

SDV602 Milestone One

Project Documentation

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Introduction

This application will show three different displays of data based around the popular trading card game Magic the Gathering. Each display will have a different set of data it will portray. This includes the top 100 Cards overall, the top 10 cards for each dual colour combo, and the top 10 commanders for each colour.

About Magic the Gathering:

Magic the Gathering is a popular trading card game created in the 1990's. In this card game players create decks with the available cards and battle each other. There are five colours that represent different physiologies and playstyles. There are also colour combinations that combine playstyles to spice up the game and the way you play. Magic the Gathering has many different formats for players to choose from, these formats have different strategies and rules that change the way players create and play decks.

Languages and Libraries:

Using the programming software Visual Studio Code, the language Python will be used to create the application. Some Python libraries will be used to create the GUI and add the functionality needed to pull data from online sources. The PySimpleGUI library will be used to create the GUI for the application.

The data for the application will be pulled from the website EDHREC. EDHREC is an online Magic the Gathering database for users to find synergistic cards, card lists, and playable decks.

EDHREC website link: <https://edhrec.com/>

Base Requirements:

Login & Sign Up:

This application will have a login and sign-up page for users to create a unique account. The login will require a username and password input along with a button that takes the user to the sign-up page if they do not have an account.

Intitle / Home Screen:

The home page will display all the relevant information about the application. On the home page users will be able to sign out of their accounts. Signing out will send them back to the login screen.

DES Screens:

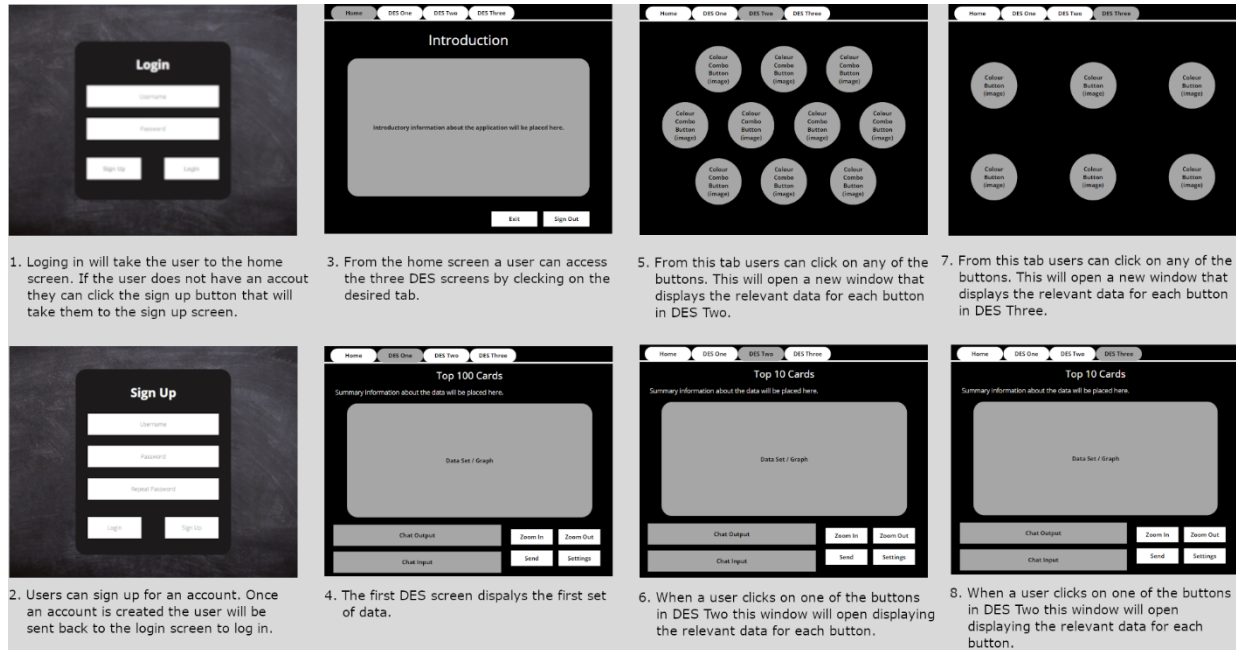
This application is required to have three DES screens (Data Explorer Screens). These will consist of sets of data that will be pulled from an online source. The data will be shown in graphs to the users.

