

Boggle 2.0 Project

Initial brainstorming ideas

- rewrite in JavaScript
- strikethrough duplicates
- fix 4x4 scoring, 3 letter words
- show path on hover
- show dictionary def
- rearrange with text box on the right, autoselect
- after time is up, find more words for fun
- no refresh needed
- board stays when u scroll
- better buttons/text/input
- solve in background while playing
- voice chat

After refining:

No voice chat since players usually don't talk during gameplay to avoid giving things away. If there's time, I can add voice chat (or just text chat) for the pre-game and post-game pages.

I will either re-write the whole thing in JavaScript to learn a good full-stack JS framework, or write the frontend in JS and the backend in Flask, since the core boggle solver code is already written in Python, and I can use a profanity filter python library I found if there is text chat

Duplicates should be recorded, but with a flag to mark them and not score them. They'll be shown with strikethrough. Also, in the list of all the words, duplicates will be green to show that players found them, but struck through.

4x4 boards should allow 3 letter words minimum instead of 4 like it does now (It's a bug).

You can create a board with custom size, word length, and time.

I will be drawing layout sketches for each page, for mobile and laptop/desktop. In the actual code, I'll use responsive design to fluidly adapt to changes in the screen width.

Text boxes will be auto-selected when the page loads.

Refresh buttons will be replaced with AJAX requests or similar

On the post-game screen, the board will stay at the top left or top right as you scroll down the word list.

On the post-game screen (or before it), there might be a "play for fun" option, where you can keep finding words without seeing the list of all words. These don't count towards the score or statistics in any way, but might be recorded.

Hovering over any word in the post-game screen will show the players who found the word, and the path on the board, and a message like "click on the word for more info."

Clicking on a word gives its definition, links to other games with that word, % of games so far that had that word, % of times people found that word when it was there, etc.

Another round of ideas:

Column for "is it regulation"

Boggle API (BAPI) or Boggle Interactive Program for Interesting Statistics (BEPIS)

Nonstandard shapes, like a T shape, S shape, non-square rectangle, pyramid, etc.

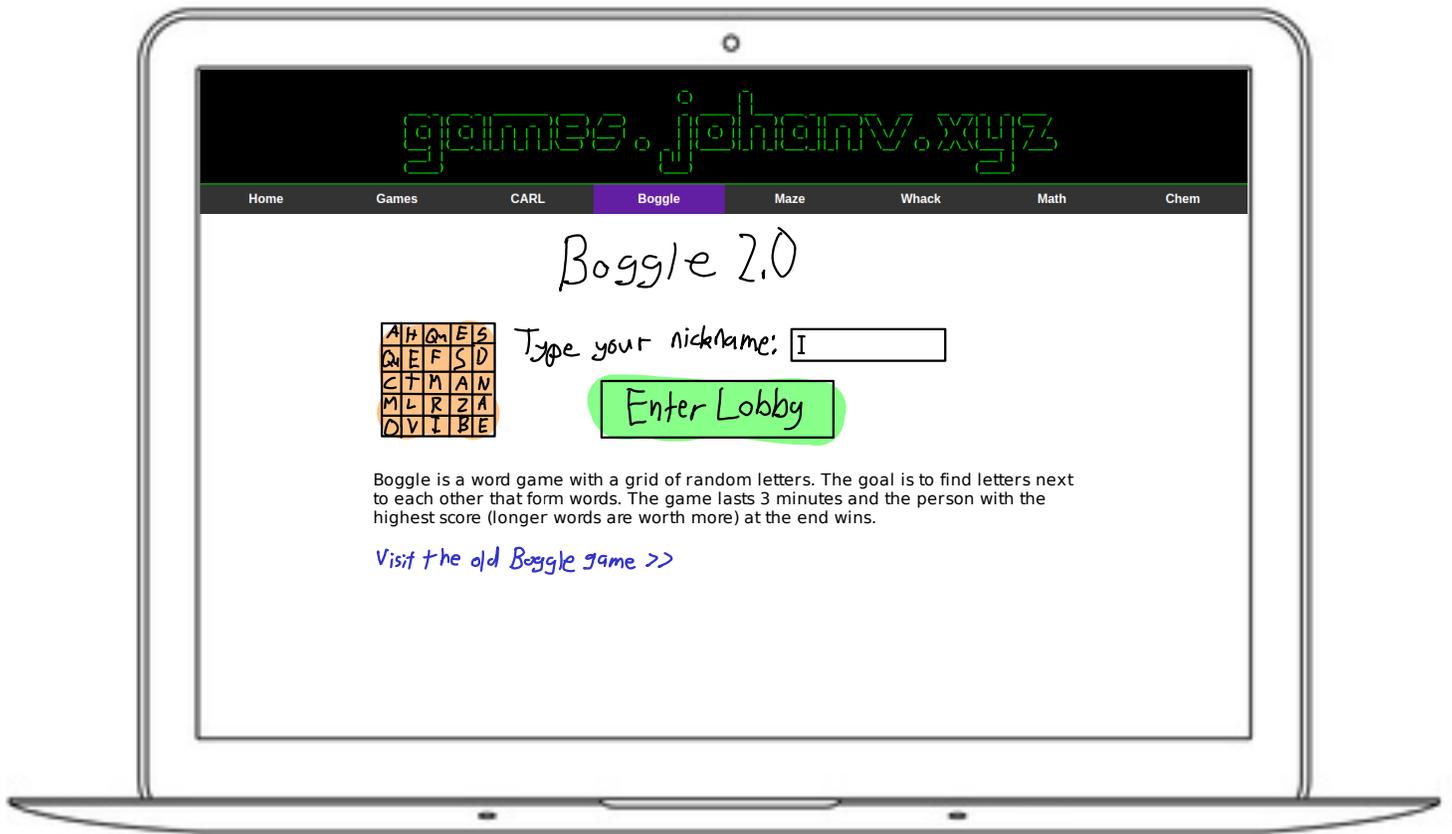
Replace some dice with blank spaces

Customize the faces of the dice, maybe add more two-letter ones like "TH" or "SH"

