

EDH Budget Builder:

Team 11 Product Backlog

Team Members:

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Problem Statement:

Magic: The Gathering (MTG) is a popular and famously complicated trading card game about magical combat that is played by millions around the world. One of the most popular ways to play MTG is a format known as “EDH” in which players must have decks that consist of 100 cards, any may only have one of any given card in this deck. As of May 2019, there are over 18,000 unique cards in MTG. As such, building a deck around cards that synergize together can be difficult. EDH Budget Builder will help make it easier for MTG players to organize their own decks.

Background Information:

MTG can be very complicated, and a lot of strategy and planning goes into preparing for a game. Other applications exist that allow MTG players to create prototype decks, but they contain clunky UIs and do not check for incomplete or “illegal” decks. Additionally, MTG is one of the most expensive card games to play; an average EDH deck typically costs around \$200-500. Our application seeks to allow new MTG players to enter the format by allowing them to filter cards based on price so that players can build an effective deck on a smaller budget.

Environment:

For our frontend, we intend to use React to create our interactive UI. We intend to use Typescript as our programming language as it will help ensure our code is maintainable and easily testable. For our backend, we intend to use Google’s Firebase platform to provide hosting, authentication, and data storage services.

Functional Requirements:

Backlog ID	Functional Requirement	Hours	Status
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1	As a user, I would like to create an account.	4	Planned for Sprint 1
2	As a user, I would like to login to my account.	3	Planned for Sprint 1
3	As a user, I would like to view a list of my existing decks.	8	Planned for Sprint 1
4	As a user, I would like to create a new deck.	4	Planned for Sprint 1
5	As a user, I would like to remove a card from one of my existing decks.	3	Planned for Sprint 2
6	As a user, I would like to delete one of my existing decks.	2	Planned for Sprint 1
7	As a user, I would like to add cards to my deck from the search page.	2	Planned for Sprint 1
8	As a user, I would like to search for a card by name.	6	Planned for Sprint 1
9	As a user without an account, I would like to view other users' decks.	2	Planned for Sprint 2
10	As a user, I would like to share my deck via a link.	3	Planned for Sprint 2
11	As a user, I would like to create a copy of an existing deck.	2	Planned for Sprint 2
12	As a user, I would like to validate that my deck is legal in the EDH format.	3	Planned for Sprint 2
13	As a user, I would like to know if and why my deck is illegal.	2	Planned for Sprint 2
14	As a user, I would like to see an image of the cards on the search page.	2	Planned for Sprint 2
15	As a user, I would like to filter cards by price, type, color, keyword, and subtype.	7	Planned for Sprint 2
16	As a user, I would like to sort cards by price, power, or toughness.	7	Planned for Sprint 2
17	As a user, I would like to log out of my account.	2	Planned for

			Sprint 1
18	As a user, I would like to export a deck to a text file.	5	Planned for Sprint 2
19	As a user, I would like to add a description to my decks.	4	Planned for Sprint 1
20	As a user, I would like to add a title to my decks.	4	Planned for Sprint 1
21	As a user, I would like to change the description of my deck.	2	Planned for Sprint 1
22	As a user, I would like to change the title of my decks.	2	Planned for Sprint 1
23	As a user, I would like to change my username.	2	Planned for Sprint 1
24	As a user, I would like to save a card as a favorite.	4	Planned for Sprint 2
25	As a user, I would like to view my favorite cards.	3	Planned for Sprint 2
26	As a user, I would like to unfavorite a card.	2	Planned for Sprint 2
	Total:	90	

Non-functional Requirements:

Usability:

Our interface must be user-friendly, organized, and easy to navigate. Card images and data must be displayed in a neat and orderly fashion such that the user can easily find a card when using the search functionality. Furthermore, users' decks must also be displayed in a similar fashion that allows for easy readability and modification. Our web-app and UI will be designed to cater mainly to desktop and laptop users. Creating a clean mobile-friendly version of our web-app will not be a priority during the development cycle.

Security:

Firebase provides the built-in capability for users to login or create an account using an existing Google account at the push of a button. This is ideal for our usage, as it allows for an easy way to access our web app.

Use Cases:

Case 1:

Create an EDH Budget Builder account.

Action	System Response
1. On the login page, click "Create a Profile"	2. Display signup page
3. Enter Email/Password	4. Send request to Firebase
	5. If success, display home page (page of existing decks - Will be empty upon sign-up)

Case 2:

Log in to an already existing EDH Budget Builder account.

Action	System Response
1. On the login page, click "Login"	2. Firebase authorizes account Credentials
	3. If success, display home page 4. If failure, display error

Case 3:

Viewing a deck.

Action	System Response
1. From the homepage, click on deck	2. Page will redirect you to a display of

you want to view	the deck name, description, and list of cards in the deck
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Case 4:

Creating a deck.

Action	System Response
1. On the homepage, click "Create Deck"	2. Prompt the user for a deck name and description
3. Hit "Confirm"	4. New deck is saved.

Case 5:

Removing a card from a deck.

