

Team Name : *Team UNO 4*

# UNO Game

Milestone 3: Web Application Entity Design

Milestone 4 : Application Logic

**Members:**

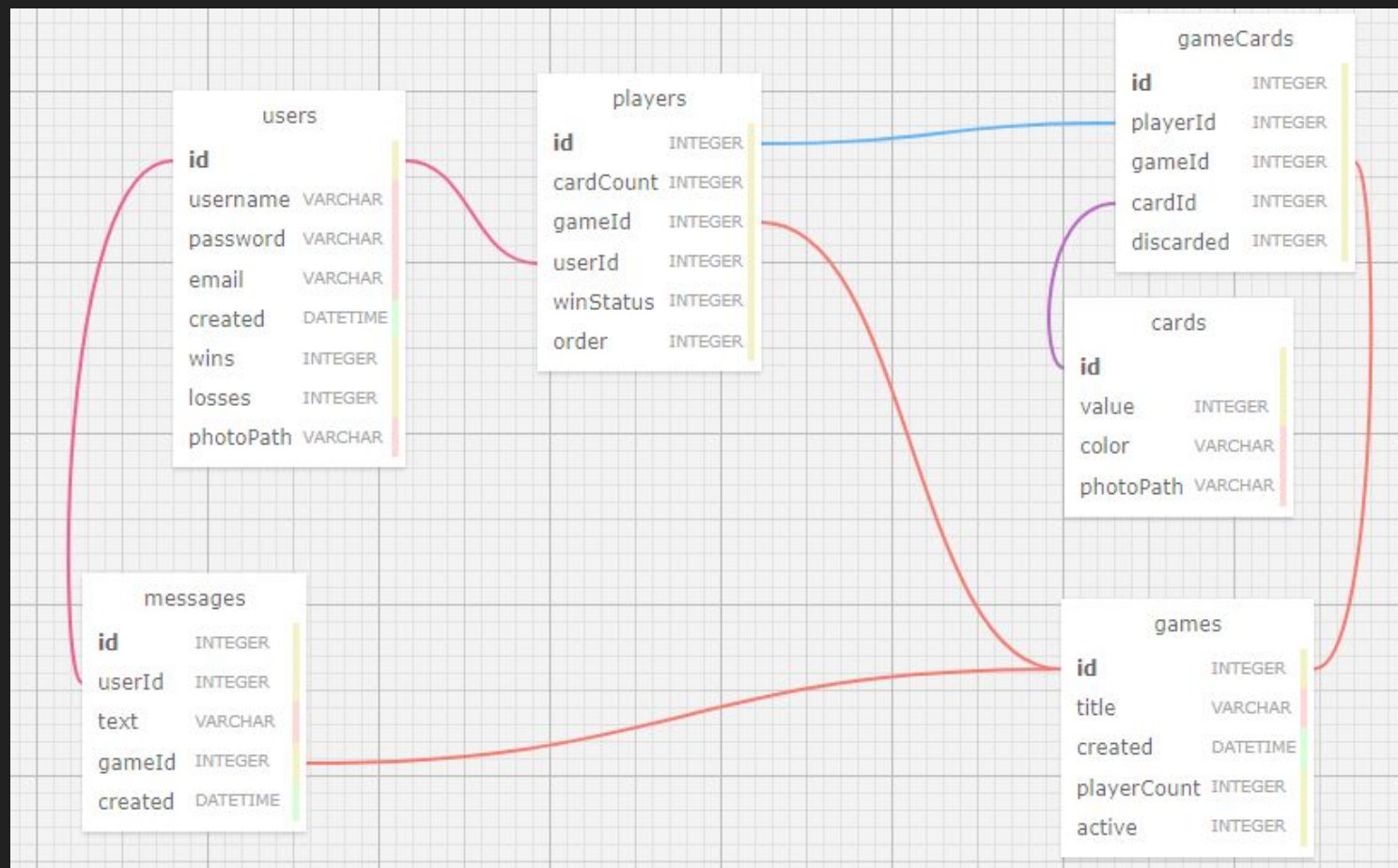
Dev Soni

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# Database



# Users

**Id - Int, Primary Key**

**username - Varchar**

**Password - Varchar**

**Email- Varchar**

**Created - DateTime** = When the User was created

**Wins - Int**

**Losses - Int**

**photoPath - Varchar** = File path to the user's profile picture

users	
id	
username	VARCHAR
password	VARCHAR
email	VARCHAR
created	DATETIME
wins	INTEGER
losses	INTEGER
photoPath	VARCHAR

