Code Team 6
Uno Game

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Table of Contents

- Overview
- Project Specifications
  - User Authentication
  - Chat
  - Game States
  - Game Design
- Wireframes

Overview

- Tech stack:
  - Heroku
  - Node.js
  - Express.js
  - Postgres
  - Socket.io (pending approval)
  - Bcrypt.js (pending approval)

Project Specifications

User Authentication

- Users will be able to:
  - Create accounts
  - Log in
  - Log out
- Users must have an account in order to play
- Users have access to their game instances, and only they can access their own instance
- Users must provide unique username (name that doesn't already exist in DB)
- Encrypt passwords for added security (using bcrypt)

Chat

- Chat will be enabled in the lobby (landing page) for all users (after log in)
- Chat is also enabled in each game room for those users participating within that game instance
- Chat will display username and timestamp
- Stretch goals:
  - @mentions (mention other users within chat)
  - Observers
  - Private messaging

Game States

- Game states will be persisted in a database
- When a user closes a tab of the game they were currently playing, they should be able to reconnect to that game
- Only relevant game state should be sent to each user
- Game state must be updated in real time (in response to user interaction)
- Application will support arbitrary number of concurrent games
- Users should be able to participate in multiple games (different tabs)
- Users should be able to join and create lobbies
- Once game starts, new players cannot join (only players that joined in lobby prior to start)