Swipe between letters of the board to enter a word (touchscreen)

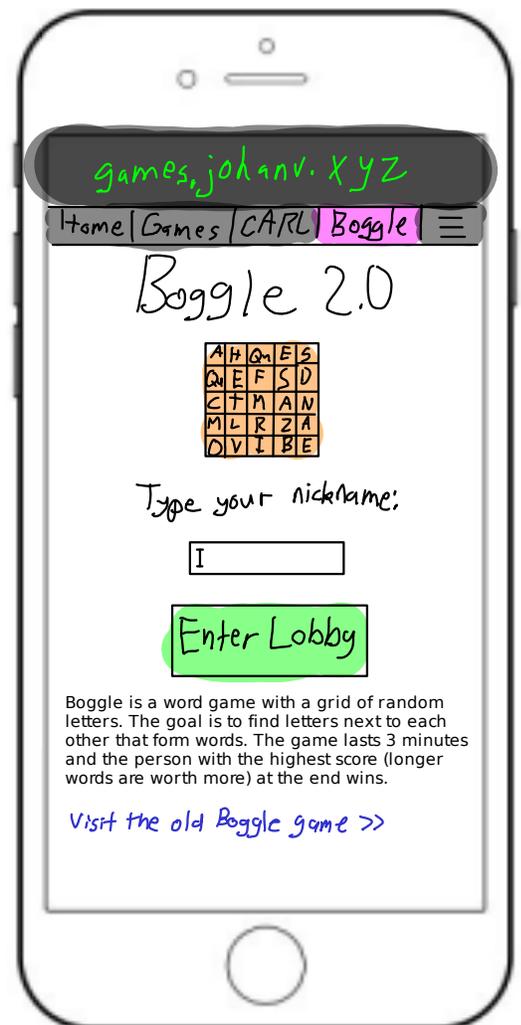
Think of a better name than "Boggle 2.0"

Layout - Login

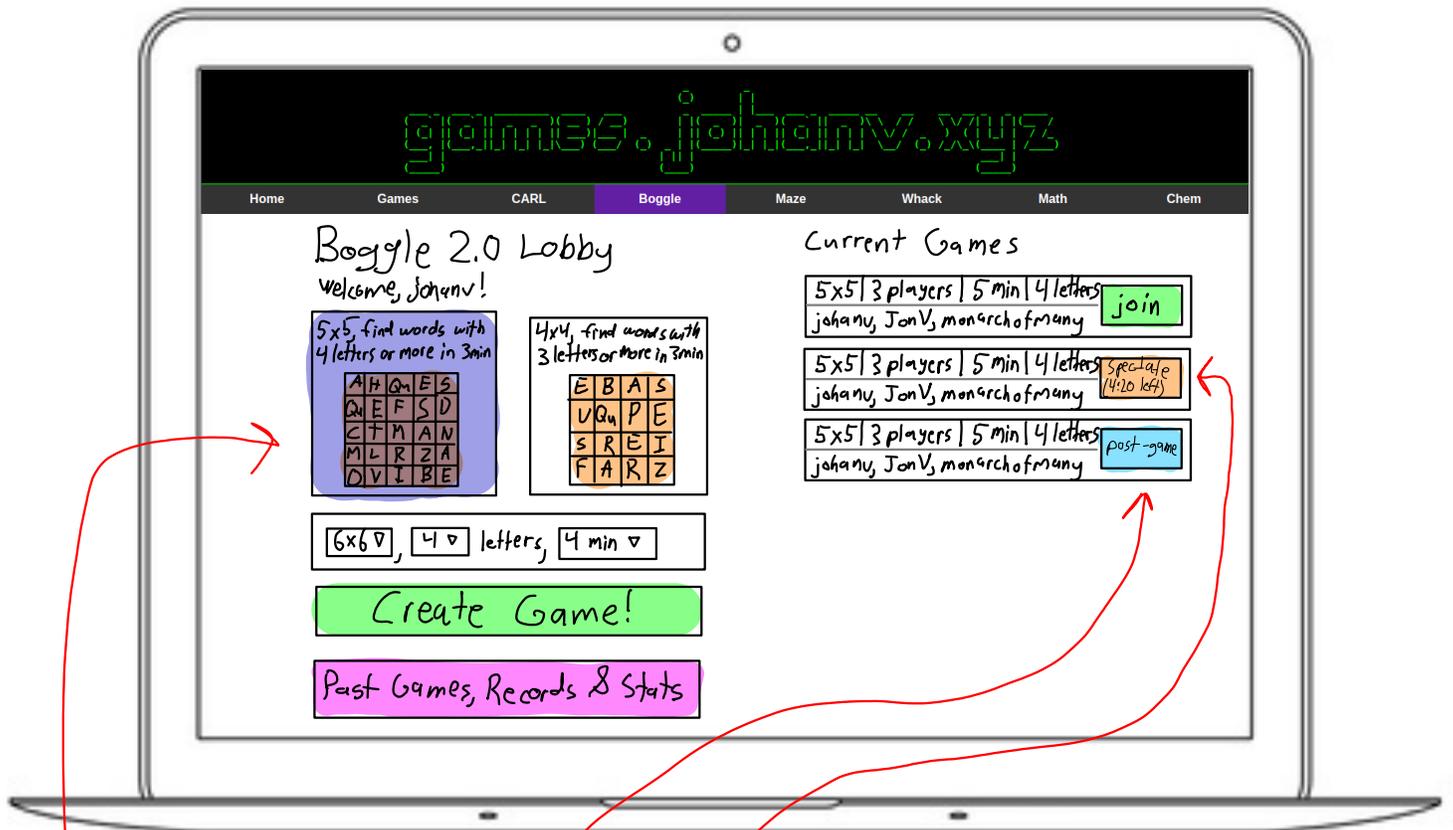


I might upgrade this to an actual login screen with a password, or an email magic link, to avoid spammers, bots, etc. If I do that, maybe I'll add a "Guest" mode, where you can join games but not create them.

