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371 Arcade Cabinet Final Proposal

Summary

Our group would like to make an arcade cabinet style web app. Within this site there will be a variety of games, leaderboards, and personal high scores. Our login page will be used as the introduction screen to the cabinet and after login the user will be redirected to a games list that we will be developing. Each game will have a high score screen along with the master scoreboard, so players can battle to get to the top score.

1. **(10%) User authentication system (login/logout) to allow multiple users to use the webapp concurrently with other users.**

   a. User authentication system will be handled with first entering the site. We will require users to log into the website to be able to bypass the first screen and actually use the website. This will be done using Firebase Authentication Email/Password.

2. **(10%) The data of your web app should be stored on Firebase (Realtime DB or Cloud Firestore) using at least two "tables".**

   a. We will be using Firebase Cloud Firestore.
   b. Tables:

       i. Table 1

Firebase Authentication Table			
FB Key	UserID	UserPassword	DisplayName
IkLm3...	someone@example.com	******	Dwight

       ii. Table 2

Player Information

FB Key	DisplayName	Profile Picture	Personal Best Score
IkLm3...	Dwight		10,000

iii.   Table 3

Master Score Table	
Name	Score
Dwight	5000
Sam	4594
Jim	150

iv.   Table 4

Per Game Score Table		
Game	Name	Score
Asteroids	Dwight	5000
Asteroids	Sam	4594
Snake	Jim	150

3. **(10%) Your webapp shall demonstrate the power of real time events provided by Firebase that benefit your multi users that are concurrently using your webapp. Also, be sure to showcase this feature during your presentation at the end of the semester.**

   a. Our web app will utilize real time events by keeping both the master and per game scoreboard on hand. These will get updated when the user has completed the round of their game.

4. **(10%) Your data should include the following two types:**
   a. **Private per-user data accessible only to its authenticated owner**
   b. **Shared data accessible to all users of your web app**

The web app should be designed (using menu or other technique) that will take your users to a screen to see only their private information (something like browsing order history on Amazon)

    c. Private per-user Data
        i. This will show the users high scores for each game, their display name, their profile picture.
    d. Shared data
        i. This will be shown with the users total high scores from each game, combining their scores from the game to create the leaderboard.
    e. Flow Chart
        i.
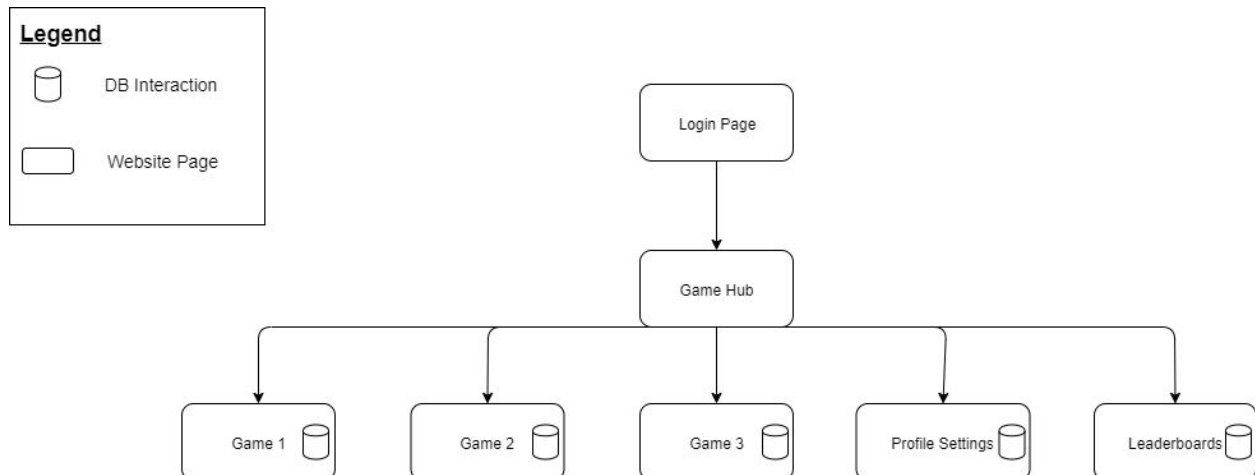
5. **(20 %) Use modern JavaScript front-end framework/libraries**

    a. We will be using VueJS from the front end framework.

6. **(5%) Display your data from the database in a nicely formatted table/list.**

    a. See tables above (question #2).

7. **(10%) Design "forms" (not necessarily an HTML `<form>`) to allow your users to make changes to the database (insert, update, and delete)**

a. The user will have an edit button on their profile page to update their display name and to insert/update/delete their profile picture.

8. **(5%) Use CSS to customize the visual styles of your web app**

   a. We are thinking about having the website laid out to be very retro and classic game themed.