

Sunny Side Up: Diana Akhmedova, Samantha Hua, Nicholas Tarsis,  
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SoftDev Pd 7  
P05 -- Monopoly Deal  
2023-06-02

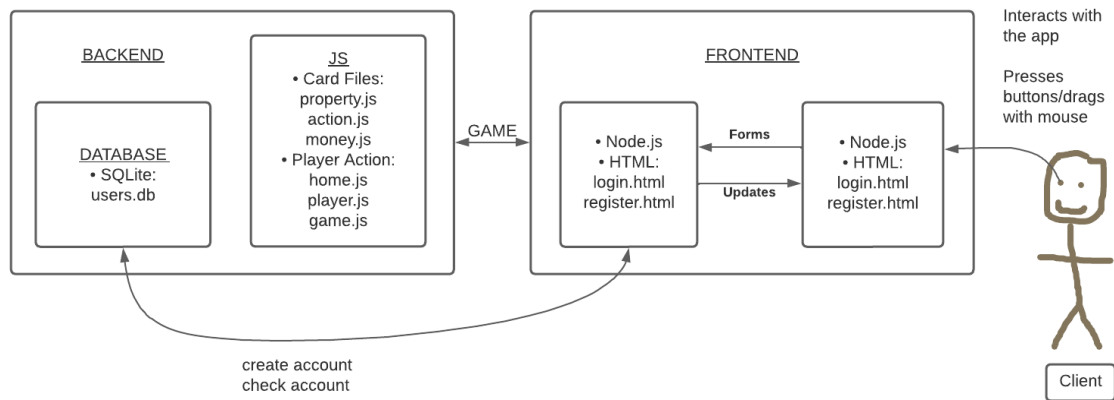
### **Abstract:**

Sunny Side Up will recreate the multiplayer, turn-based card game Monopoly Deal. Following the rules of the official game, we will implement Node.js to support real-time gaming between players. The rules are attached below.

### **Program Components:**

- HTML Files:
  - login.html
  - home.html
  - game.html
- CSS Files:
  - style.css
- JS Files:
  - home.js
  - property.js
  - action.js
  - money.js
  - player.js
  - game.js
- Image Files:
  - We will have .png files for every card in the game
- SQLite Databases:
  - users.db
    - Usernames will be unique so we can reference specific players
- Node.js
  - Handles the multiplayer aspect of the game

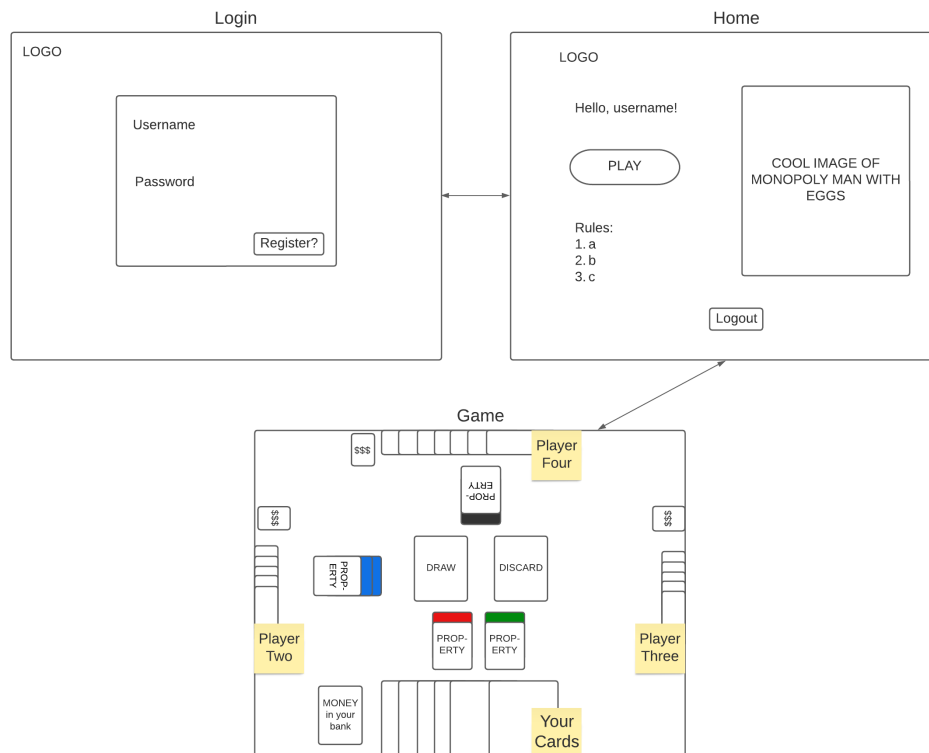
## Component Map:



## Database Organization:

username (TEXT)	password (TEXT)
dawg	w00f
egg	sunnysideup

## Site Map:



**Rules:**

- Goal - Own three complete sets of property
- Set up - Each player gets dealt a hand of 5 cards
- Turn - Pick up two cards, Play up to three cards