Nicknames will be limited to letters, numbers, and underscores. If email is used for the magic link or whatnot, it will also allow dots and at signs. I haven't decided if spaces should be included.



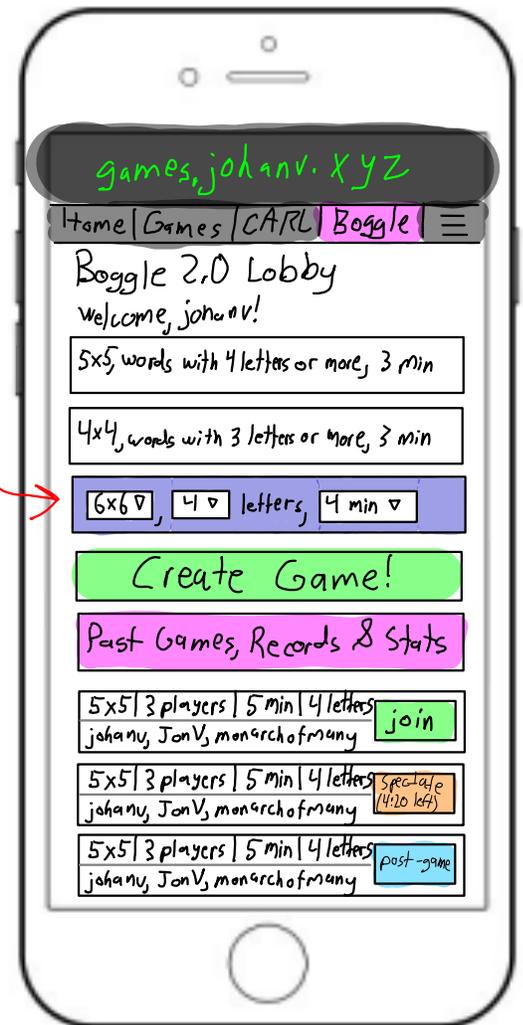
Layout - Lobby



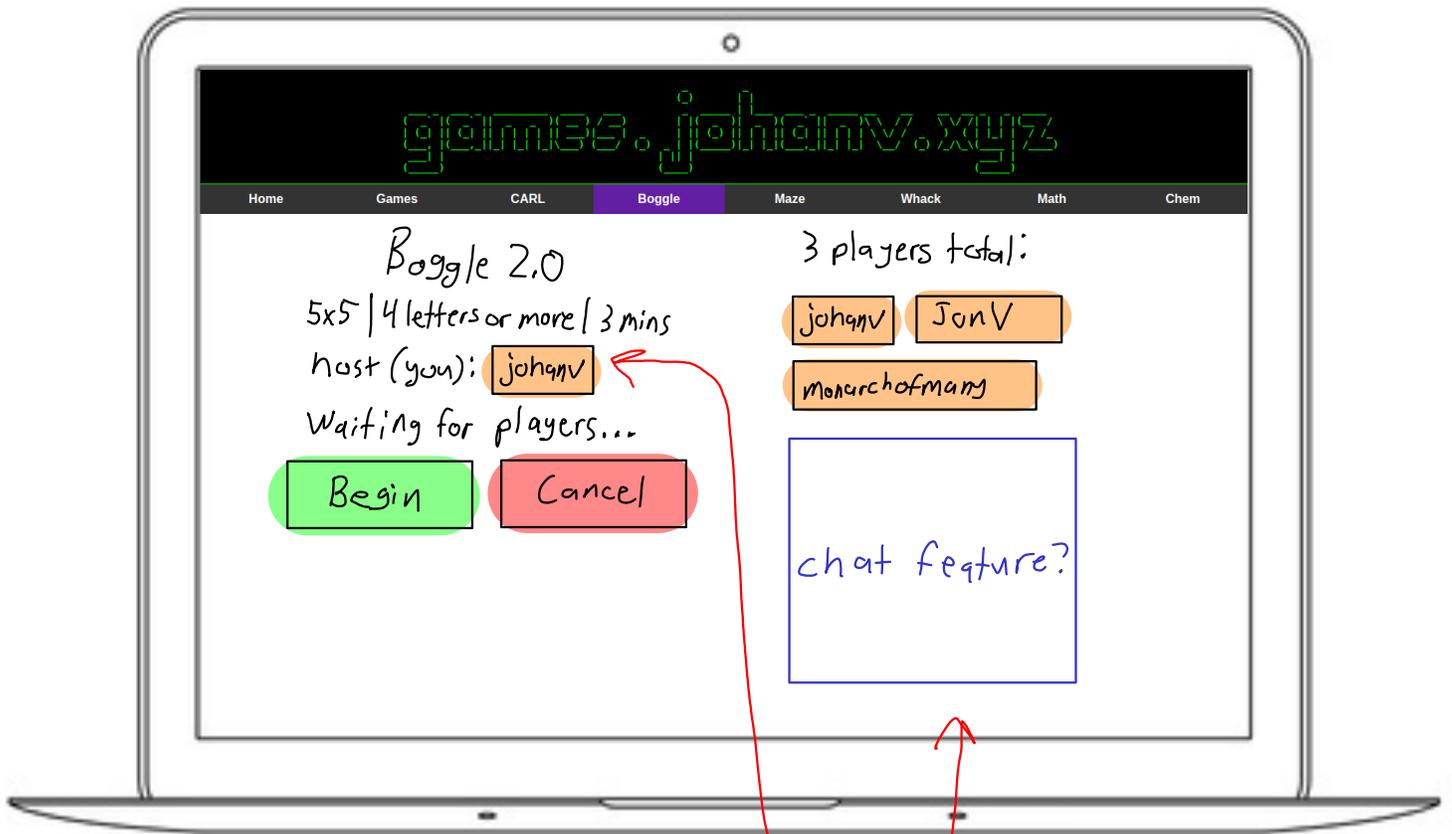
Still unsure about the post-game and spectate features. Post-game is where you can join a game after it has ended to talk to the other people and discuss the board.

