🃏 Rummy with Hidden Joker

Real-Time Multiplayer Card Game

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Milestone 1: Project Specifications & Wireframes

Project Overview

Rummy with Hidden Joker is a real-time multiplayer card game where players compete to form valid sets and runs from their hand. The twist: one card is secretly designated as the wild joker, and players must deduce which card it is while strategically drawing and discarding. The first player to form valid melds and declare wins the round.

🎯 Strategy • 🤔 Deduction • 🏆 Competition

Why Egyptian Ratscrew War?

- **Complex Game State:** Manage hands, melds, discards, and hidden joker

- **Strategic Depth:** Balance forming melds with deducing the joker

- **Real-Time Sync:** All players see actions instantly

- **Turn-Based Logic:** Learn async game state management

- **Rich UI:** Card visualization, drag-and-drop, validation

Core Features – Backend & Auth

Required Features:

- User authentication (sign up, login, logout)
- PostgreSQL database for users and game history
- Express.js REST API
- WebSocket for real-time game updates
- Render deployment

Core Features – Game Logic
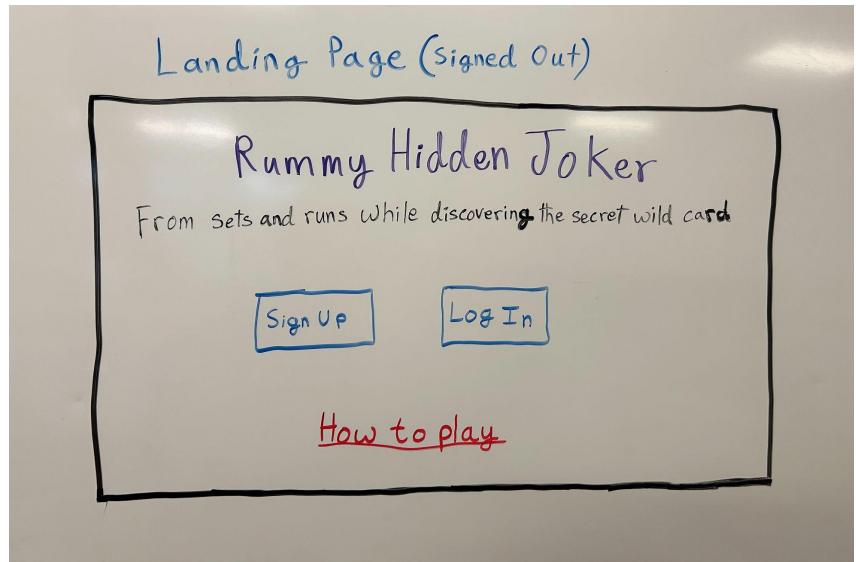
- **Deck Management:** Shuffle and deal 13 cards per player

- **Hidden Joker:** Randomly select secret wild card

- **Turn System:** Enforce draw-discard sequence

- **Meld Validation:** Check sets (3-4 same rank) and runs (3+ consecutive)

- **Declaration:** Validate winning hand

- **Discard Pile:** Track and allow drawing from pile

- **Lobby System:** Create/join rooms (2-6 players)

- **Scoring:** Calculate points from unmelded cards

Technologies

- Frontend
  - HTML/CSS, Javascript
- Backend
  - Node.js, Express.js
- Real-Time
  - Socket.io (WebSocket)
- Database
  - PostgreSQL
- Security
  - bcrypt for password hashing, express-session
- Deployment
  - Render

