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Software Development
P05
Target ship date: 2023-6-26

Match 3 Game

Program Description

Players will be able to play a game of Coduckers on this site. There are two different game modes the user can select from. We will be extending a base candy crush game to include specials powered up ducks.

Game Modes

Every game mode will have the same base mechanic: match a line of 3 or more same duck to clear them, and matches of more than 3 will spawn powered up ducks that, when used, produce a special effect.

The two different modes will be *Coin* mode and *Clear* mode.

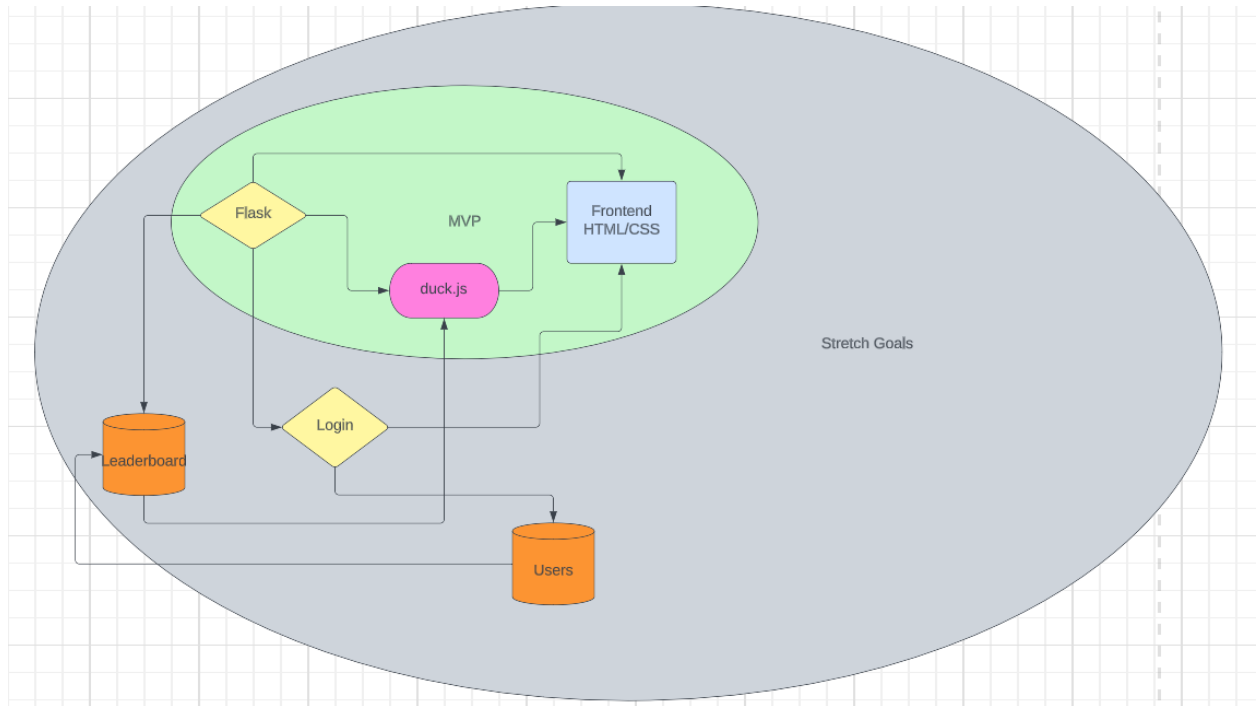
Coin mode: where new ducks will spawn as old ones are cleared.

The *Clear* mode will feature the player trying to use the minimum number of moves to clear the field. New blocks will not spawn.

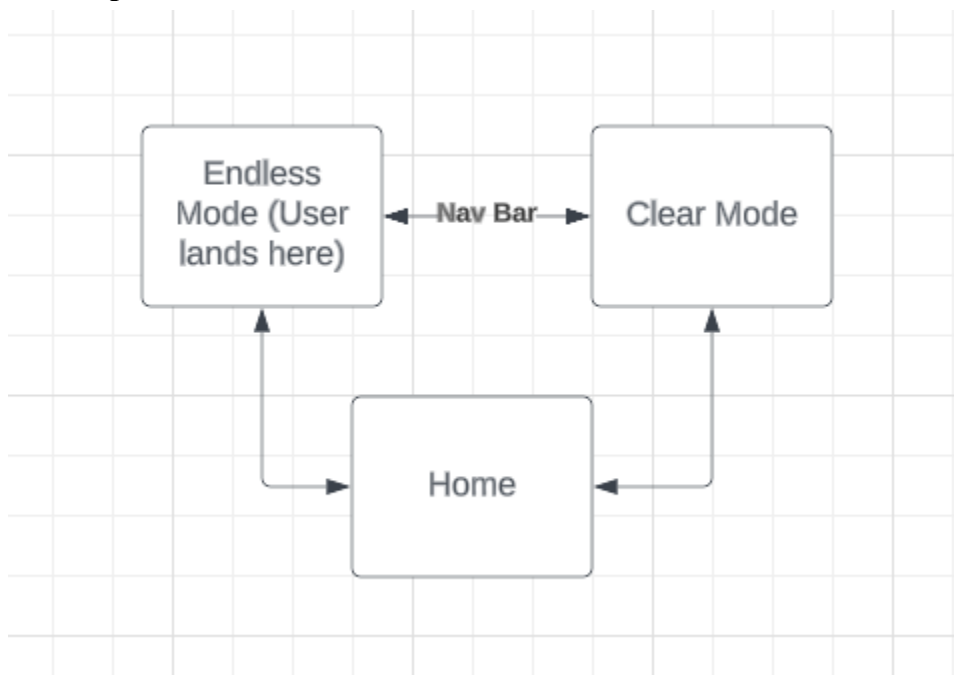
Program Components

- **Python**
 - **Flask:** serves our game to the web server
- **Javascript**
 - **Game.js:**
 - Base game (from <https://github.com/ImKennyYip/candy-crush>)
 - Regular ducks do nothing on clear.
 - Red/Green/Orange/Yellow/Purple/Blue
 - Special duck
 - (Balance to be determined later)
 - Clear adjacent 8 blocks (fat duck exploding)
 - Clear vertical / horizontal line depending on orientation of match (Striped duck)
 - Clear all ducks of the same color (rainbow duck)
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Component Interactions/Component Map



Site Map



Task Breakdown

MVP:

- ~~Create grid object to store ducks~~
- ~~Create grid graphic~~
- ~~Create duck objects~~
 - ~~Store different attributes~~
 - ~~Super duck (for match of >4)~~
- ~~Create duck graphics~~
 - ~~Different designs based on attributes~~
- ~~Create logic to to perform different operations on the grid object~~
- ~~Framework for game~~
 - ~~Score counter~~
 - ~~Coin counter (for coin gamemode)~~
 - ~~Store which game is chosen~~

Stretch Goals:

- Database to store high scores
- Pause to save gamestate through cookies
- Animations
- Login to store high scores

Jobs:

Ryan: HTML/Video Production

Jian Hong, Jeff: JS

Ziying: HTML