**Requirements Page**

* **Requirements for Account Creation**
  + **Inputs:** the player will select and enter username and password of choice, as well as an email address. After email verification, users will add basic information such as weight, height and if the player will be joining other users in a multiplayer game.
  + **Outputs:** After verifying username and password, the user will be sent an email to verify the account. Once the account is verified, the player will be redirected to the main site and asked to enter basic information.
  + **Any data system must store:** all account information entered for each account created. The system must be secure to ensure user data is not compromised.
  + **Computations:** Verify account email is not already in use, display password strength bar when creating a password, once account creation is verified, send email to email address associated with account to confirm creation
* **Requirements for Solo Multiplayer Game Mode (This mode will not be featured in the prototype build)**
  + **Inputs:** User enters relevant information to their selected game. For example, if the user is aiming to lose weight, they will enter total pounds lost that week. User input should be validated by ensuring values entered are numerical.
  + **Outputs:** System should output a graphical representation of the user's progress. The graph will show every data point added by the user so far as well as their entered end weight. Underneath the graph, a stat table will be displayed, showing total weight lost, average lost per week and percentage to final goal. If
  + **Search options needed:** players should be able to search progress reports and see the weight needed to reach the end goal.
  + **Any data system must store:** the player's username, number of players competing, range of time of the game, and any user input.
  + **Computations:** the system should be able to calculate the weight difference between each player in order to determine who has the lead in the healthy competition app /website. Also, the system should calculate the average weight lost per week, or month depending on user set settings. To stimulate healthy competition
* **Requirements for Team Multiplayer Game Mode**
  + **Inputs:** When team multiplayer is chosen, the team creator must enter the team goals for the game and set the game time. Individual group members will enter relevant information to their selected game. For example, if the group goal is to lose weight, they will enter total pounds lost that week. User input should be validated by ensuring values entered are numerical.
  + **Outputs:** System should output a graphical representation of the team members’ total progress. Every data point on the graph will be the total of all values entered by the team that day. Underneath the graph, a stat table will be displayed, showing total group weight lost, average lost per week and percentage to final goal. A second stat table should show the individual users’ progress.
  + **Any data system must store:** the number of players competing, account names of players on the team, range of time of the game, and amount of calories user input per player as well as a total amount per team.
  + **Computations:** the system should be able to calculate the weight difference between each player in order to determine who has the lead in the healthy competition app /website. Also, the system should calculate the average weight lost per week, or month depending on user set settings.
* **Requirements for Solo Game Mode**
  + **Inputs:** User enters information regarding game settings and goals. This may include duration of game, goal weight or initial weight. The input must be validated to ensure that they are numerical.
  + **Outputs:** The system will output a visual representation of the user’s progress throughout the game. The data points on the graph will depict the data entered by the user.
  + **Search options needed:** players should be able to search progress reports and see the weight needed to reach the end goal.
  + **Any data system must store:**  The length of the game, the player’s username, initial weight, goal weight, amount of weight lost, and final weight should be stored.
  + **Computations:** Based on the settings chosen by the user, the system should calculate the average monthly or weekly weight loss, calories burned, and the difference between the goal weight and current weight.
* **Requirements for Making a Donation**
  + **Inputs:** User will enter a donation amount and be redirected to a PayPal page to complete the donation
  + **Outputs:** The user will be taken to a landing page letting them know that their payment was processed successfully. They will also receive a confirmation email to their email inbox - sent to the address associated with the account.
  + **Any data system must store:**  The system must store the donor’s name, billing address, payment information, and donation amount.

**Functional Requirements**

* The user should be able to obtain information about progress during any stage of the game. The information would be displayed for the user as a graph to provide a visual representation of the player's goal as well as to provide motivation for the player to continue to move forward as the goal gets closer.
* The system should be able to allow the player to share progress with friends and other players in the game.
  + **Design constraints: Categories constraining environment and technology of system.**
    - Platform website will be compatible with Mac and OS operating systems and the app will be operable with both android and iphones platforms.
    - Technology to be used will be React for front and back end along with Node.js for backend as a free open source environment for javascript.
    - For authentication purposes React along with Auth0 will be utilized. This will allow users to be redirected to another site in order to create an account or to login. After user identification is created the player will be redirected to the main site.
  + **Commercial constraints:** Categories constraining **project plan** and **development methods**
    - Development process (methodology) to be used
    - Cost and delivery date
      * Often put in contract or project plan instead

**Non-Functional Requirements**

* **Security requirement (**example: “The system shall not disclose any sensitive, personal information about patients to any user besides the patient themselves.”)
* Any personal or sensitive information must be disclosed and encrypted in a database that only qualified personnel may access.
* Payment and billing information must be encrypted to prevent any breaches, risks, and financial losses.
* Application should be easy to navigate and utilize

**Requirements Analysis – Potential Problems**

* Users are not satisfied with the game only tracking weight and calories, but are unsure of what other data can be collected to track progress
* Users want updates and new challenges
* Gyms want to incorporate Healthy Competition with their training services and the site must be updated to run within the guidelines created by the gym.