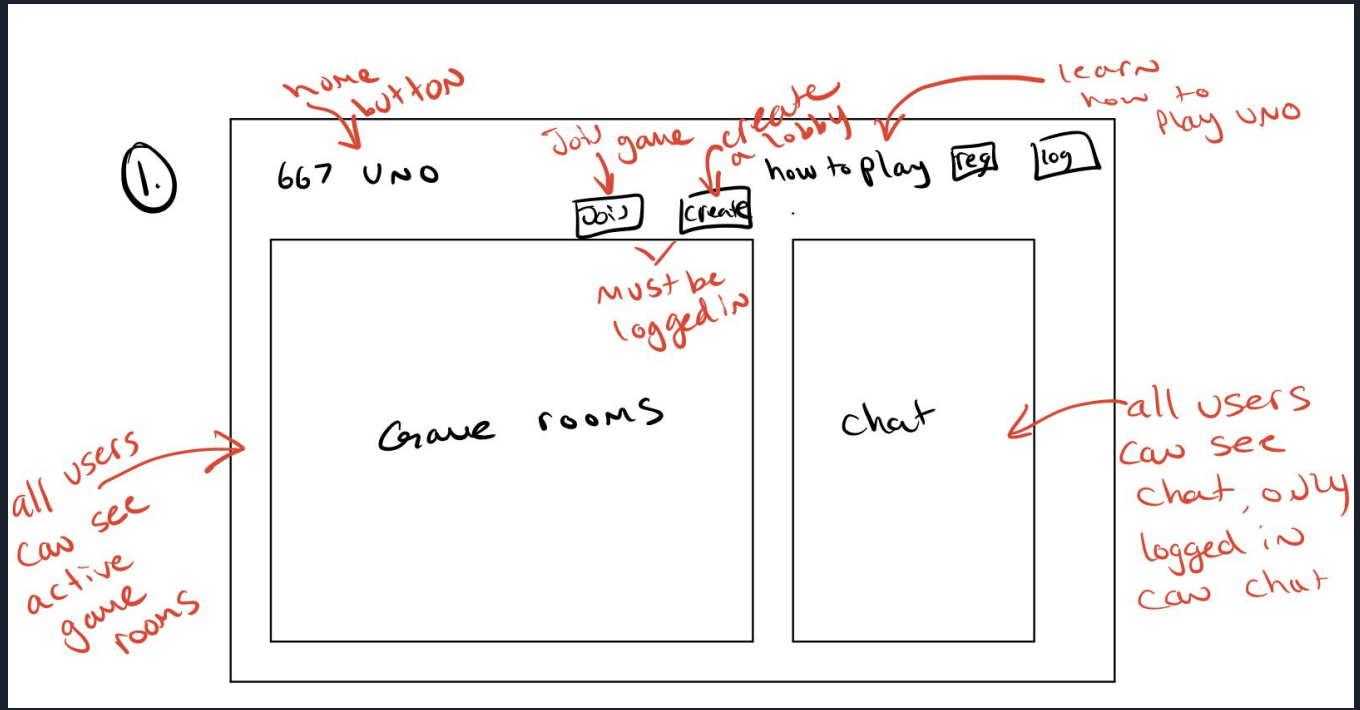
Game Design

- Player limits: 2-10 players max per lobby
- Every player begins the match with 7 cards
- Max 112 cards in deck
  - 19 Red cards – 0 to 9
  - 19 Blue cards – 0 to 9
  - 19 Green cards – 0 to 9
  - 19 Yellow cards – 0 to 9
  - 8 Skip cards – two cards of each color (can only be placed on similar color or skip card)
  - 8 Reverse cards – two cards of each color (can only be placed on similar color or reverse card)
  - 8 Draw cards – two cards of each color (can only be placed on similar color or draw 2 card)
    - Stretch goal: allow stacking for +2 and +4 cards
  - 8 Black cards – 4 wild cards and 4 Wild Draw 4 cards (can be placed anytime, regardless of current face card)
    - Wild - select between the 4 colors
    - Wild Draw 4 - select between the 4 colors and +4 to next player in rotation
  - Once deck is depleted, deck is reshuffled
- Players will be able to place 1 card per turn
  - Unless, the player is preceded by a skip card in rotation

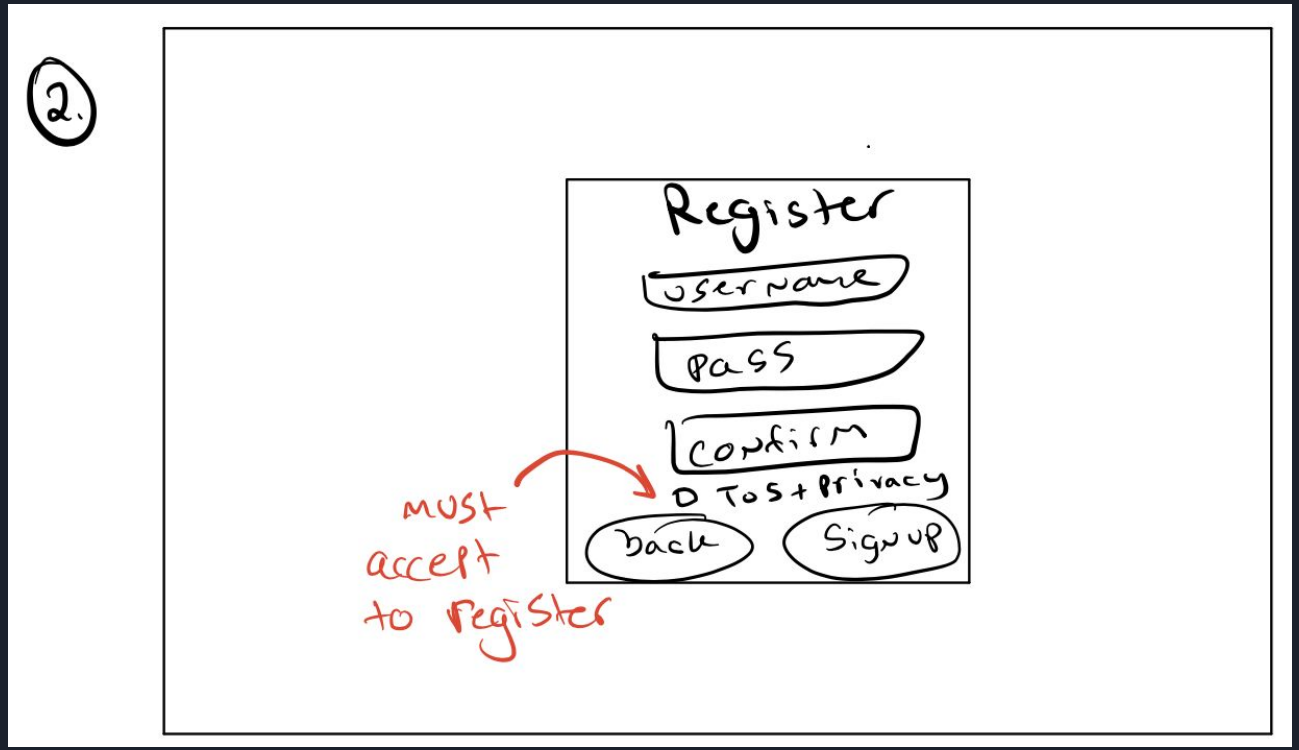
Game Design cont.

- Players must draw a card if they do not have any playable cards
  - If player draws a card that still isn't playable, then their turn is skipped
- Uno button that must be pressed prior to player placing second to last card (display Uno graphic)
  - If above not true, other players may press the "check" button to call player out for not confirming Uno
    - +2 card penalty for player that was called out
- Random player assigned to start
- First card from top of deck is used as starting card
  - If card is Action card, return card to deck until regular card (non-action) is played
- Indicator for when it's the players turn
- 30 second timer for player action
  - If time runs out, player forced to draw 1 card and turn skipped
  - Players can also end their turn early pressing the "End turn" button
- Win condition: when a player has 0 cards left
- Display user that won the game