The option that is selected for a new game is colored blue. When the "Custom" option is selected, the dropdowns remain white.

In general, green buttons represent the simplest path forward. When logging in, green was the "Enter Lobby" button. When greeted with this screen, the two green buttons are to create a game (with the 5x5 selected by default) or to join an existing game. In the next screen, the green button is to begin the game.

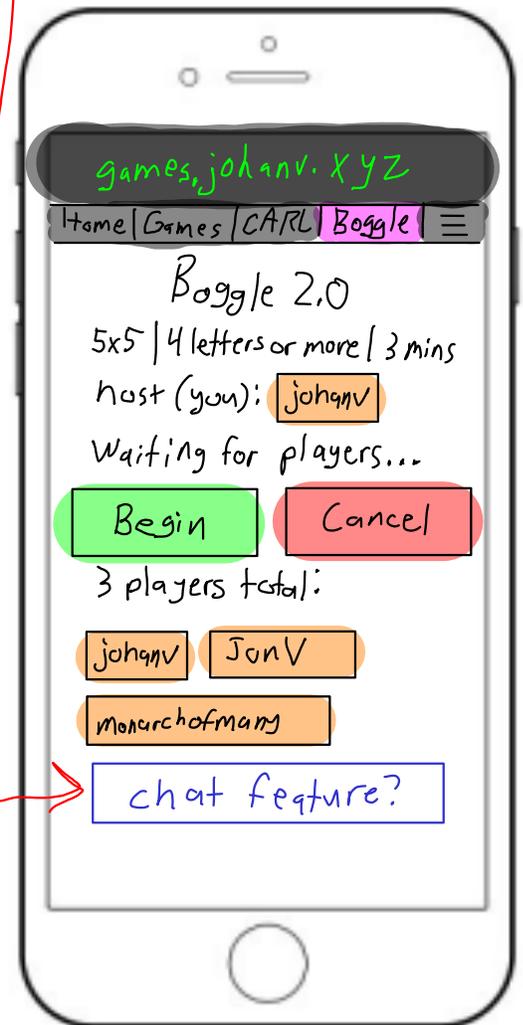


Layout - Waiting for Players (host view)

