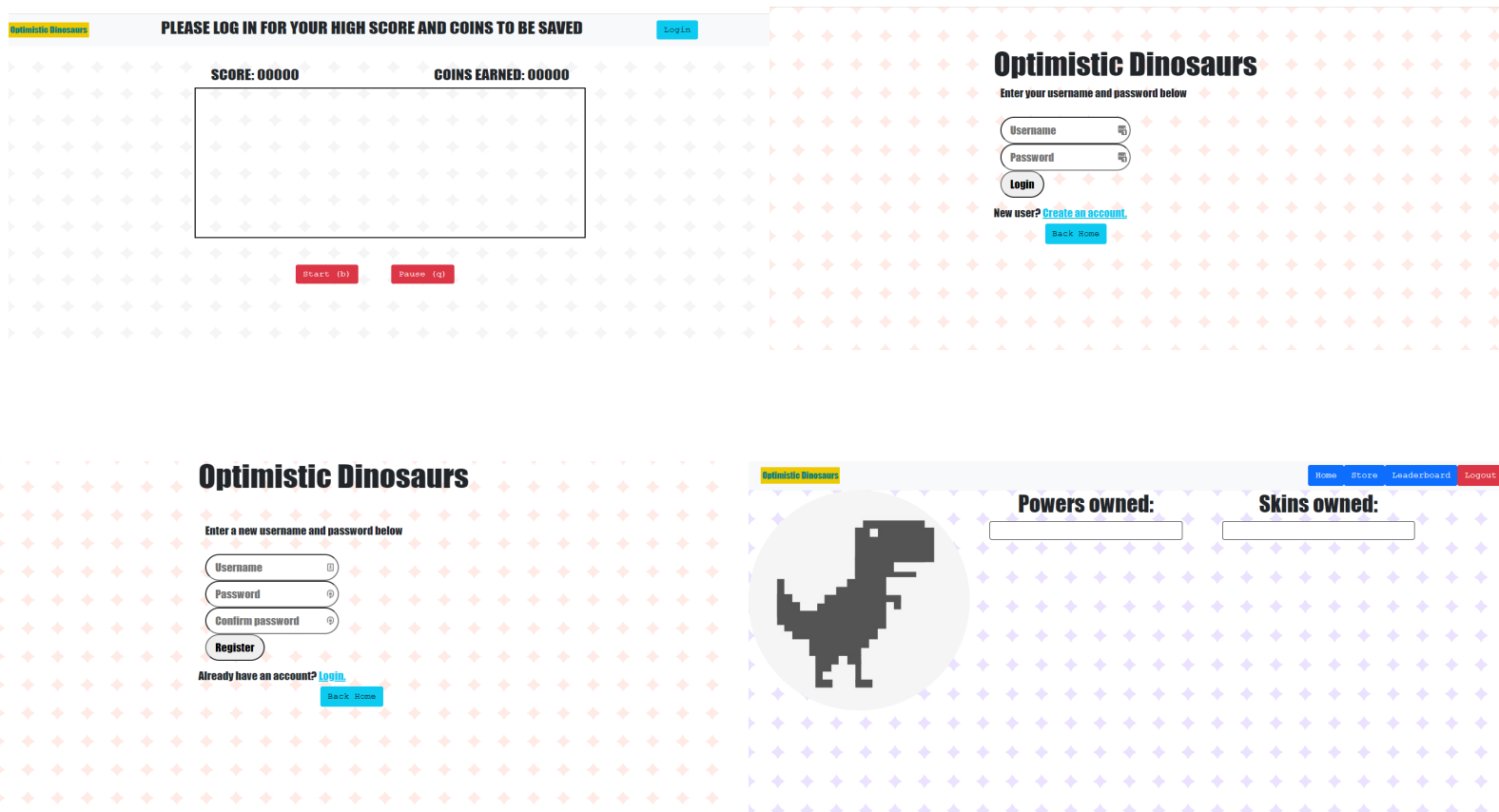


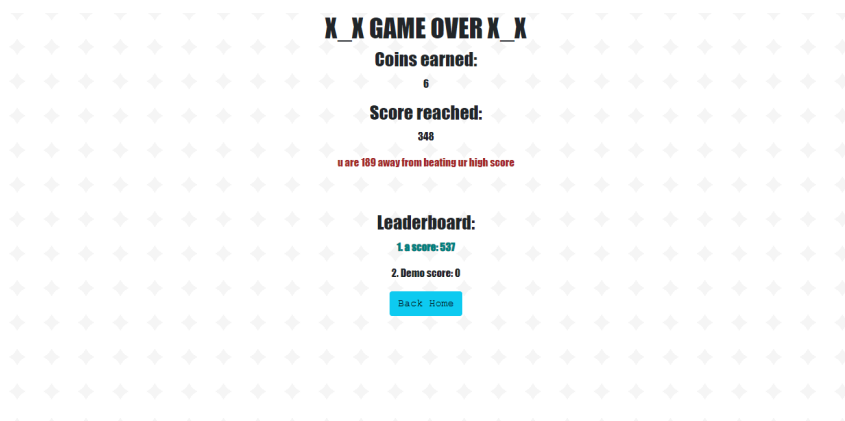
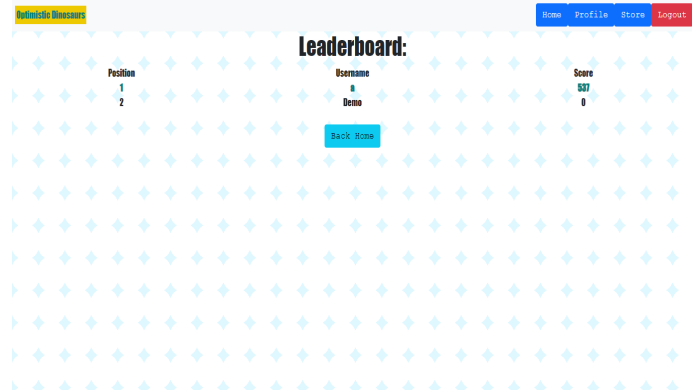
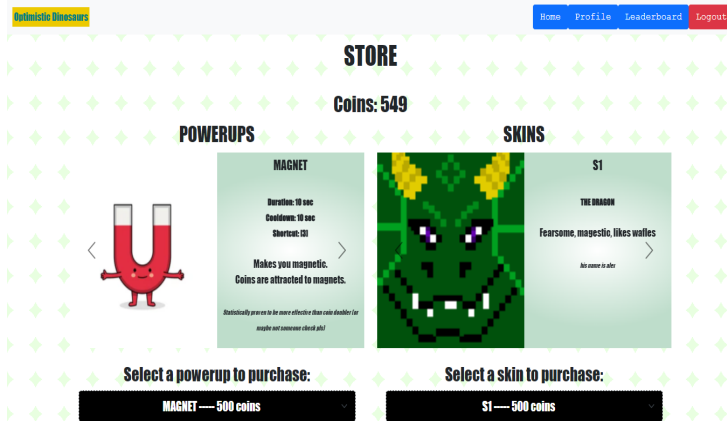
Optimistic Dinosaurs - Yuqing Wu (Zero), Hebe Huang (Umbreon), Roshani Shrestha (Pete), Justin Zou (Piggy)
SoftDev Pd2
P02 -- Run for Your Life | Design Doc
2022-03-24

Project Description:

We are making an infinite runner game, similar to the offline dinosaur game except it wouldn't be available offline. It will have the character be able to jump and duck under randomly generated obstacles. Users will control the character through the keyboard. When the character runs into an obstacle, the game ends and if the user is logged in, their high score will be uploaded to the leaderboard; this score will be the total distance traveled. The user can also visit the store and purchase items, such as skins and power-ups, using coins collected during the game. The user can view their profile to see what items they have and use them during the game.