Chat:

On each of the DES pages there will be a chat box with an output. Users will be able to chat to each other simultaneously about the DES information that is being displayed.

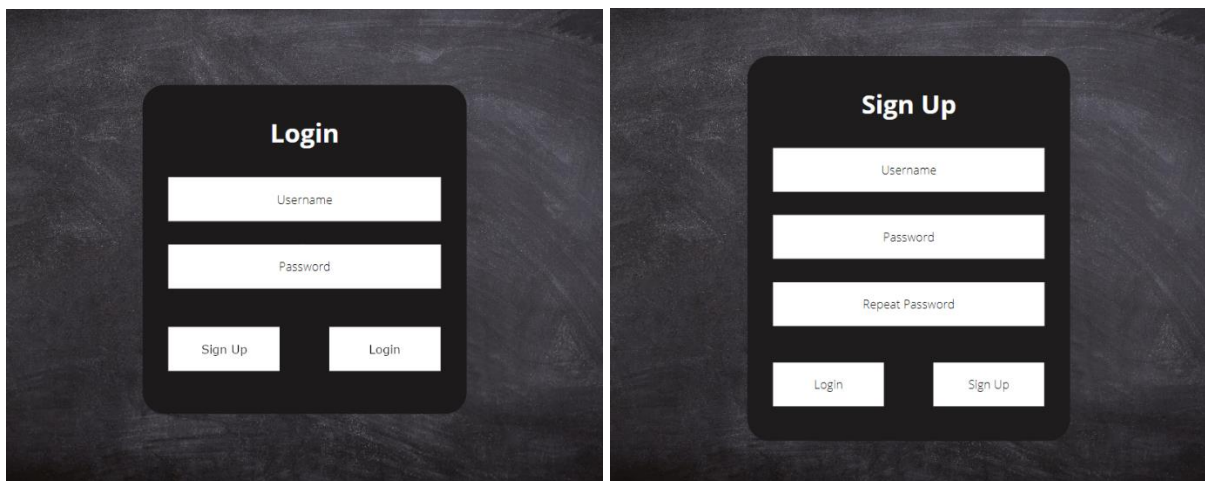
Storyboards

Storyboard Diagram



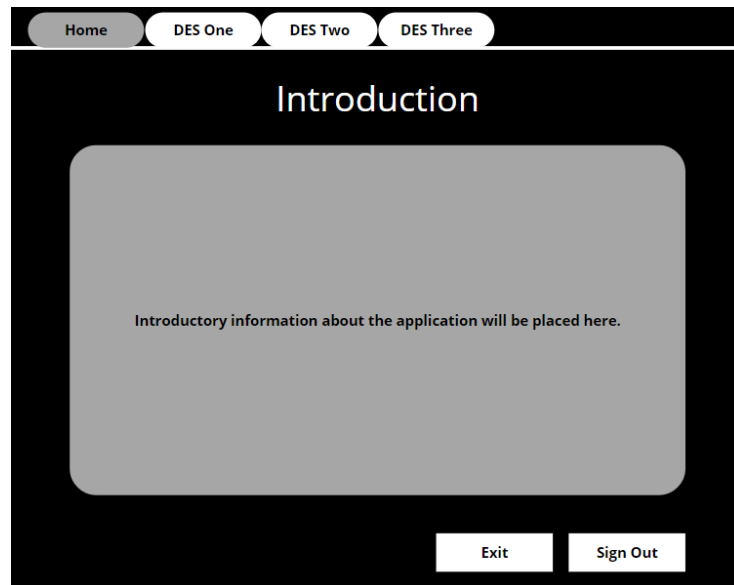
Login / Sign Up

When the application opens the user will be presented with the Login screen. From the login screen the user can log into their account. If the user does not have an account, they can sign up by clicking the Sign-Up button. This will take them to the Sign-Up screen. When an account is created the user will be sent back to the Login page to log into their new account.