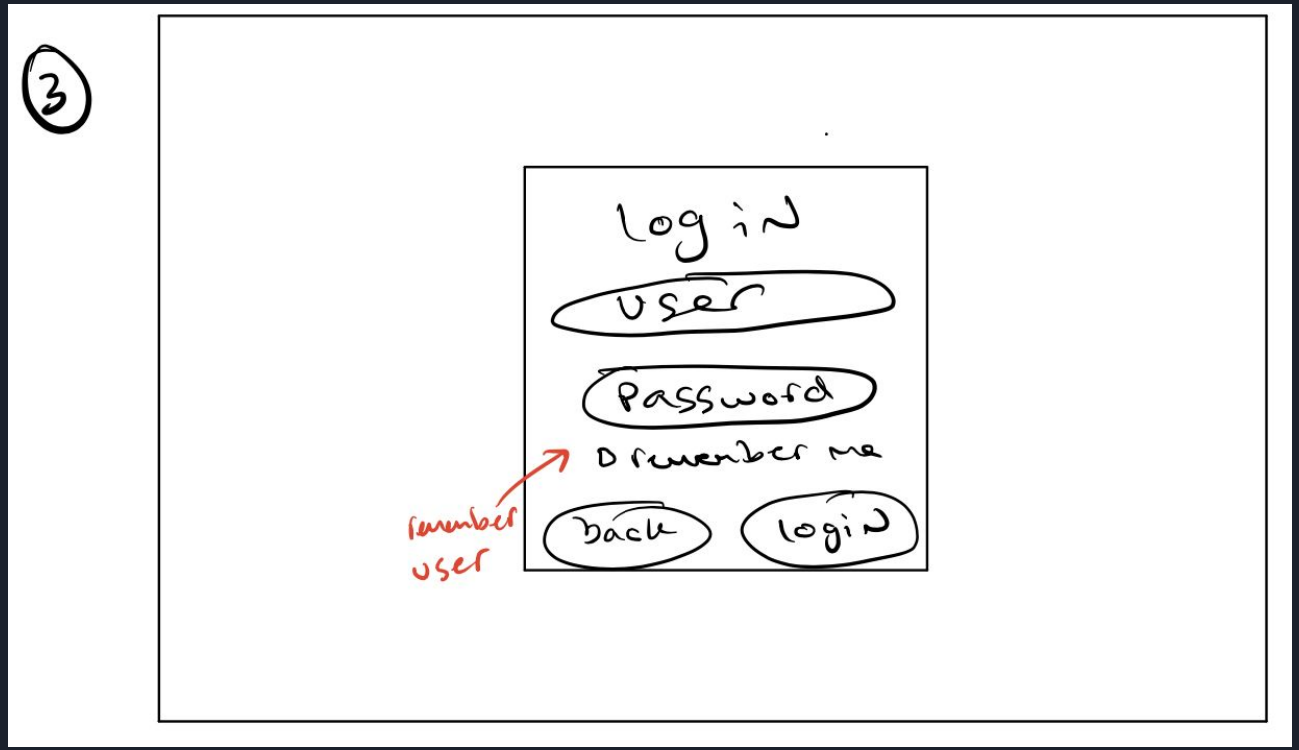
Wireframes


1.
home button
667 UNO
Join game
create a lobby
learn how to play UNO
how to play
reg
log
join
create
must be logged in
Game rooms
chat
all users can see active game rooms
all users can see chat, only logged in can chat