Templates:





Program components:

Frontend

- HTML
 - “/”
 - The user can click a start button to start the game or login and then start to record their scores.
- “/login”
 - Asks the user for username and password and sends them to /auth.
 - If successful, redirects to /

- “/auth”
 - Checks the username and password from /login
- “/register”
 - Asks the user for a new username and password and checks them.
 - If successful, redirects to /login
- “/rAuth”
 - Checks the username and password from /register
- “/logout”
 - Logs the player out
- “/game_results”
 - Shows the results of the game after the character loses the game.
 - Contains the updated leaderboard
- “/leaderboard”
 - User can view the leaderboard with all the highest scores of the users in order from highest to lowest
- “/store”
 - A shop page for the user to purchase things with the coins the user collects in the game.
 - User can buy power ups
 - Magnets, reviving, double coins, invincibility
 - User can also buy skins
 - For characters
- “/profile”
 - View items that the player has bought
- “/power”
 - Adds the powerup the user bought to the database and redirects to /profile
- “/skin”
 - Adds the skin the user bought to the database and redirects to /profile
- CSS
 - We will be using Bootstrap as our front-end framework because we think it looks better visually.
 - Features we will be using:
 - Gridding system for formatting
 - Drop-down menus and carousels for profile customization
 - Buttons and different button styles
 - Form controls for the login and register pages
- JS
 - Moving obstacles towards the character so the character looks like running.
 - Respond to UP_ARROW, DOWN_ARROW key for jumping and ducking.
 - Respond to the spacebar for reloading the page.

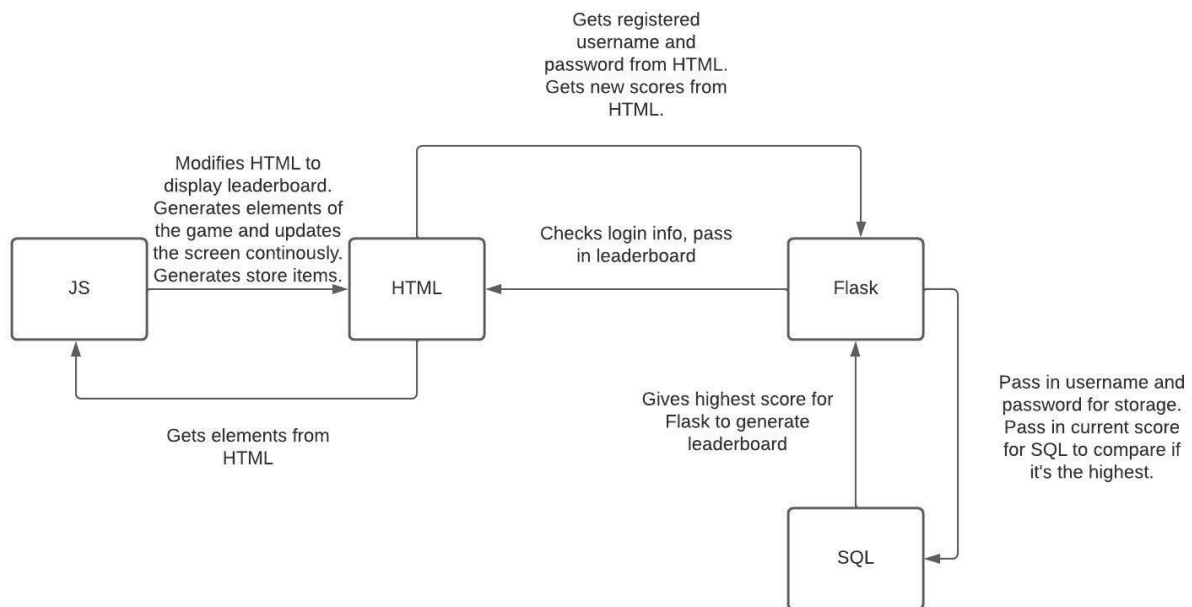
- Respond to “b” for starting the game and “q” for pausing/resuming.
- Respond to number keys for different power ups.
- Check for game ends. Stores and updates locations of obstacles.
- Generate new obstacles.
- Speeds up the game over time.
- Displaying leaderboard.
- Displaying scores.
- Updates high scores/coins.