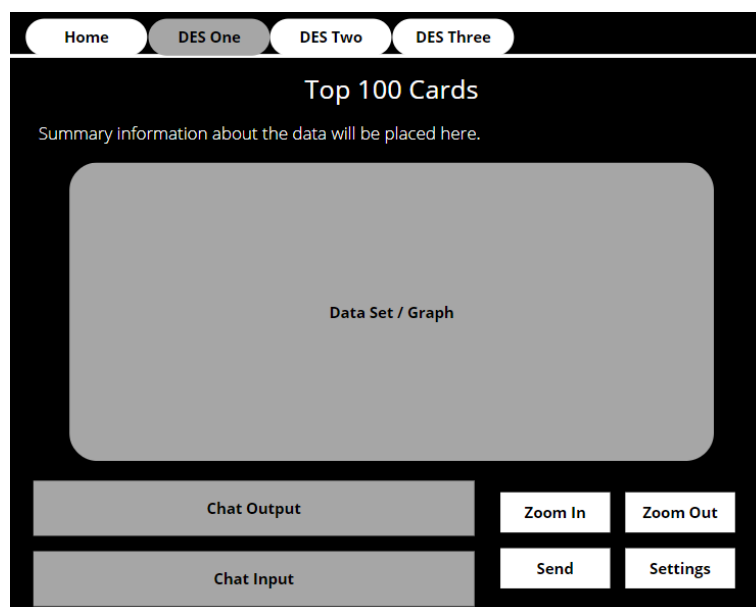
Initial / Home Screen

When a user has logged in to their account, they will be sent to the home screen. The Home page will display the user's information along with an introduction to the application. The user can exit the application and sign out of the application from this page.



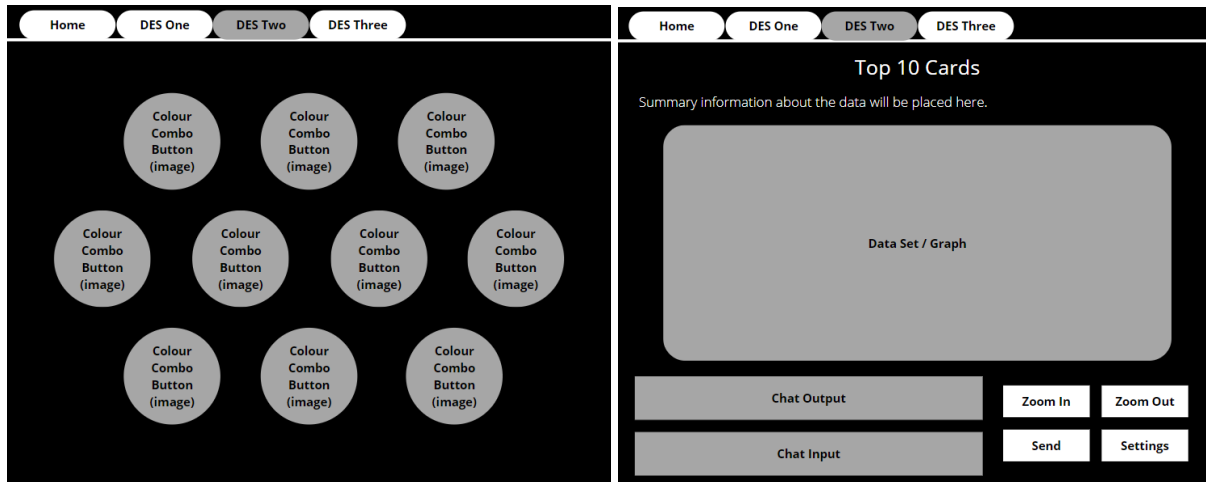
Data Explorer Screen One

The first Data Explorer Screen tab will depict the top one hundred overall Magic the Gathering cards in order. The user can Zoom in and out using the dedicated buttons. The user can also use the chat box to talk to other users viewing the same data.



