# Objective

The objective of this project it to create a Magic the Gathering card search and deck creation interface with an integrated e-commerce option to purchase cards.

# Card Database

A Database of all the cards available to play in the current rotation.

## Database Fields

### Name

String Value of the card name. CardName

### Type

String Value of the card type. The types are: Creature, Instant, Sorcery, Enchantment, Land. CardType

### Rarity

String Value for the rarity of the card. The Rarities are: Mythic, Rare, Uncommon, Common. CardRarity

### Casting Cost

String Value for the cost required to play the card in a game. CardCost

### Color

String Value for the Color of the card. Values can be B: Black, W: White, R: Red, G: Green, U: Blue. CardColor.

### Picture

File path of the card picture stored in database. Either to a reference folder or Web Image. CardImage

### Card Text

String Value of card text. CardText

### Power

Byte Value of card’s power. -1 will indicate card with variable power. Fixed to “\*” on display. CardPower

### Toughness

Byte Value of card’s toughness. -1 will indicate card with variable toughness. Fixed to “\*” on display. CardToughness

### Flavor Text

String Value of the card flavor text. Not all cards will have this field. CardFlavor

### Card Price

Float value of card price. CardPrice. Given time will pull price from web since price is constantly updating.

## Card Add, Subtract, Modify.

Allow user to input or remove a card from the database. Allow for updating card fields after input into database.

* CardAdd(String CardName, String CardType, String CardRarity, String CardCost, String CardColor, String CardImage, String CardText, Byte CardPower, Byte CardToughness, String CardFlavor, Float CardPrice)
* CardSub(String CardName)
* CardMod(String CardName, String CardType, String CardRarity, String CardCost, String CardColor, String CardImage, String CardText, Byte CardPower, Byte CardToughness, String CardFlavor, Float CardPrice)

# Card Search

Allow card look up filtered by any of the database fields. Null input will result in every card in the database being displayed.

* CardSearch(String CardName, String CardType, String CardRarity, String CardCost, String CardColor, String CardImage, String CardText, Byte CardPower, Byte CardToughness, String CardFlavor, Float CardPrice)

A screenshot of a cell phone

Description automatically generated

# Deck Creation

Allow user to create a sixty card deck using the Card Search function to find cards from the database. Allow the user to save, update, or remove multiple decks.

A picture containing wall, photo

Description automatically generated

# E-Commerce / Card Purchase

Integrate program to the web to allow users to purchase a card and/or created deck. Using the API from tcgplayer.com to provide real time pricing updates.

(Placeholder for draft image of e-commerce interface)

# Additions

## Random Deck Creation

Allow the user to generate a random deck of sixty cards based on the archetype they choose. Archetypes will be Aggro, Mid-Range, Control. Will require an additional database field and Card value called CardArchetype. In addition to this given time available, cards will get ranked in each archetype on a number scale and formulated to create better random decks.

## User library

Adding a second database of cards that the user owns so they can restrict their searches to only their collection and have the options of creating decks only from the cards they own.