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Homework 1: Specification and Wireframing

Executive Overview

Our proposed application called **AmiiboDex** solves the problem of collectors having to manually input data into a spreadsheet of their collection by providing a convenient way to view and share their list of obtained amiibos. This web application provides a database for all available Super Smash Bros. amiibos and enables collectors to easily maintain an organized catalog of their amiibos as well viewing which ones they are missing.

Problems:

- Users need a convenient way to start their collection list instead of using a blank document/excel file to keep track of their amiibos. This is extremely tedious work. This would require extensive research for what is currently out and creating a spreadsheet accordingly.
- Users that are collectors need a way to see what parts of their collection are missing and available.
- Users need a convenient way to check if a certain amiibo will work for Super Smash Bros. series.

Solutions:

- By having an amiibo database, we can automate a list of currently available amiibos so
 that the users do not have to do it themselves. It also improves accuracy of currently
 available amiibo and minimizes user input error.
- By having a checklist that a user can update, the user is able to visualize their progress
 for their collection by viewing the progress percentage at the top of the page. By having
 a total number of which amiibo the user owns compared to possible amiibo's available,
 the user is able to see what percentage of amiibo they are missing.
- By having an amiibo database, users have a reliable and accurate way of knowing what is currently available.
- Because only certain amiibos will work for the Super Smash Bros. game, our database will prevent users from purchasing an amiibo that is not compatible.

II. User Study

Two types of users that would utilize AmiiboDex would be enthusiast collectors and amiibo sellers.

Enthusiast Collectors:

Collectors are a significant user demographic for this application. They generally subscribe to all the release dates and information regarding each figurines prices and rarity in the marketplace. While this may be the case for most of the collectors that would use a tracking application for amiibos, some collectors may be initially unaware of the nuances and terminology of the amiibo marketplace. Collectors are particularly wary of what their inventory is and the how conditions of their amiibos are, and our application can directly address these concerns by giving the user options to describe their amiibos. Our application provides experienced and novice collectors alike a normalized template of amiibos listing. This benefits both parties, as experienced collectors can begin tracking without the hassle of data entry while novice collectors can learn the nuances of collecting as well as the terminology in an intuitive manner.

Collectors often socialize with other collectors by sharing their collection to others. There are no convenient ways to show off collections to others, so it would be beneficial for our application to be used to export a clean, formatted listing of a user's amiibos. Tracking statistics such collection progress can be used socially as well or for personal recording.

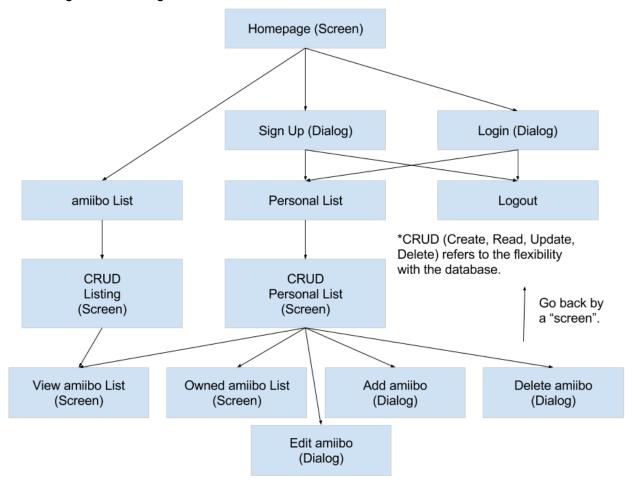
Collectors are very conscious about the items they collect and make a requirement to maintain the pristine condition of their amiibos as a means of attaching a value for their collection or more importantly trading. Collectors can use this application to collaborate with other collectors to set up trades and track their trades with others.

Amiibo Sellers:

In contrast to collectors, this demographic uses amiibos as a business rather than a hobby. They are not as common as collectors but are just as invested in amiibo tracking as collectors. Traders are highly conscious of their inventory of amiibos and when amiibos come out, and are typically more diligent in their pursuit of amiibos. They are highly conscious of prices, inventory, and availability of amiibos in retailers, especially for the rare or store exclusive amiibos.

Amiibo reselling and trading is not large scale business for most part, as most of this demographic usually resides in online secondhand marketplaces such as eBay or Amazon. Our application can address the needs for real time notifications of amiibo restocking at official retailers or when a major release of new amiibos come out. These traders can also benefit from the same needs of collectors, since a trader is just a collector that moves their product more often than an normal enthusiast. Inventory tracking and customizing entries to the their amiibo listing offers sellers flexibility and structure in maintaining their stock of amiibos.