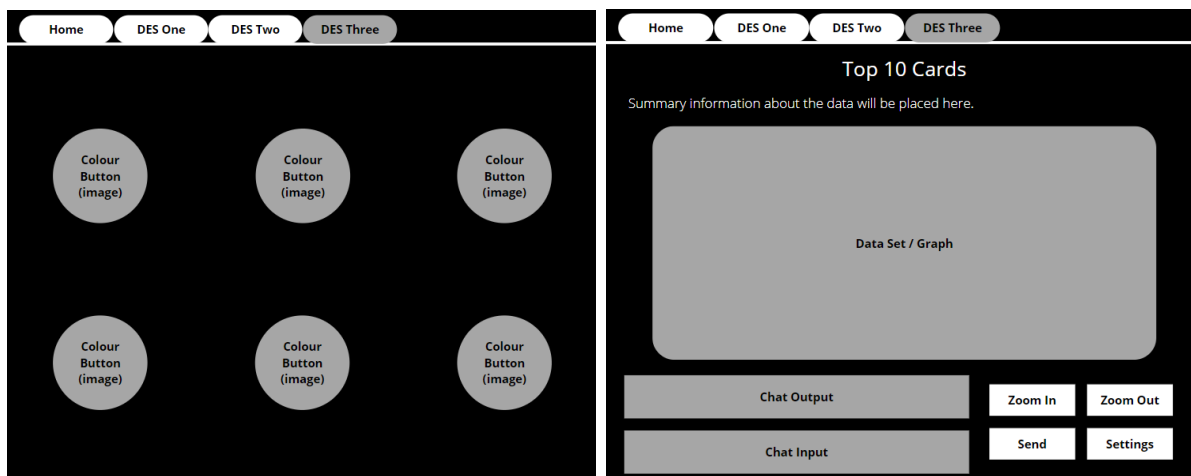
Data Explorer Screen Two

The second set of data will have several buttons for the user to choose from (as shown below on the left). Each button (image) will be a Magic the Gathering colour combination that will show the top ten cards for each colour combination. There ten colour combinations, Azorius, Boros, Dimir, Golgari, Gruul, Izzet, Orzhov, Rakdos, Selesnya, and Simic. When a button is clicked it will open a new window that will display the data (as shown below on the right).



Data Explorer Screen Three

The third set of data will have several buttons for the user to choose from (as shown below on the left). Each button (image) will be a Magic the Gathering colour that will show the top ten commanders for each colour. There six colours, Red, Green, Blue, Black, White, and Multicolour. When a button is clicked it will open a new window that will display the data (as shown below on the right).



Use Cases

Login

- User enters their username and password.
- The user then logs into the application and will be presented with the home screen.
- If the user does not have an account, the user can click the sign-up button and will be taken to the sign-up screen.

Sign Up

- User will enter their desired username and enter their desired password into the dedicated inputs.
- The user will then have to re-enter their password to confirm it.
- The user can then create their account by clicking the sign-up button, this will send them to the login screen to log into their account.

Sign Out

- To sign out a user must return to the home screen.
- From the home screen a user can then click the sign out button at the bottom right-hand side.
- This will return the user to the login screen.

Accessing Each DES:

- A user can access each DES screen from any page by clicking the desired tab at the top of the application window.

Accessing Each DES (in Colour Combo Tab):

- A user must navigate to the Colour Combo DES tab.
- Once there the user can click on any of the colour combo buttons.
- This will open the DES screen for the colour combo that was clicked.

Accessing Each DES (in Top 10 Commanders Tab):

- A user must navigate to the Top 10 Commanders DES tab.
- Once there the user can click on any of the colour buttons.
- This will open the DES screen for the top 10 commanders for that colour that was clicked.

Chat:

- On any of the DES screens a user can chat with other users viewing the same data by typing into the designated input box.
- To send the message the user will click the send button on the right-hand side of the input box.

Zoom:

- On any of the DES screens a user can zoom in on the graph being shown by clicking the zoom in button to the bottom right of the graph.
- To zoom back out of the graph, a user can click the zoom out button to the right of the zoom in button.