Action	System Response
1. From the homepage, click on an existing deck	2. Display a detailed view of a deck
3. Click the "Edit Deck" button	4. Click "remove" next to a card
5. Click the "Save Deck" button	6. Changes to the deck are saved

Case 6:

Deleting an existing deck.

Action	System Response
1. From the homepage, click on an existing deck	2. Display a detailed view of a deck
3. Click the "Delete Deck" button	4. Display an "Are you sure?" prompt
5. Click "Yes" or "No"	6. If "Yes" is clicked, delete the deck. If "No" is clicked, return to the detailed deck view

Case 7:

Adding cards to my deck from the search page.

Action	System Response
1. On the search page, click on the card you want to add	2. Display a popup with a closer view of the card and an “Add to deck” button below it
3. Click “Add to deck”	4. Prompt user for which deck they would like to add it to
5. Select specific deck	6. Add card to specified deck and return to search page

Case 8:

Search for a card by name.

Action	System Response
7. Enter search query	
8. Click “Search”	9. Display cards whose title includes the query

Case 9:

Viewing other users’ decks.

Action	System Response
1. Put url in search bar	
2. Press enter	3. Deck corresponding to url is displayed.

Case 10:

Sharing a deck via a URL.

Action	System Response
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1. Click "Share"	2. URL is displayed to the user.
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Case 11:

Creating a copy of an existing deck.

Action	System Response
1. From deck view, click "Create a Copy"	2. A new deck is created that is identical to the original deck but with " - Copy" appended to the title

Case 12:

Validating that a deck is legal in the EDH format.

Action	System Response
1. Click "Confirm"	2. Check that deck is 100 cards
	3. Check that there are no duplicate cards
	4. Check that no restricted cards are in the deck
	5. If all the above is true, deck is validated, otherwise deck is illegal

Case 13:

Verifying if a deck is illegal and why.

Action	System Response
1. Click "Confirm"	2. If legal deck is saved. If illegal, illegal cards are highlighted red and/or reason why deck is illegal is displayed.

Case 14:

Seeing images of the cards on the search page.

Action	System Response
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1. On search page, user enters search criteria	2. Top results for search criteria are displayed along with their corresponding images
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Case 15:

Filtering cards by price, type, color, and subtype on the search page.

Action	System Response
1. Select tick boxes price range	
2. Select tick boxes for each color (R, G, U, B, W)	3. Show that any ticked boxes are ticked
4. Select tick boxes for each type ("Creature, Enchantment, Land, Instant, Sorcery, Artifact)	5. Show that any ticked boxes are ticked
6. Enter a subtype in the "subtype" text box	
7. Click the "Add" button next to the subtype text box.	8. Subtype is shown as part of the query on the sidebar.
9. Click search	10. Only cards that match the filters are shown

Case 16:

Sorting cards by price, power, or toughness on the search page.

Action	System Response
1. At the top of the results on the search page, select one of the following options from a drop-down menu.	2. Reload the page, displaying all the same cards, but sorted according to the option that was selected.

Case 17:

Logging out of an account.

Action	System Response
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1. On any page, click “Log Out” button in corner	2. Display popup confirming user wants to log out
3. Confirm Sign out by clicking “confirm”	4. Log user out and redirect to login/signup page

Case 18:

Exporting a deck to a text file.

Action	System Response
1. On deck view page, click “Export”	2. A text file is generated containing the deck
	3. The user is prompted to download the file

Case 19:

Adding a description to a deck.

Action	System Response
1. On deck creation page, fill out description field	
2. Click “Confirm”	3. The deck is created with the given description

Case 20:

Adding a title to a deck.

Action	System Response
1. On deck creation page, fill out title field	
2. Click “Confirm”	3. The deck is created with the given title

Case 21:

Changing the description of a deck.

Action	System Response
1. From deck detail view, click “Edit Deck”.	2. Description text becomes an input field pre-filled with current description
3. Edit deck description	
4. Click “Save Deck”	5. The deck description is updated.

Case 22:

Changing the title of a deck.

Action	System Response
1. From deck detail view, click “Edit Deck”.	2. Title text becomes an input field pre-filled with current title
3. Edit deck title	
4. Click “Save Deck”	5. The deck title is updated.

Case 23:

Changing my username.

Action	System Response
1. From homepage, click “Change Username”	2. Username text becomes an input field pre-filled with current username
3. Edit username	
4. Click “Save”	5. Check if the username is already taken
	6. If username if not already taken, the username is changed

Case 24:

Adding a card to a collection of favorite cards.

Action	System Response
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1. When searching for cards, click on a certain card	2. Display card information as well as buttons to add card to a deck or to favorites
3. Click "Add to favorites" button	4. Card is added to user's favorites collection

Case 25:

View collection of favorite cards.

Action	System Response
1. On the main page, click "Favorites" tab	2. Redirect user to favorites page, displaying a detailed view of the user's favorite cards

Case 26:

Removing a card from a collection of favorite cards.

Action	System Response
1. On favorite cards page, click on a card	2. Display a context menu option to unfavorite the card
3. Click "Unfavorite"	4. The card is removed from favorites