WDD330 Final Project Proposal

Overview

Problem to solve

In the game of Magic: The Gathering, players create personalized decks of cards that they then use to battle against other opponents. The cards are chosen from an enormous array of cards created by The Wizards of the Coast that span a myriad of themes, types, and genres. Because of this, creating decks can be a very complex and time-consuming process often leaving players confused and frustrated.

Objective

Create a Magic: The Gathering deck builder application that allows players to build personalized decks. It will simplify the process of searching for cards based on the player's preferences and allow them to add and remove them from any number of decks they create.

Audience

The target audience of the deck builder application will be both new and veteran players of the Magic: The Gathering card game. The ability to create decks, search for cards based on personal preferences, and then add or remove them from those decks will appeal to all players. New players will appreciate the simplified user interface that won't overwhelm them as they begin building their own decks. More seasoned players will enjoy using the advanced card search and filter features and the ability to examine card information in greater detail.

Major functions

1. **Deck manipulation**
    - Decks can be created, deleted and saved to local storage in JSON format.
    - The name of the deck can be modified.
    - Decks can be cloned to make a copy of another existing deck.
    - A detailed view of a selected card from the current deck can be displayed.
2. **Deck building**
    - Players can switch between existing decks to modify their contents.

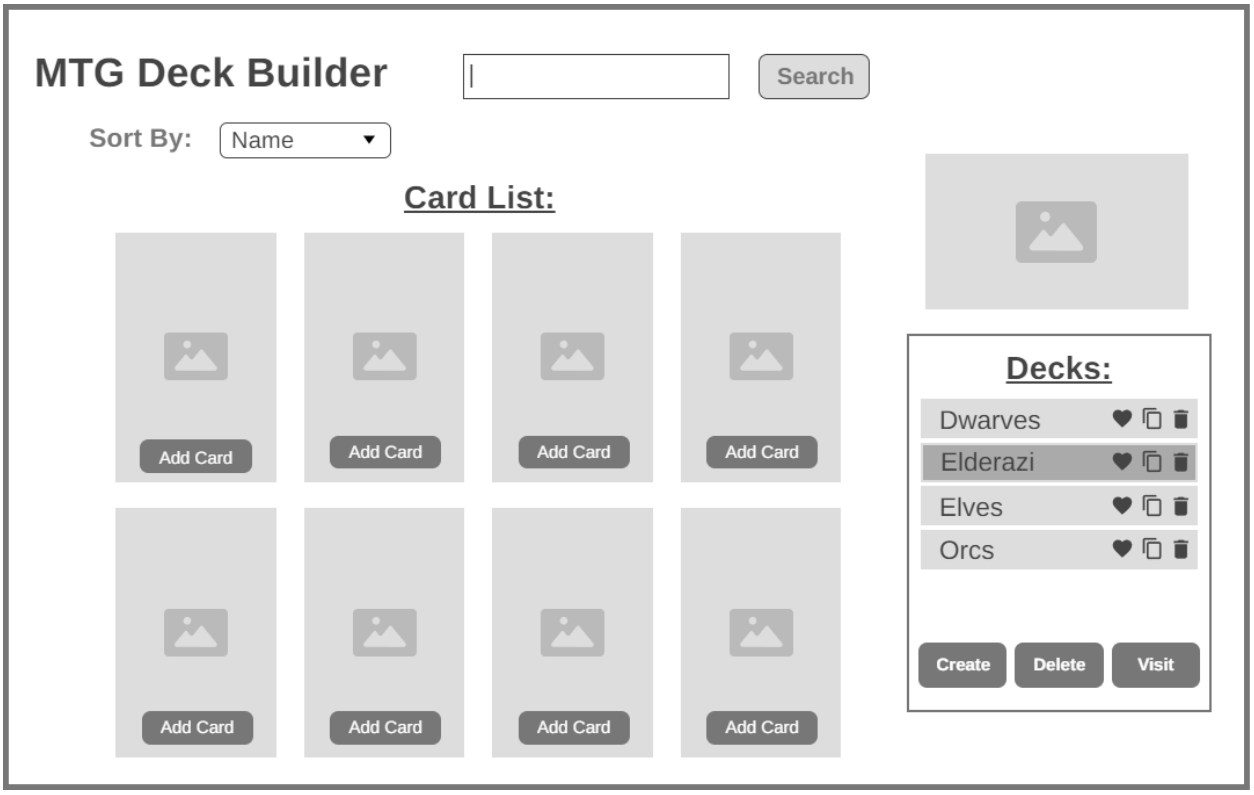
- Cards can be added or deleted from the selected deck.
- The quantity of a specific card in a deck can be increased or decreased.
- The contents of any deck can be viewed. Sorting and filtering features will allow for customization of the output.