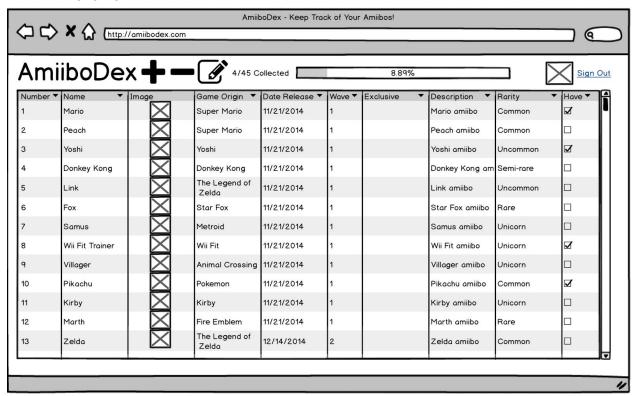
III. Logical Flow Diagram



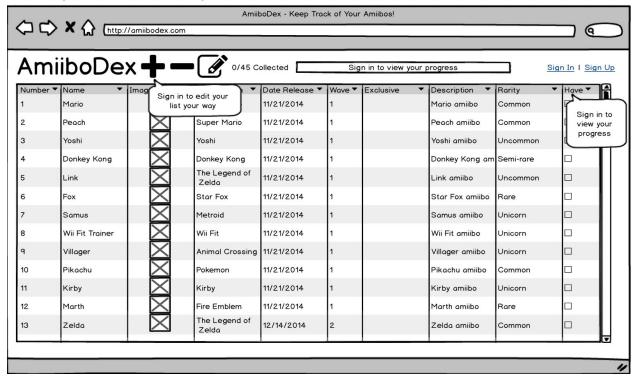
In brief of the logical flow chart:

- The homepage has three functionalities for the users to be engaged, view the amiibo listing, sign in, or sign up.
- For users without accounts, they are only available to view the amiibo listing provided by the web database.
- Upon having an account, users are granted their own personal listing screen of amiibos, and the ability to edit, add, and delete amiibo in their own listing.

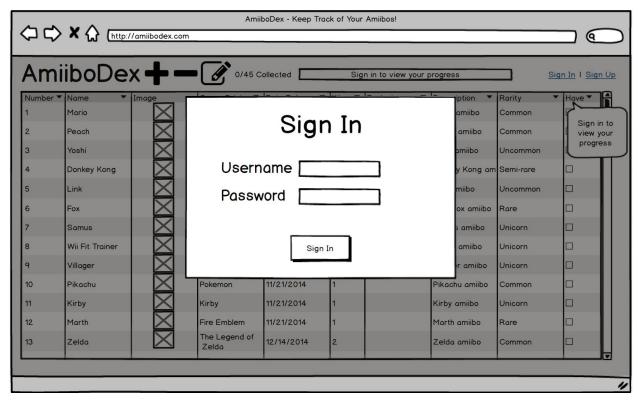
IV. Wireframe



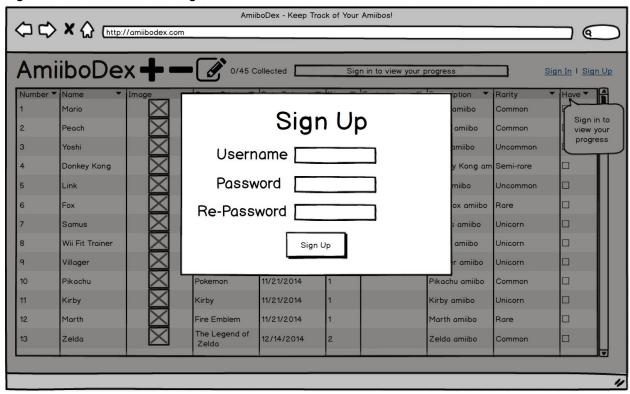
Homepage as a user that is signed into their account.



Homepage as a user that is not signed into an account. They are prompted with tooltip balloons telling them that there are features that can be used when signed in.



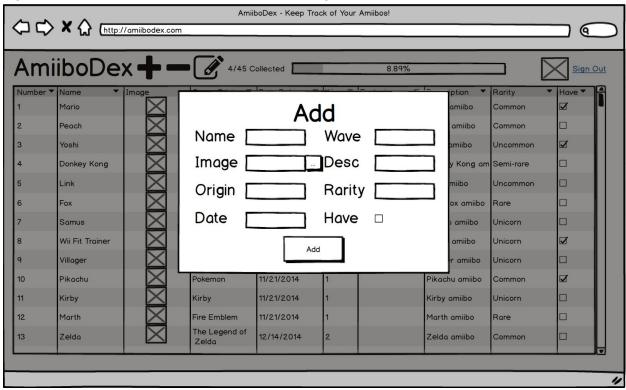
Sign in modal for a user to sign in to their account.



