Sunny Side Up: Diana Akhmedova, Samantha Hua, Nicholas Tarsis, Faiza Huda
SoftDev Pd 7
P05 -- War/Memory Card Games
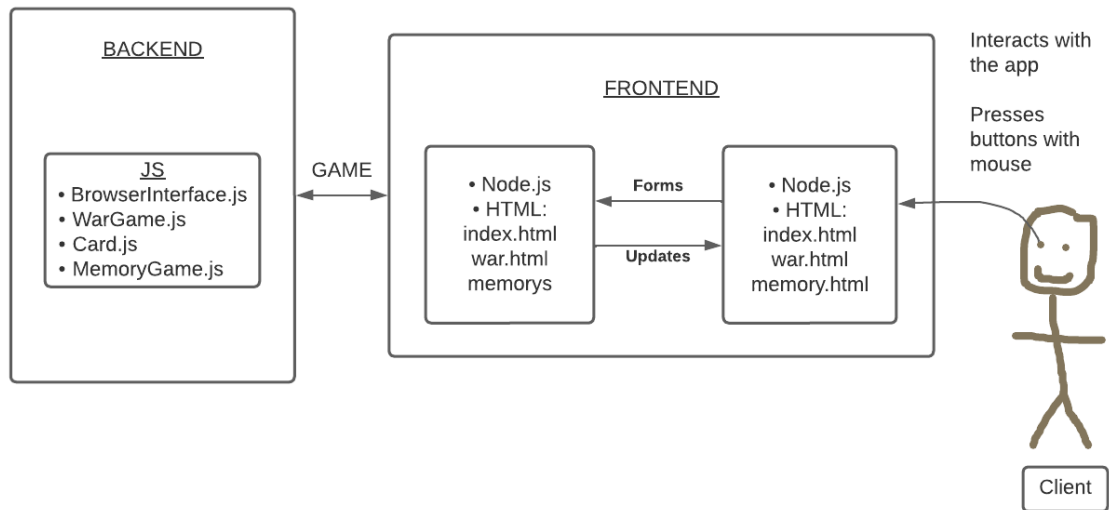2023-06-02

**Target Ship Date:** 2023-06-13

**Abstract:**
Sunny Side Up will recreate the thrilling turn-based card game I Declare War and the fantastically mesmerizing memory games featuring iconic video games.
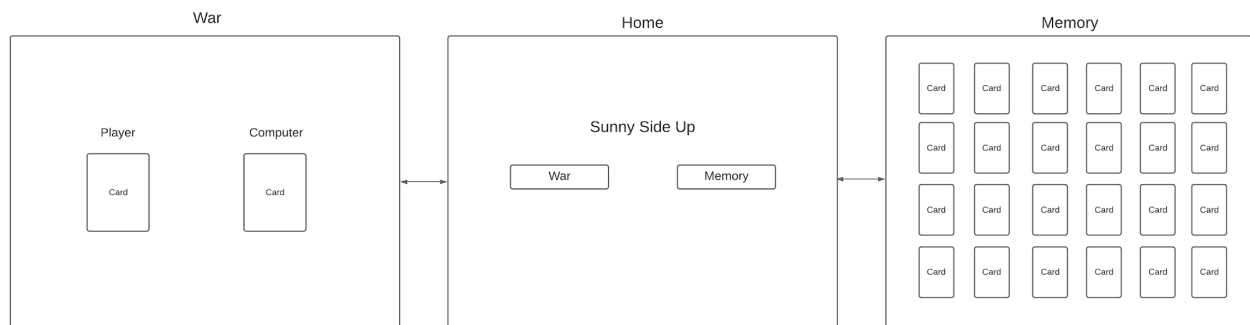
**Program Components:**
- HTML Files:
  - index.html
  - war.html
  - memory.html
- CSS Files:
  - Animate.css
  - MemoryGame.css
  - WarGame.css
- JS Files:
  - BrowserInterface.js
  - WarGame.js
  - Card.js
  - MemoryGame.js
- Image Files:
  - We will have .png files for every card in the games
- Node.js
  - Hosts the app