3. **Card searching and filtering**
    - Magic cards are read from an API and displayed based on search and filtering functions (card type, name, set, year released, mana cost, power, toughness, mana type, rarity, etc.).
    - A “detailed view” feature displays a modal window providing the images and various details about the selected card.
4. **Organization and navigation**
    - All existing decks are visible in the deck building page and selecting one will highlight it and allow the player to manipulate the cards in the deck.
    - Each deck has an icon that allows it to be favorited. This will move the deck to the top of the deck view for easy access.
    - Each deck has an icon that allows it to be deleted. This will remove the deck from the deck view and delete it from the local storage.

Wireframes

Mobile

Desktop



Data sources

External API

- The service that will fetch card information from the Magic: The Gathering website: https://api.magicthegathering.io

Initial Module List

1. **Card Fetch Module**
   - Pulls card information from the server based on desired search parameters.
2. **Card Details Module**
   - Provides an infrastructure to create, store, and display information.
3. **Card List Module**
   - Manages the creation and manipulation of a card list that holds an array of Card Detail objects.

4. **Deck List Module**
    - Contains and maintains a list of decks. Includes features for adding, deleting, cloning, selecting, and favoriting the list.
5. **Deck Builder Module**
    - This is the main JavaScript module that loads when the deck builder page is initiated. It creates instances of several utility modules that provide the following functionality: manipulate decks and add/delete cards from those decks.
6. **Deck Viewer Module**
    - This is the main JavaScript module that loads when the deck viewer page is initiated. It creates instances of several utility modules that provide the following functionality: display the contents of the selected deck, change the quantity of cards in a deck, switch between decks, and save/delete/clone decks.
7. **Save Module**
    - Performs all save and delete operations.

Styling

Colors

- Primary: #D8D2C2 (Gray)
- Secondary: #B17457 (Brown)
- Background: #FAF7F0 (White)

Typography

- Font Family: 'Helvetica Neue', sans-serif
- Font Sizes: 16px (Body), 24px (Heading)

Schedule

Week 1

- Create basic structure
    - Create basic HTML pages and link them
    - Create JavaScript file for the main index page
- Create card details and list modules
- Functionality to interface with the Magic: The Gathering API
    - Create JavaScript module to interface with the API and pull card data
    - Test the module to ensure proper operation

    - Review various endpoints to determine which are most applicable to the application. Test as needed.
- Implement the Deck Builder page
    - Generate the HTML layout
    - Create modules to load in card data
    - Display card data
    - Create the Deck List module
- Test the functionality of the main page: Grab cards, switch decks, create decks, delete decks, clone decks, and add cards.

Week 2

- Implement the Deck Viewer page
    - Generate the HTML layouts
    - Create modules to load in deck card information
    - Create the Deck List module
    - Implement switching, creating, deleting, and cloning decks.
    - Display the quantity of cards, create Increment and Decrement buttons, and add an animation when quantity changes.
- Implement search and filter functionality
- Allow the user to select a card image to represent the deck, which is displayed on the page whenever the deck is active.

Week 3

- Implement different formatting for mobile viewports.
- Testing
    - Pull cards from the API, generate decks, add and remove cards from decks, and save changes.
- Polish
    - Clean up and refactor code
- Publish and submit with final report.

Trello

https://trello.com/b/PYzYv6ro/final-project-mtg-deck-builder