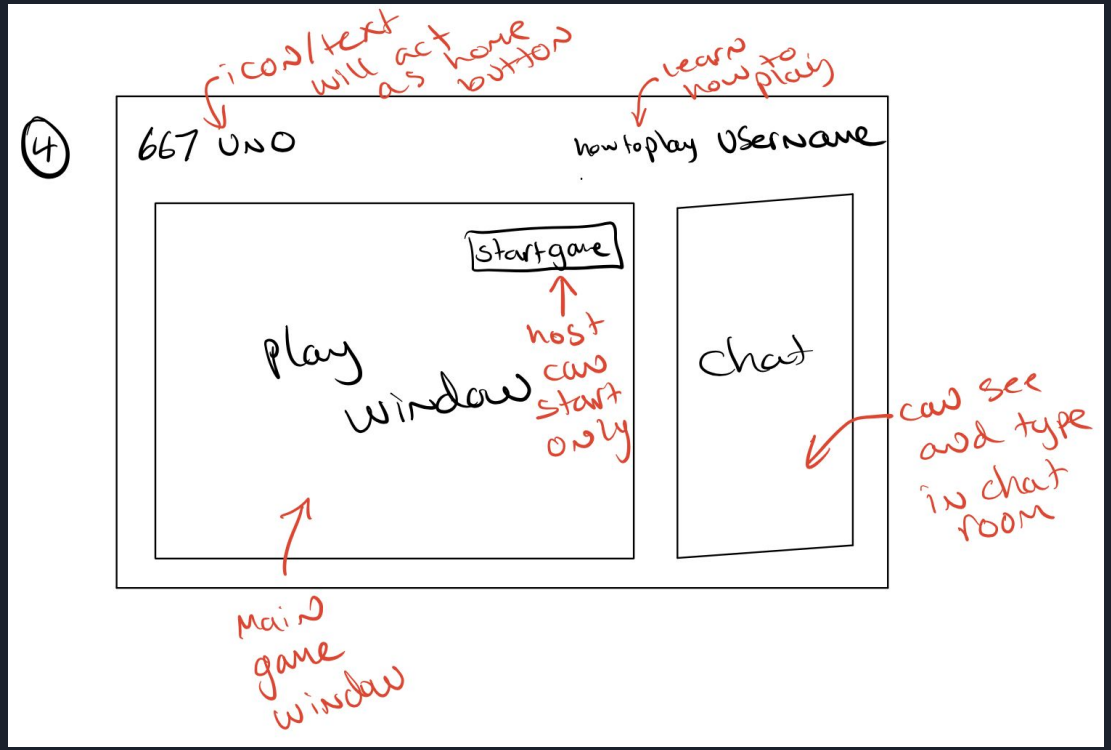
Wireframes


2.
Register
username
pass
confirm
ToS + Privacy
back
Sign up
MUST
accept
to register

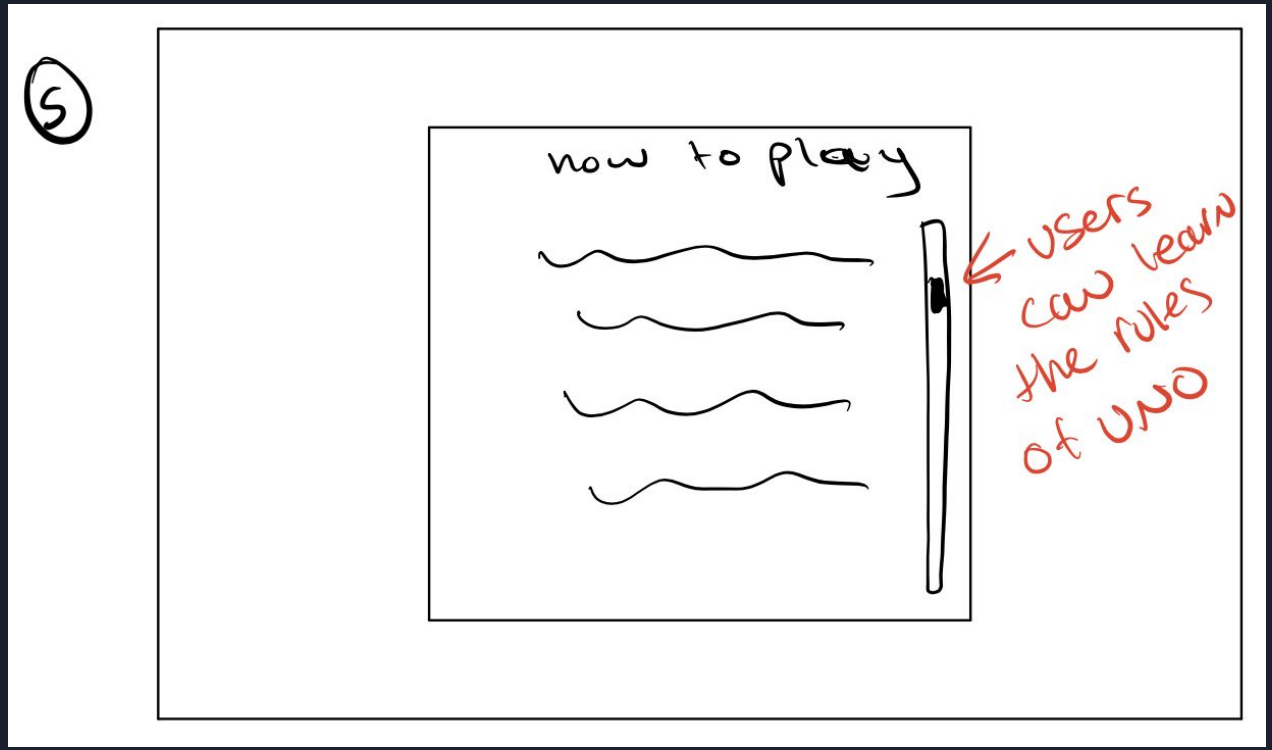
Wireframes



Wireframes


icon/text will act as home button
learn how to play
667 UNO
how to play
Username
Startgame
host can start only
play window
Chat
can see and type in chat room
main game window

Wireframes



Thank you!