Wireframe: Landing Page

- **Actions:** Sign Up → Sign Up page | Log In → Login page

Wireframe: Sign Up

- **Flow:** Create Account → Store in PostgreSQL → Redirect to Main Lobby
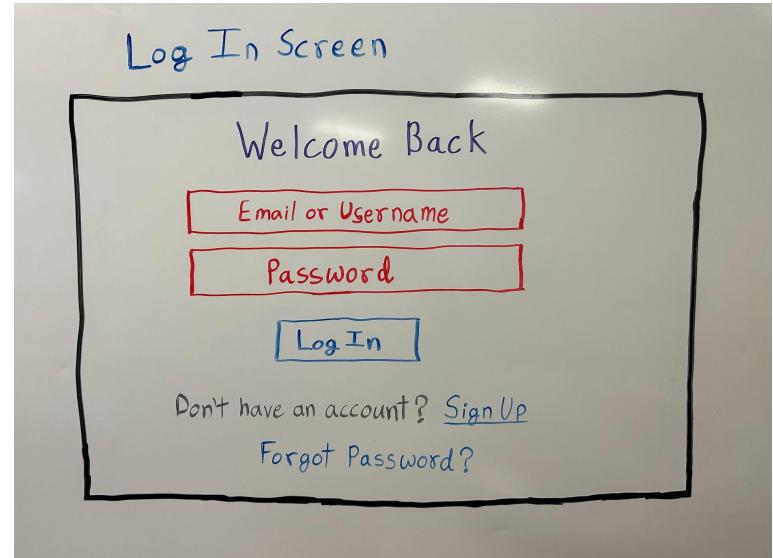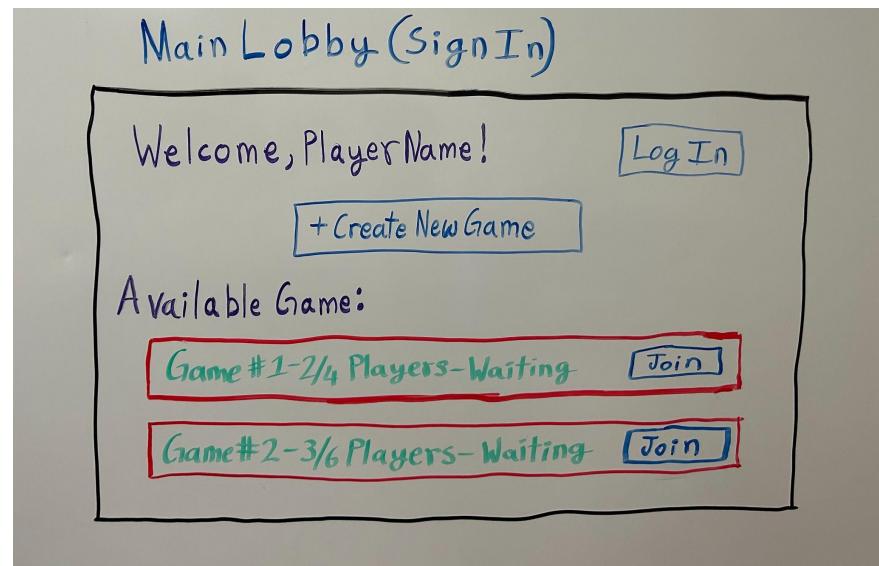
Wireframe: Log In

- **Flow:** Log In → Verify with bcrypt → Redirect to Main Lobby
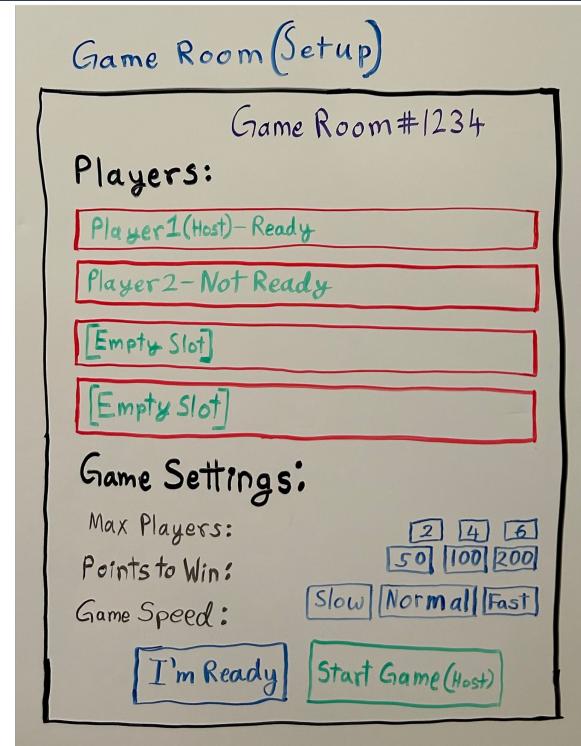
Wireframe: Main Lobby