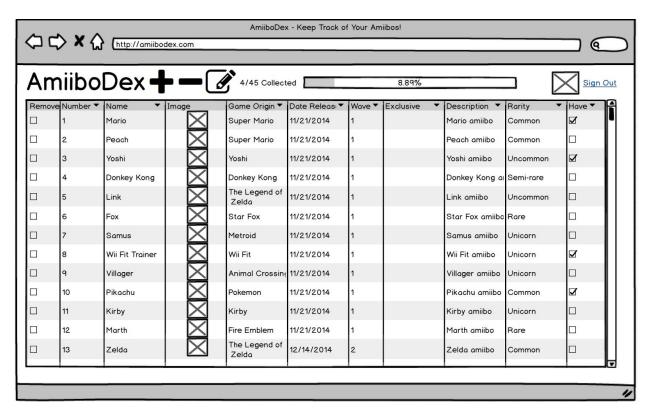
Sign up modal for a user to sign up for an account.



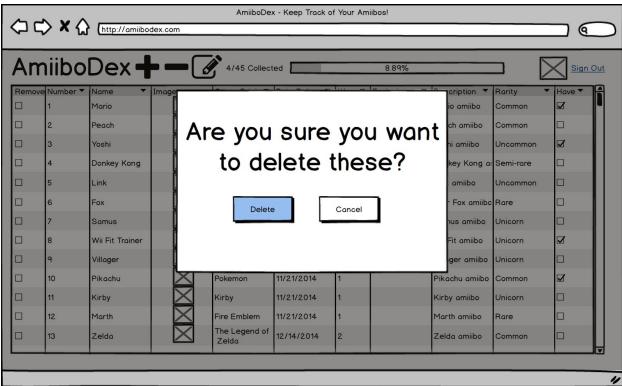
Sign out modal to ensure that the user wants to sign out.



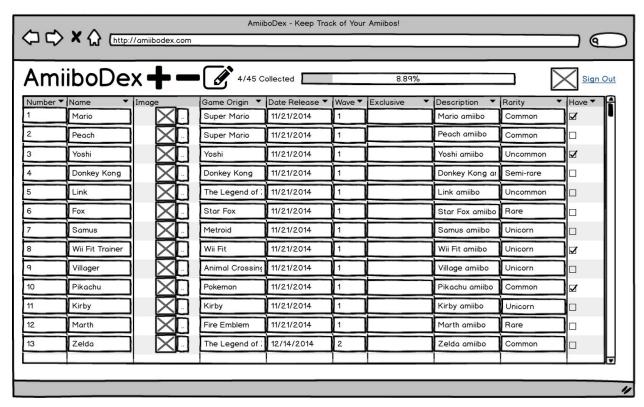
Add modal when the "+" sign is clicked so that users can add to their amiibo list with something that is not in their original database.



When the user clicks the "-" button, there is a new Remove column that appears on the left for multiple removes and ease of use.



When in the delete screen and the user again clicks the "-" button, the user is prompted to make sure they want to delete the chosen items



When the user clicks the pen and paper button for editing, their list changes to text boxes in which they can edit their list as they choose. They are able to also upload their own image to override the current image (if one already exists).

V. Important Notes (Strength/Weakness/Risks/Execution)

Strengths:

- Users have a personalized and organized collection of their amiibo
- Convenient to update and save and view their collection using user accounts
- Centralized database lets new users have an easier, intuitive experience
- User interface is straightforward and easy to use

Weaknesses:

- Doesn't give much opportunity for users to customise their catalogue
- Scope is limited to Smash Bros amiibos as opposed to the entire amiibo
- Many similar applications, both mobile and web, have existed

Risks:

- No input check can cause users to enter bad/unrelated data into their catalogue
- Users creating amiibo entries cause users to encounter database storage limitations
- Devs are solely responsible for maintaining an accurate list as new amiibo arrive

Execution:

- Implement backend using Firebase to store user's data on amiibo collection
- User interface can be implemented using HTML, CSS, and Javascript
- Node.js and javascript are used to collect data from Firebase
- Using Heroku for web hosting
- GitHub for code management