Backend

- Python / Flask
 - Handle login / registration
 - Generate leaderboard
 - Get highest score
 - Render pages
- Databases
 - Player Database: username | password | highest_score | coins
 - Store Database: item | item_type | price
 - Items database: player | item_type | item

Component Map:

https://lucid.app/lucidchart/5a6d63a5-5b2c-438d-a813-e1269bd2772c/edit?invitationId=inv_9e8df603-817c-4c3e-b549-d19faf04a9e6



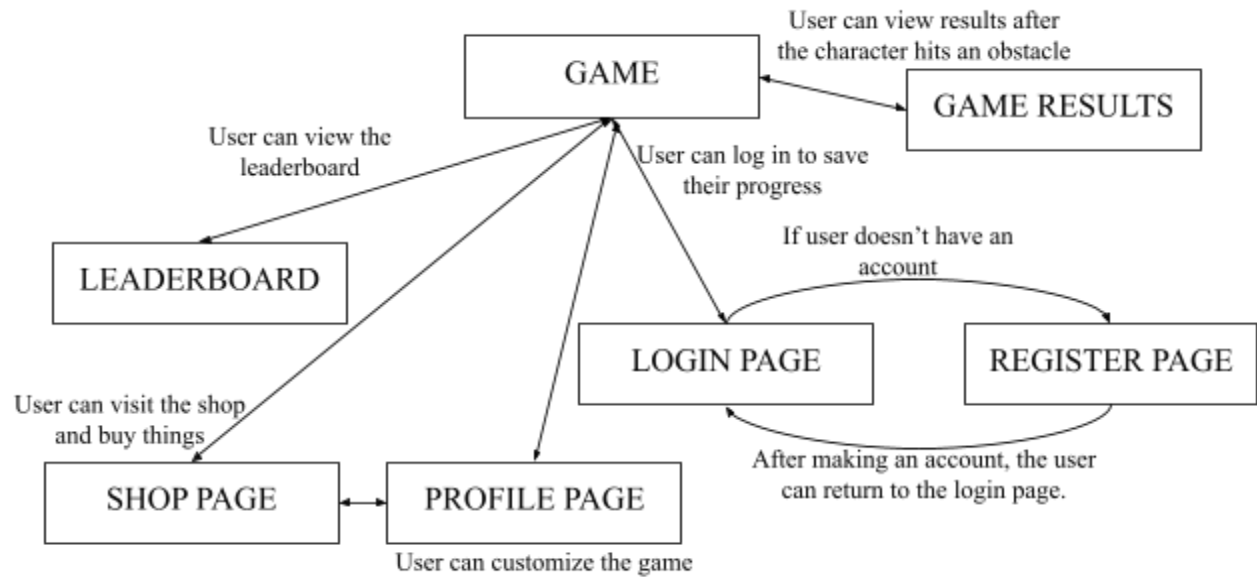
Database Organization:

USERNAME (TEXT)	PASSWORD (TEXT)	HIGH SCORE (INTEGER)	COINS OWNED (INTEGER)
username0	password0	score0	coins0
username1	password1	score1	coins1

STORE ITEM (TEXT)	ITEM TYPE (TEXT)	PRICE (INTEGER)
item0	item_type0	price0
item1	item_type1	price1

PLAYER (TEXT)	ITEM TYPE (TEXT)	ITEM OWNED (TEXT)
player0	item_type0	item0
player1	item_type1	item1

Site Map:



APIs:

No APIs were used in the making of this project

Task Division:

Frontend/Templates:

- game.html (Everyone)
- login.html (Justin)
- register.html (Justin)
- leaderboard.html (Justin, Hebe)
- store.html (Hebe)
- profile.html (Justin)
- results.html (Hebe)

Flask/Python:

- Buy things (Justin)
- Rendering pages (Everyone)

Leaderboard/backend database:

- Login + score database (Justin)
- Store database (Hebe)
- Items owned database (Roshani, Hebe, Justin)

Game Tasks:

- Updating score based on distance (Hebe)
- Implementing backgrounds/sprites/skins (Roshani)
- Generating, collecting, updating coins (Yuqing)
- Generate Obstacles (Yuqing)
- Making the character jump/duck (Roshani)
- Detect game ends (Roshani)
- Power-ups/skills (Yuqing, Roshani)
- Setting skins the user selects from game page (Roshani)

Target Ship Date:

March 24, 2022