Memory Math-O-Rama

By: Areebah Iqbal
CS 161 - Section 01

Table of Contents

01 Project Overview

02 Finished Features

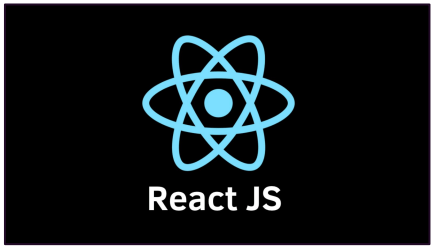
03 Feedback and Long-Term Enhancements

04 Demo of the Project

Project Overview

- Educational game designed to improve a user's arithmetic skills, while also boosting memory skills
- Users need to turn all the tiles green by selecting the tiles that correctly answer the questions
- Users will be timed and mistakes will be tallied
- Game statistics will be saved for logged in users
- Administrators can view accounts, delete non-admin accounts, and update non-admin users to admins

Project Technologies



Frontend: React and Tailwind

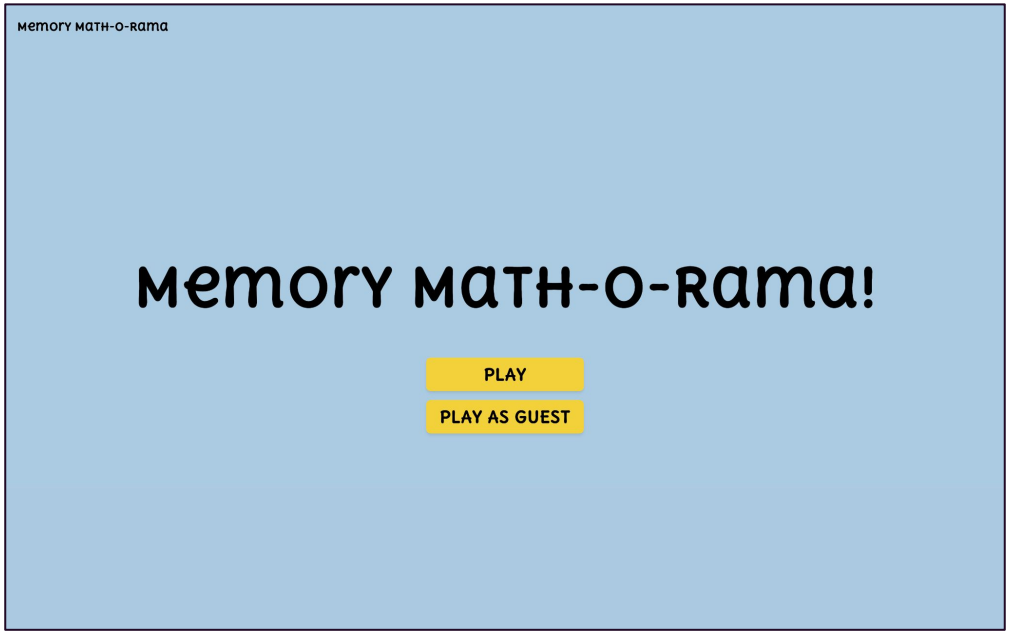
Deployment: Python Anywhere

Backend: Flask and MySQL

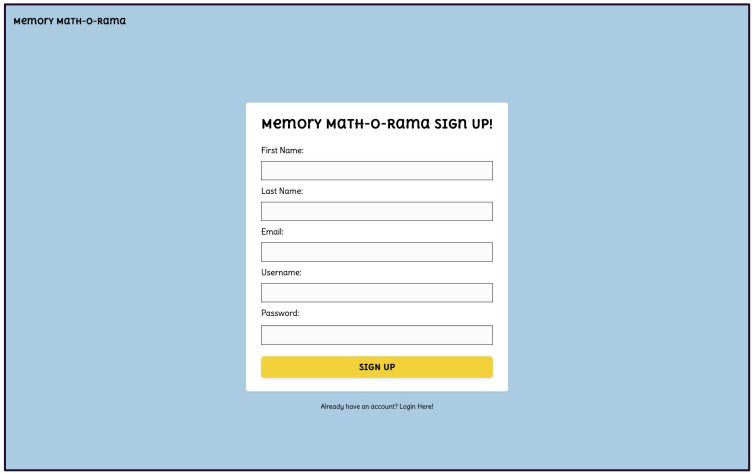
Finished Features

- Home Page
- Play as Guest Feature
- User Authentication:
  - Login, Signup, and Logout
  - Password Hashing
- Admin Page:
  - View all Accounts
  - Delete Non-admin Accounts
  - Update Non-admin Users to Admin
- Game:
  - Game Page Screen
  - View Game Instructions
  - Timer and Mistakes Counter
  - Hint Feature
  - Solve Feature
  - End Game Screen
  - Save and Update User Statistics