# Games

**Id - int, Primary key**

**Title - varchar** = Title of the lobby the user inputted

**Created - Datetime** = When the game was created

**PlayerCount - int**

**Active - int** = "0" If the game has started, "1" if it has not

games	
id	INTEGER
title	VARCHAR
created	DATETIME
playerCount	INTEGER
active	INTEGER

# Players

**Id - Int, Primary Key**

**CardCount - Int** = Number of cards the player has

**GameId - Int, Foreign Key to games table**

**UserId - Int , Foreign Key to users table**

**winStatus - Int** = Will be “1” when the player has won the game. Otherwise “0”

**Order - Int** = Players will be randomly assigned a number based on the number of players that signifies what turn they are when playing the game

players	
id	INTEGER
cardCount	INTEGER
gameId	INTEGER
userId	INTEGER
winStatus	INTEGER
order	INTEGER

# Cards

**Id - int**

**Value - int** = Number 1-9, Reverse, Draw cards

**Color - varchar** = Red, Yellow, Green, Blue, or Wild

**Photopath - varchar** = File Path to the picture of the card

cards	
id	
value	INTEGER
color	VARCHAR
photoPath	VARCHAR

# GameCards

**Id - int**

**PlayerId- int, Foreign Key to players table** = This will signify which player has this card. If it is “NULL”, then the card hasn’t been drawn yet

**GameId - int, Foreign Key to games table**

**CardId - int, Foreign Key to cards table** = This will signify which kind of card this is. (ex. blue 5, or wild draw 4)

**Discarded - int** = This will be “0” if the card is still in play. If it has been discarded, this will be “1”

gameCards	
id	INTEGER
playerId	INTEGER
gameId	INTEGER
cardId	INTEGER
discarded	INTEGER

# Messages

messages	
id	INTEGER
userId	INTEGER
text	VARCHAR
chatRoomId	INTEGER
created	DATETIME

**Id - int**

**UserId - int, Foreign Key to users table** = This signifies which user posted the message

**Text - MediumText** = The message the user is posting

**gameId - Int, Foreign key to games table** = This signifies where the messages will be displayed. If this field is "NULL", then this message will be posted on the main lobby chat

**Created - datetime** = The time the message was created



# Actions a user can perform and their outcomes

1. Draw a card
  - Player's turn
  - Cannot place right card into the holder
2. Placing the appropriate cards into the player's holder
  - Player's turn
3. Start a new game
  - One of the players wins or loses
  - Options to start a new game
4. Exit the game in middle of an ongoing game session
  - Option to quit game

# Events that may occur in the system and their outcomes

1. Draw a card
  - Player has no more card than before
2. Placing the appropriate card into the holder
  - Player has one less card then before
3. Start a new game
  - New game is initiated
4. Exit the game
  - Leads you to the back home page

## More Events

1. Messages sent in lobby
2. Messages sent in a game (Game X)
3. User A joined Game X
4. User A played Card Z
5. User A now has Y cards remaining
6. Order of Players REVERSED
7. Game Over “User A Won”
8. Game Over “Game Ended”
9. Game Restarted

# API Documentation

## End Points

- Landing page: /
- Login: /login
- Registration: /register
- User profile: /user/:user-id
- Lobby (Authenticated page) : /lobby
- Rules: /rules
- Specific Game: /game/:game-id

# API Documentation

## Endpoints to Actions

- Create game: /create
- Join game: /game/:game-id/join
- Leave game: /game/:game-id/leave
- Play a card: /game/:game-id/play
- Draw a card: /game/:game-id/draw
- Send messages in lobby: /lobby/send
- Send messages in game: /game/:game-id/send