**Special Cases:**

- If you owe money and do not have enough money in your bank, you must give up property of equal value to the debt
- If you owe someone money but have zero assets you do not have to pay
- If you have no cards, pick up 5
- If you have more than 7 cards at the end of your turn, discard cards until you have seven

**Front End Framework (FEF):** Bootstrap**Job Assignments:**

- Diana Akhmedova (PM) - Cards, Graphics in JS
- Samantha Hua - Cards, Graphics in JS
- Nicholas Tarsis - Droplet, Databases
- Faiza Huda - Implementing cards with game rules, Login system

**Tasks:**

- ☒ ~~Play Monopoly Deal to learn how to play the game we will make~~
- ☐ Learn Node.js
- ☐ Make a Droplet
  - ☐ Get a domain
  - ☐ Make app work on droplet
- ☐ Registration/Login Page
  - ☐ Logo
  - ☐ Registration (button)
  - ☐ Login (button)
  - ☐ Add users into DB
  - ☐ Redirect people to home page if logged in

- ☐ Home Page
  - ☐ Logo
  - ☐ Reverting people to login page if they aren't logged in
  - ☐ Login message
  - ☐ Play button leads to Game Page
  - ☐ Rules summary
  - ☐ Monopoly man image
  - ☐ Logout button
- ☐ Game Page
  - ☐ Logo
  - ☐ Track user movements
  - ☐ Send other user movements in real time
  - ☐ Make users adhere to game rules
  - ☐ Create different card types (Property, Action, Money)
  - ☐ Create specific cards based on parent class
  - ☐ Implement the correct probability of drawing the cards as dictated by the game deck
  - ☐ Implement game rules with cards
  - ☐ Display cards correctly on board

**Stretch Goals:**

- Add a leaderboard
- Add game rooms people can create/join
- Create a chatroom (w/emojis)
- You can see the specific property card names when they are in your hand (ex: Indiana Avenue)
- Implement wild rent and property cards

## Cards in Game:

- Property Cards
  - Red - 3
    - Rent: \$2, \$3, \$6
    - Illinois Avenue
    - Kentucky Avenue
    - Indiana Avenue
  - Orange - 3
    - Rent: \$1, \$3, \$5
    - St. James Place
    - Tennessee Avenue
    - New York Avenue
  - Yellow - 3
    - Rent: \$2, \$4, \$6
    - Atlantic Avenue
    - Ventnor Avenue
    - Marvin Avenue
  - Light Green (Utilities) - 3
    - Rent: \$1, \$2
    - Electric Company
    - Water Works
  - Dark Green - 3
    - Rent: \$2, \$4, \$7
    - North Carolina Avenue
    - Pennsylvania Avenue
    - Pacific Avenue
  - Light Blue - 3
    - Rent: \$1, \$2, \$3
    - Oriental Avenue
    - Connecticut Avenue
    - Vermont Avenue
  - Dark Blue - 2
    - Rent: \$3, \$8
    - Park Place
    - Boardwalk

- Pink - 3
  - Rent: \$1, \$2, \$4
  - States Avenue
  - St. Charles Place
  - Virginia Avenue
- Brown - 2
  - Rent: \$1, \$2
  - Mediterranean Avenue, Baltic Avenue
- Black (Railroad) - 4
  - Rent: \$1, \$2, \$3, \$4
  - Pennsylvania Railroad
  - Reading Railroad
  - B. & O. Railroad
  - Short Line
- Property Wild Cards - 2 each
  - Red/Yellow
  - Pink/Orange
  - Dark Blue/Dark Green
  - Light Blue/Brown
  - Black (Railroad)/Light Green (Utilities)
  - Black (Railroad)/Light Blue
  - Black (Railroad)/Green
- Action Cards
  - Rent - 2 each
    - Charge player(s) money based off of the color and amount of property as specified by the card
    - Red/Yellow
    - Orange/Pink
    - Light Green (Utilities)/Black (Railroads)
    - Light Blue/Brown
    - Dark Green/Dark Blue
    - Wild (only one player affected) - 3
  - Houses/Hotels
    - If added to a complete set, it increases the rent amount
    - If added to bank, it liquidates into cash

- Houses: 3M - 3
  - Hotels: 4M - 2
- Deals
  - Sly Deal - 3
    - Steal a player's property card as long as it is not part of a complete set
  - Forced Deal - 3
    - Swap property cards with a player as long as their card's not part of a complete set
  - Deal Breaker - 2
    - Steal a complete set of property
  - Debt Collector - 3
    - Force any player to pay you 5M
- Just Say No - 3
  - Cancel any action that is played against you
- Pass Go - 10
  - Draw 2 extra cards
- Double the Rent - 2
  - Played with a Rent card
- It's my Birthday - 3
  - All players pay 2M
- Money Cards
  - \$1 (6), \$2 (5), \$3 (3), \$4 (3), \$5 (2), \$10 (1)