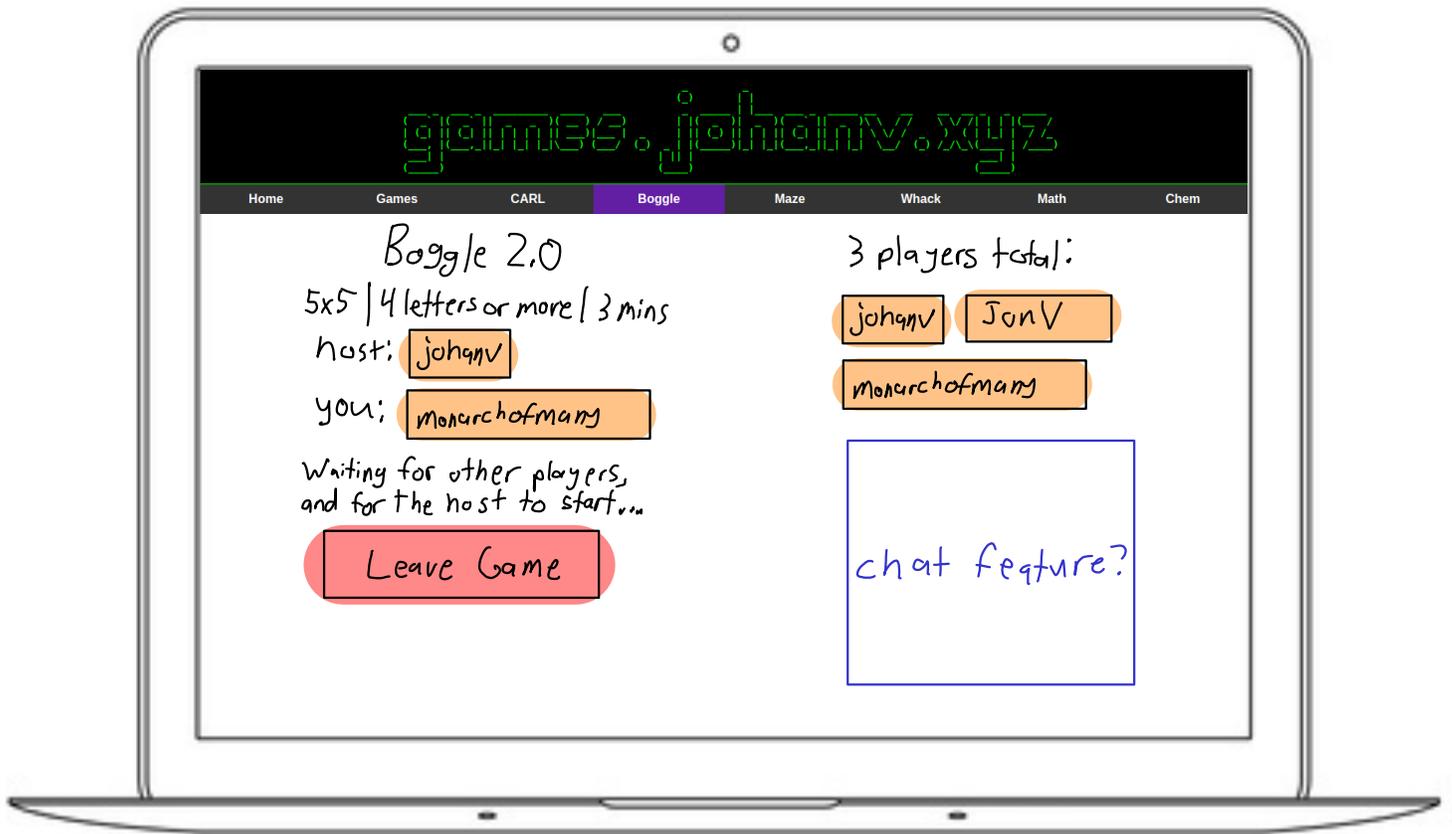


The person who created the game is called the host. They are the only one who can start the game, and when they leave, the game is cancelled. (Maybe the host privilege should be handed off to the next player, but that might cause issues with guest players or something??)

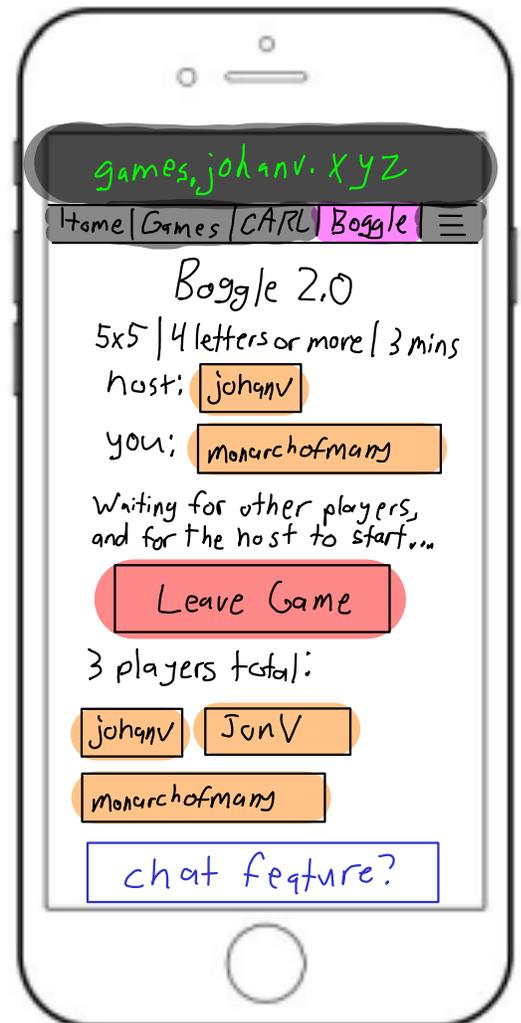
It might be good to add text/voice chat to this part so non-host players can ask the host why they haven't started yet. (Maybe they are waiting for a specific player.)



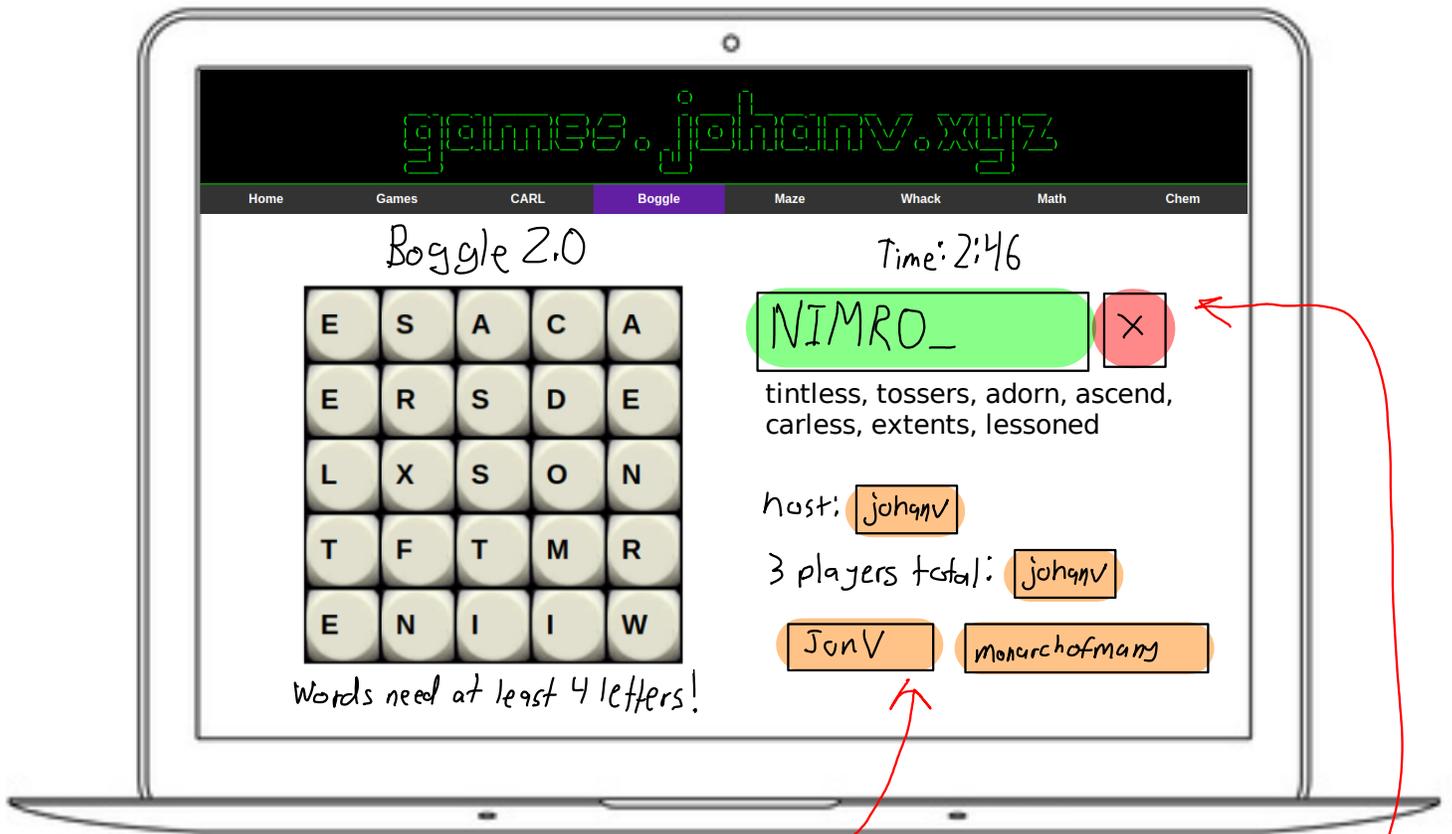
Layout — Waiting for Players (player view)