## Component Map:

```
┌─────────────────────┐         ┌──────────────────────────────────────────────┐     Interacts with
│     BACKEND         │         │                FRONTEND                        │     the app
│                     │         │                                                │
│                     │  GAME   │  ┌─────────────┐  Forms  ┌─────────────┐       │     Presses
│    ┌───────────┐    │ <────>  │  │ • Node.js   │ <────── │ • Node.js   │       │     buttons with
│    │    JS     │    │         │  │ • HTML:     │         │ • HTML:     │ <──────┤     mouse
│    │• BrowserInterface.js│    │  │  index.html │ Updates │  index.html │       │
│    │• WarGame.js│   │         │  │  war.html   │ ──────> │  war.html   │       │
│    │• Card.js   │    │         │  │  memorys    │         │  memory.html│       │
│    │• MemoryGame.js│ │         │  └─────────────┘         └─────────────┘       │
│    └───────────┘    │         │                                                │
└─────────────────────┘         └──────────────────────────────────────────────┘
```

Client

## Site Map:

```
┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│        War          │      │        Home         │      │       Memory        │
│                     │      │                     │      │ ┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐ │
│  Player   Computer  │      │    Sunny Side Up    │      │ │Card││Card││Card││Card││Card││Card│ │
│  ┌────┐   ┌────┐    │ <──> │  ┌────┐   ┌──────┐  │ <──> │ ┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐ │
│  │Card│   │Card│    │      │  │ War│   │Memory│  │      │ │Card││Card││Card││Card││Card││Card│ │
│  └────┘   └────┘    │      │  └────┘   └──────┘  │      │ ┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐ │
│                     │      │                     │      │ │Card││Card││Card││Card││Card││Card│ │
│                     │      │                     │      │ ┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐ │
│                     │      │                     │      │ │Card││Card││Card││Card││Card││Card│ │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
```

## Front End Framework (FEF): Bootstrap

- Bootstrap because we are more familiar with it, it is easier to use, and it has a wide variety of tools

## Job Assignments:

- Diana Akhmedova(PM) - Memory Game
- Samantha Hua - War Game
- Nicholas Tarsis - War Game
- Faiza Huda - Memory Game

## Tasks:

- ☑ ~~Play Monopoly Deal to learn how to play the game we will make~~
- ☑ ~~Learn Node.js~~

- [x] ~~Make a Droplet~~
  - [x] ~~Get a domain~~
  - [x] ~~Make app work on droplet~~
- [ ] Home Page (Monopoly Deal)
  - [ ] Logo
  - [x] ~~Generate new room~~
  - [x] ~~Join room~~
  - [x] ~~Play button leads to Game Page~~
  - [x] ~~Rules summary~~
  - [ ] Monopoly man image
- [ ] Game Page (Monopoly Deal)
  - [ ] Logo
  - [ ] Track user movements
  - [ ] Send other user movements in real time
  - [ ] Make users adhere to game rules
  - [x] ~~Create different card types (Property, Action, Money)~~
  - [x] ~~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
- [x] ~~Home Page (New)~~
  - [x] ~~Button for I Declare War~~
  - [x] ~~Button for Memory Game~~
- [x] ~~War Page (New)~~
  - [x] ~~Button to go back to the home page~~
  - [x] ~~Player card deck~~
  - [x] ~~Computer card deck~~
  - [x] ~~Deal button~~
  - [x] ~~New game button~~
  - [x] ~~Implementation of war feature~~
  - [x] ~~Fancy animations~~
  - [ ] Multiplayer feature
- [x] ~~Memory Game (New)~~

- ☑ ~~Button to go back to the home page~~
- ☑ ~~Four difficulty levels~~
- ☑ ~~Start new game button~~
- ☑ ~~Matching card algorithm~~
- ☑ ~~Fancy animations~~
- ☑ ~~Snazzy CSS :D~~
- ☐ Online chatroom

**Stretch Goals:**
- Add a leaderboard
- Add profile pictures and the ability to change usernames
- Add game rooms people can create/join (multiplayer)
- Create a chatroom (w/emojis)

**Popular Video Games:**
1. Minecraft
2. Overwatch
3. Overcooked
4. Cyberpunk 2077
5. Stardew Valley
6. League of Legends
7. Grand Theft Auto V
8. Super Mario Odyssey
9. Red Dead Redemption 2
10. Resident Evil 4 Remake
11. Final Fantasy VII Remake
12. The Witcher 3: Wild Hunt
13. Assassin's Creed Valhalla
14. Animal Crossing: New Horizons
15. The Legend of Zelda: Tears of the Kingdom