

My project is a website that collects and shows data on winning decklists in tournaments from a game called Magic: The Gathering. Magic: The Gathering (MTG) is a competitive card game played in tournaments around the world. Decks in MTG have 5 cards. Additionally, decks can have up to 4 of any given card across the maindeck + the sideboard excluding basic lands (and a few other exceptions). Users should be able to browse many things in the app. Firstly, they should be able to see tournament results, showing what decks were played, what cards they contain, what archetypes they are in and who piloted the deck. Users should also be able to see a certain person's history of tournament results and the decks that they used. Lastly, the app should allow the user to have a special page for each individual card. This page will show, what decks the card is played in, its price, various winrates, and various descriptors.

Functionalities for In in-memory key-value storage: Decks. Decks will be viewed many times so the names of the decks can be stored in a in memory key value storage.

Nouns: Card, Tournament, Deck, pilot, player, user, winrate, price

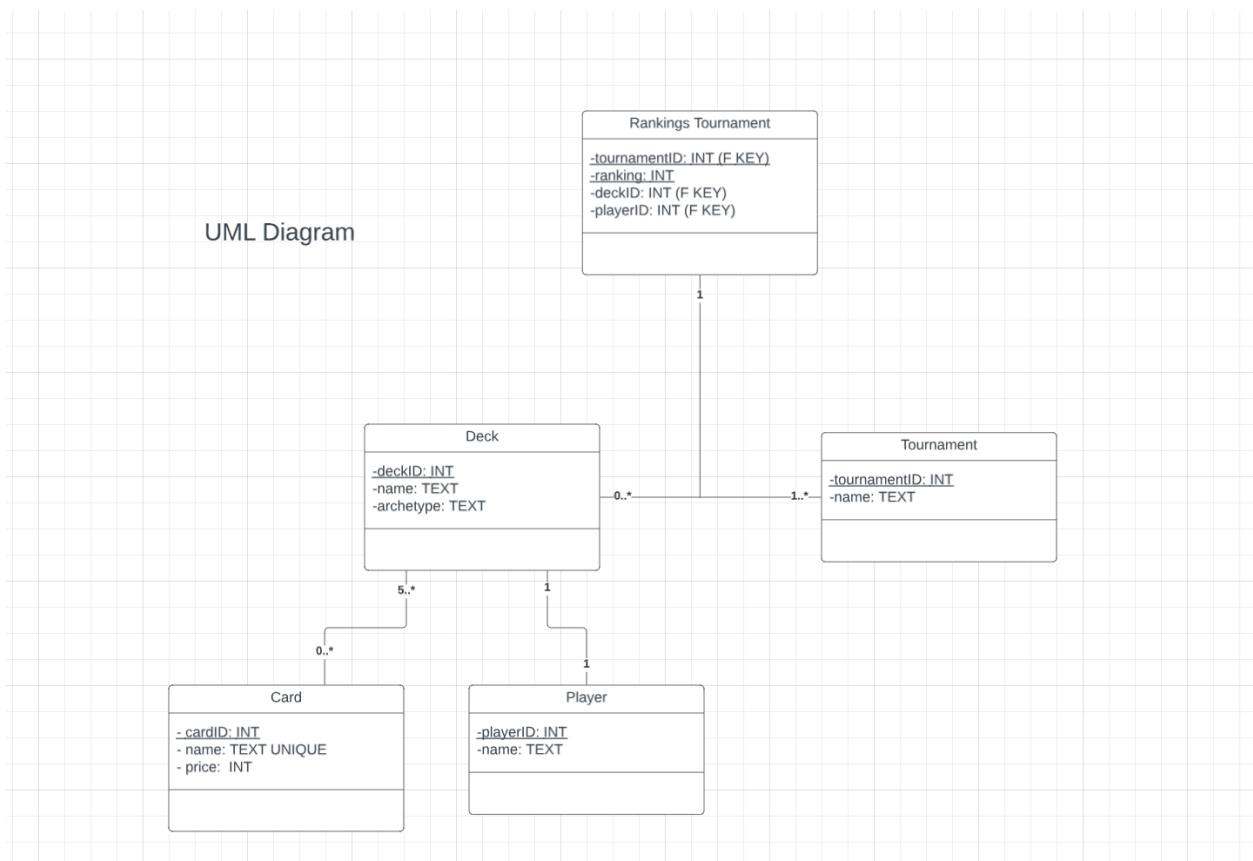
Verbs, view, sort, exclude, show

Rules:

1. Tournament contains any number of decks
2. Each deck has 1 player
3. Each deck can have up to 5 cards

4. 1 Deck/player can be in multiple tournaments

UML Diagram:



Part 2:

For this project I will store all Decks in a Hash. Each deck also has a player associated with it.

Deck Metadata:

Key: deck: <deckID>

Data Structure: Hash (HASH)

Stores data about the deck, includes the cards contained within, which tournaments it was used in and who the pilot of the deck was.

Deck Players

Key: player:<deckID>

Data Structure: Hash (HASH)

Stores a players name and ID

Part 3:

Initialize: FLUSHALL

Operations:

Create:

HSET deck:<deckID> name "Deck Name" archetype "Archetype"

Read:

HGETALL deck:<deckID>

HGETALL card:<cardID>

Update:

HSET deck<deckID> name "Deck Name" archetype "Archetype"

Delete:

DEL deck: <deckID>

DEL player: <playerID>