Here's the same page from the view of a player who isn't the host. They don't have the option to start the game, but when they leave, it doesn't cancel the entire game.



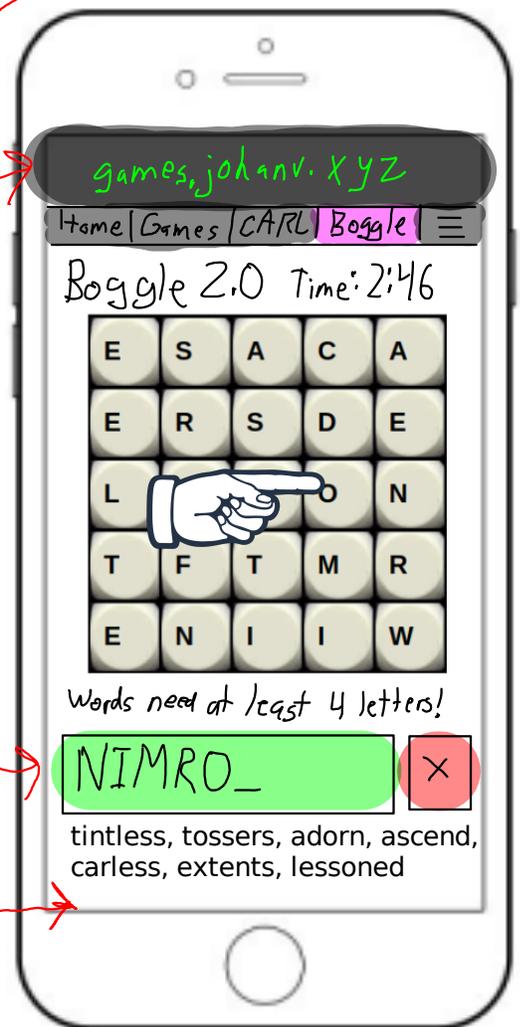
Layout - Playing



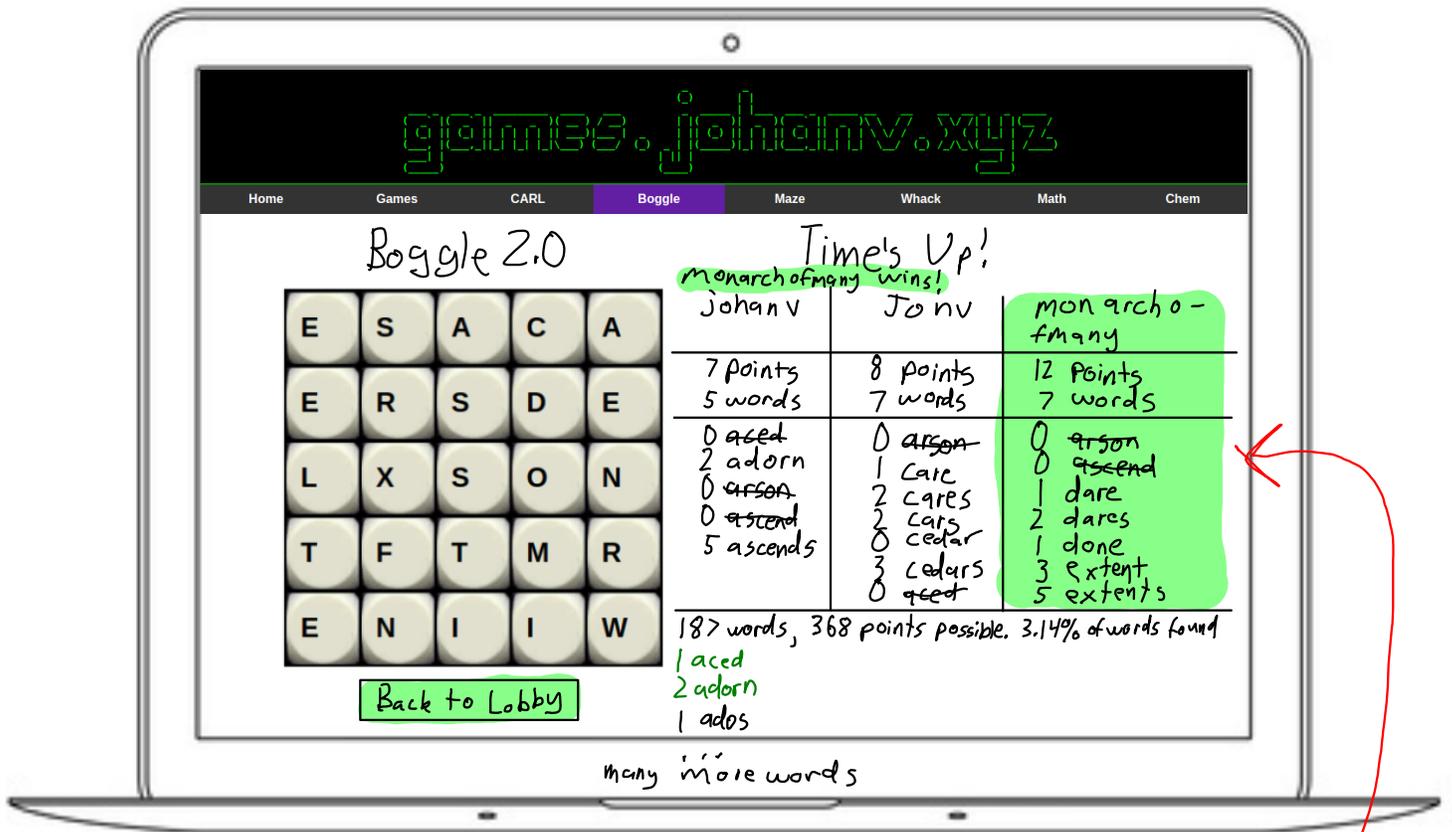
As you type/tap, the green box will fill. Only letters will be accepted when typing, and they will all be made uppercase. When you are happy with the word, you can press ENTER, SPACEBAR or tap on the green box to add the word to your list. Tapping the red X will clear the box, while backspace only removes 1 letter.