- **Actions:** Create → Game Setup | Join → Game Room
  | Logout → Landing Page
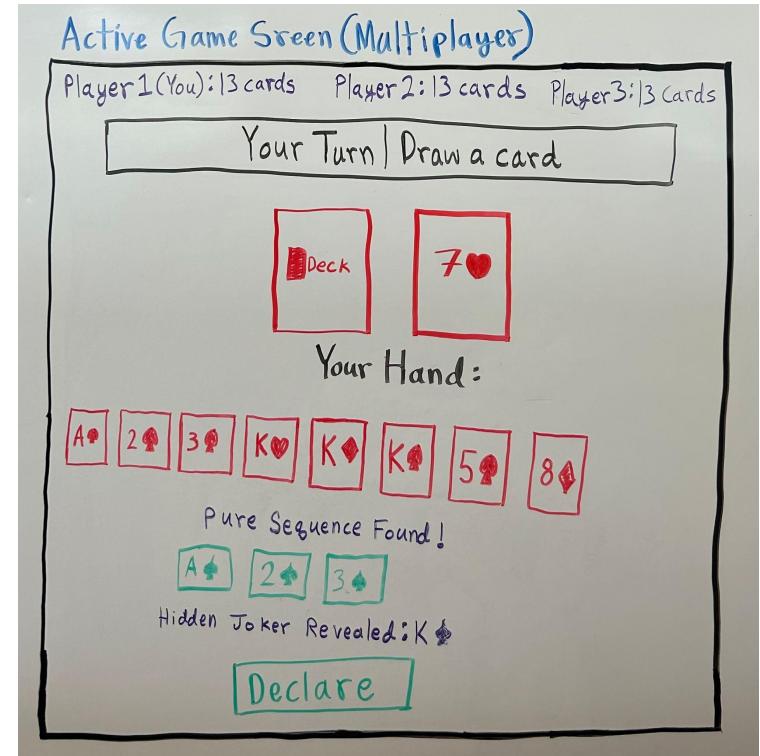
Wireframe: Game Room Setup

- **Flow:** Host configures settings | All ready + Host starts → Active Game
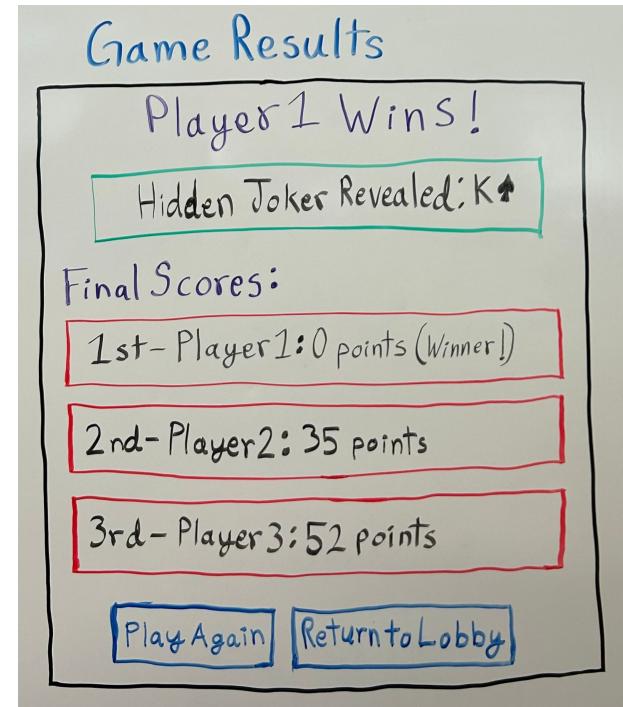
Wireframe: Active Game Screen

- **Key:** Pure sequence unlocks joker | Other players' card counts visible | Real-time updates via Socket.io

Wireframe: Game Results

- **Actions**: Play Again → New game setup | Lobby → Main lobby

Game Results

Player 1 Wins!

Hidden Joker Revealed: K♠

Final Scores:

1st - Player 1: 0 points (Winner!)

2nd - Player 2: 35 points

3rd - Player 3: 52 points

Play Again   Return to Lobby

Complete User Flow

Landing Page
↓
Sign Up   Log In
↓
Main Lobby
↓
Create/Join Game
↓
Game Setup
↓
Active Game
↓
Results
↓
Play Again
↓
Lobby

Technical Architecture

Frontend
HTML/CSS, Javascript

Backend
Express + Socket.io

Database
PostgreSQL

Development Timeline

- **Milestone 2:** Backend API & PostgreSQL setup (user auth, game creation)

- **Milestone 3:** Frontend UI & authentication (all wireframe screens)

- **Milestone 4:** Card game logic & WebSocket integration (real-time gameplay)

- **Milestone 5:** Testing, polish, bug fixes

- **Deployment:** Launch on Render

Questions?

Let's build Egyptian Ratscrew War! 🖼️⚡

GitHub: [Your Repository Link]