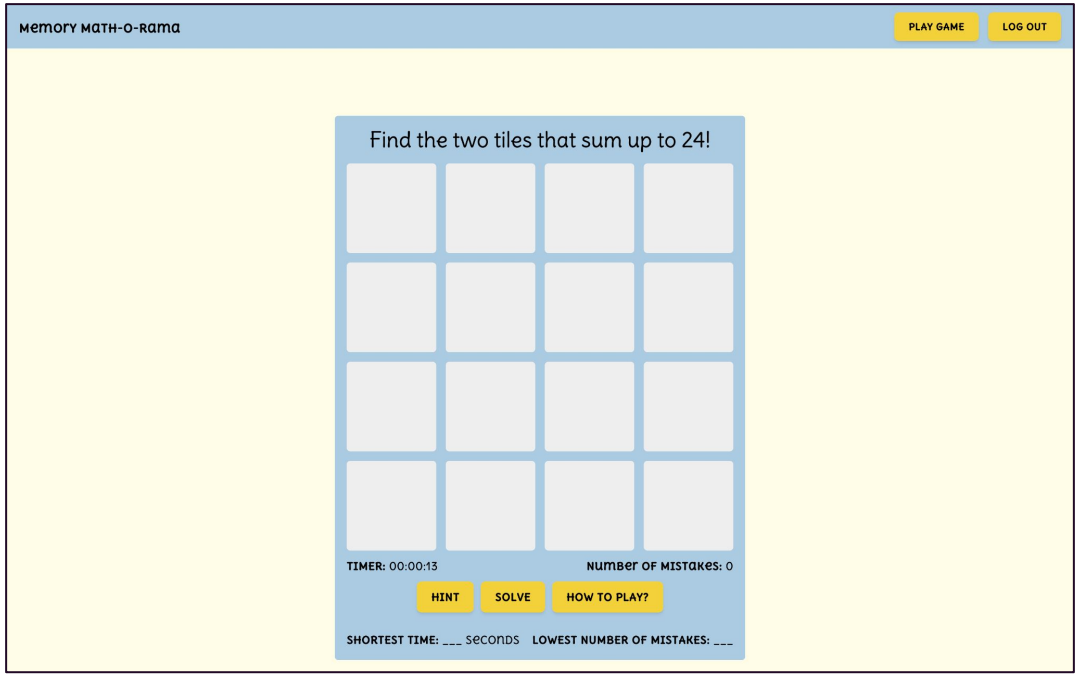
Landing Page



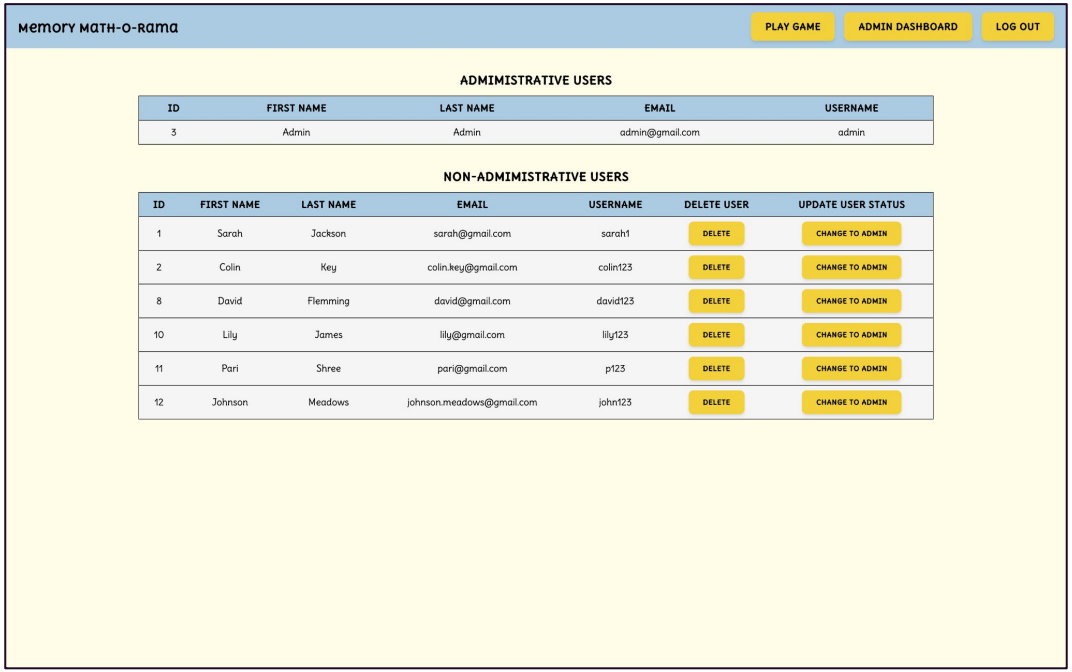
Login and Sign Up



Game Page


Memory Math-o-Rama
PLAY GAME
LOG OUT
Find the two tiles that sum up to 24!
TIMER: 00:00:13
Number of mistakes: 0
HINT
SOLVE
HOW TO PLAY?
SHORTEST TIME: ___ seconds
LOWEST NUMBER OF MISTAKES: ___

Admin Page


Memory Math-O-Rama
PLAY GAME
ADMIN DASHBOARD
LOG OUT
ADMIMISTRATIVE USERS
ID FIRST NAME LAST NAME EMAIL USERNAME
3 Admin Admin admin@gmail.com admin
NON-ADMIMISTRATIVE USERS
ID FIRST NAME LAST NAME EMAIL USERNAME DELETE USER UPDATE USER STATUS
1 Sarah Jackson sarah@gmail.com sarah1 DELETE CHANGE TO ADMIN
2 Colin Key colin.key@gmail.com colin123 DELETE CHANGE TO ADMIN
8 David Flemming david@gmail.com david123 DELETE CHANGE TO ADMIN
10 Lily James lily@gmail.com lily123 DELETE CHANGE TO ADMIN
11 Pari Shree pari@gmail.com p123 DELETE CHANGE TO ADMIN
12 Johnson Meadows johnson.meadows@gmail.com john123 DELETE CHANGE TO ADMIN

Feedback and Long-Term Enhancements

- **Professor Tsao:** Add different levels of difficulty for the puzzle
  - In the long-term, I could add other levels that incorporate subtraction and multiplication
- **Farhia:** Add a scoring mechanism, so that a user can track progress over multiple games
  - In the long term, I could create an algorithm to generate a score
- **Gargi:** Add a Sign Up button on the End Game Screen for guest users to save user statistics
  - In the long term, I could that section to the End Game Screen
- **My Long-Term Enhancements:** Add game history section and limiting number of hints

Time for the Demo!

Deployed Link: http://aiqbal.pythonanywhere.com/

Thank You!

Any questions?