You have the option to tap or click on desktop, and to type on mobile, but the on screen keyboard might cover part of the board - an issue to investigate. Maybe the page will scroll up and the nav bar will be hidden.

If you scroll down on mobile, you will see the host and player list below.



Layout - Post Game

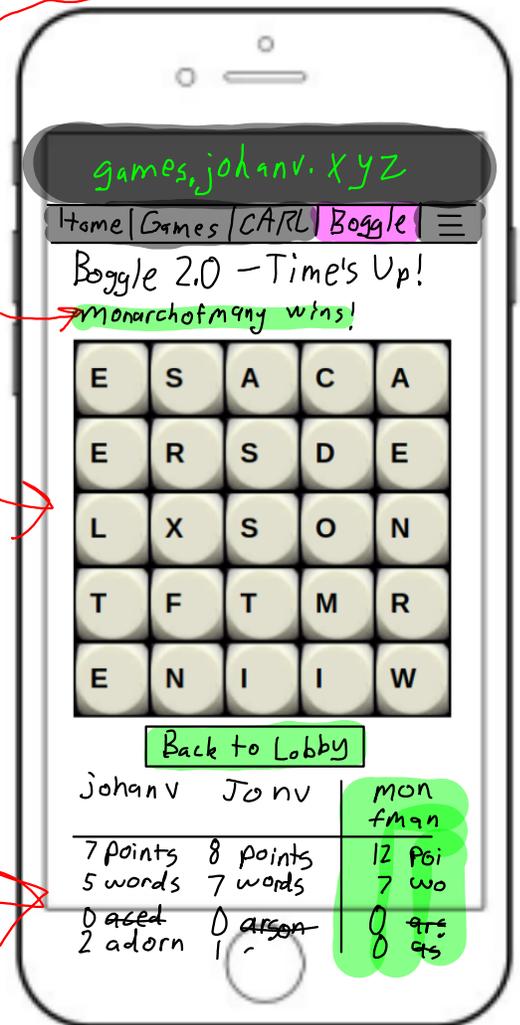


The board stays when the page is scrolled.

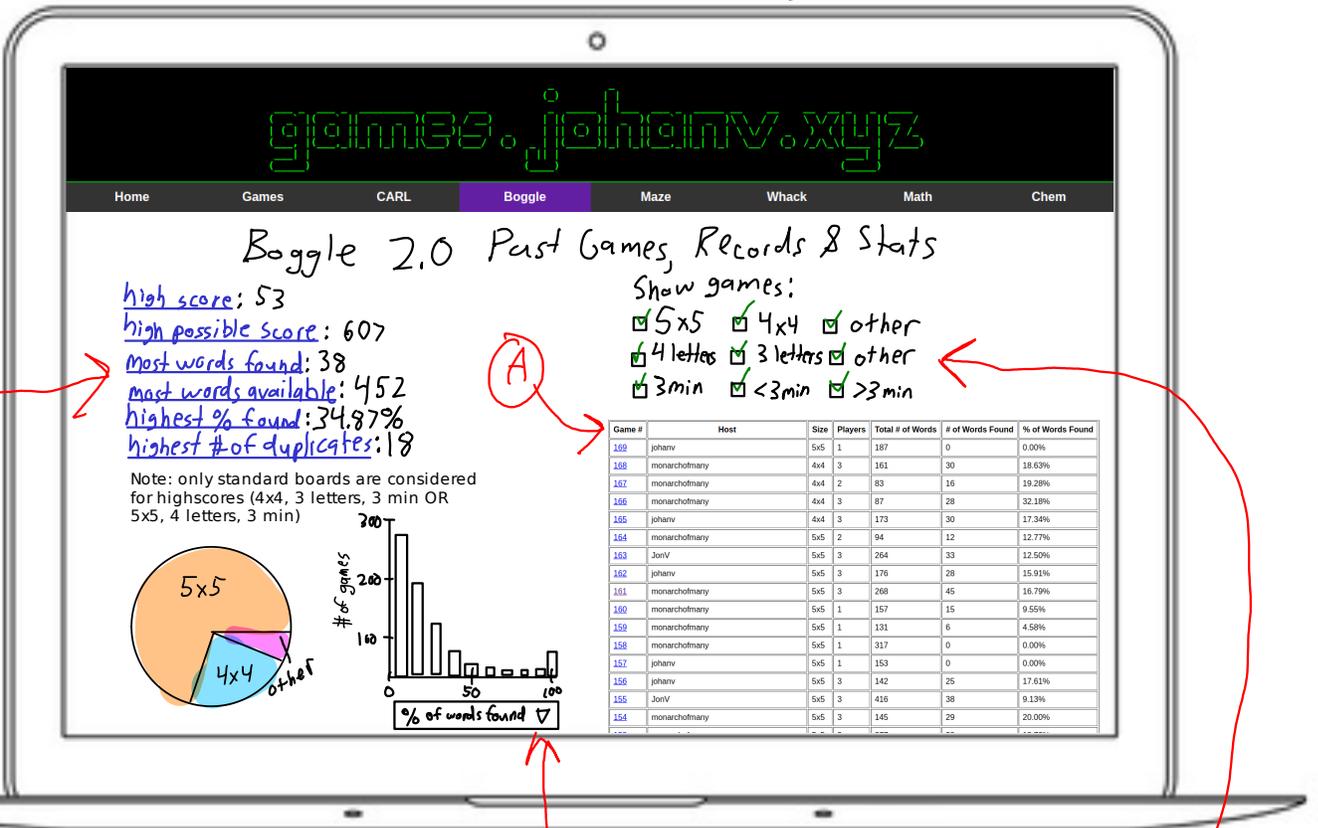
The right half of the page can be scrolled both vertically (there are always many words), and horizontally (there might be many players).

