board game will not know the difference between when a user is playing on a team versus playing one on one. This module will interact with the main menu; it will have the ability to give the main menu the game state, whose turn it is to play, and the option to terminate a game.

Friend Tracker Module: Holden

This will keep track of the friend requests a user has accepted or denied. The list of friends a user has dictates who they can play games against. If the user does not have any friends to send friend requests to then there is an option to send random friend requests. Once a user accepts this random friend request that user will then be considered a "friend" as far as the software is concerned. The random friend request feature will select a friend at random; the user will not be able to search people they do not know.

5. Mock-up User Interface

See attached .zip file containing .html files mocking our UI. Start with login.html. Buttons and links work for navigation- no validation yet.