The winner is listed at the top and also their column is highlighted in green.

TODO: highscores in different categories?
like # of words found, # possible,
highest score, highest score "possible",
of duplicates, highest % found



Layout - Past Games, Records & Stats



The highscores link to the post-game page for the game that has the highscore.

You can change the x axis on the graph to any of the metrics.

Unchecking the checkboxes affects the graph, pie chart, and table, but not the highscores.

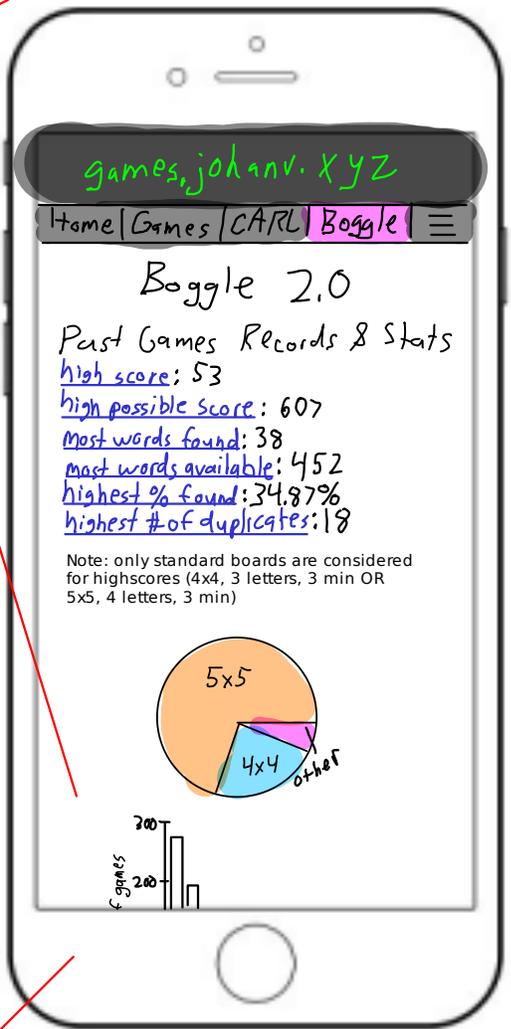
The graph columns will actually be:
 Game #, host, # players, size, letters, time, total # words, # words found, % words found, max score, winner, score

Clicking on column headers in the table sorts by that column.

other possible highscores:
 least words possible
 least score possible

I fully expect some bots ;)

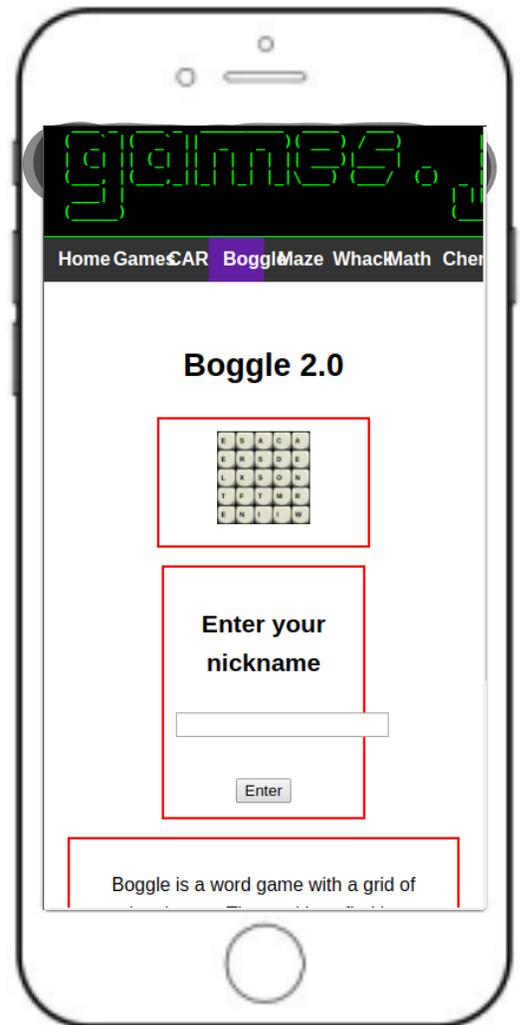
game#	host	one other columns...	max score possible	winners score
13	Johannv	xyz	9800	9001
12	JanV	huhret's m3 colors' mudiol'	123	80
11	monarchomary	...	2020	2019
10	Johanna	dum de-do duuuuuu	518	420
9	johannick	doggo	314	159
8	M_Beans	uplog	18	7



Layout - Login Test with real HTML & CSS



The red borders are added to give more info on what's going on, and they will be removed in the final version.



Layout -

