Team Angora Rabbit (038)

Personalized Game Recommender

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Project Summary

Our web application will allow registered users to store a collection of their favorite video games. Moreover, users will be able to get recommendations for games they might like. If there is a game which is not immediately available within the web application's game library, users will still be able to add those as well. Users will also be able to browse through the collection of Steam games through the web application. We will be using the class provided dataset of Steam games.

Description

In today's game world, there are tens of thousands of games being created which makes users feel dazzled. When users are choosing a game to play, it's often hard for them to decide which game is better for them or which game is more interesting. Our website comes in to help users find the right game for them faster. Using our website, users can search games and add games to their library. When they want to find a new game to play and cannot decide which game to play, they can use our recommendation system. Our recommendation system will make game recommendations for users according to the current games in their library, as well as user's preferences. In addition, users can also add new games onto the platform, and once the administrator approves the new game, this game can be uploaded to our main database so that all users can see it, which makes our game database richer and more complete.

Usefulness

There are numerous games on the internet these days. Faced with so many games, users often feel confused and struggle to decide what games are suitable for them and which ones are better. With our platform, we can recommend specific games to users according to their current game library and preferences, so that users can find fun games faster. In regards to similar applications, Steam is one of the applications that also provides similar game recommendation functionality. But our website is different from Steam in the aspect of our platform. Users themselves can add games that are not from Steam, but from anywhere, and once the newly added game is approved by the administrator, the game can be added to the main database, so that every user can see it.

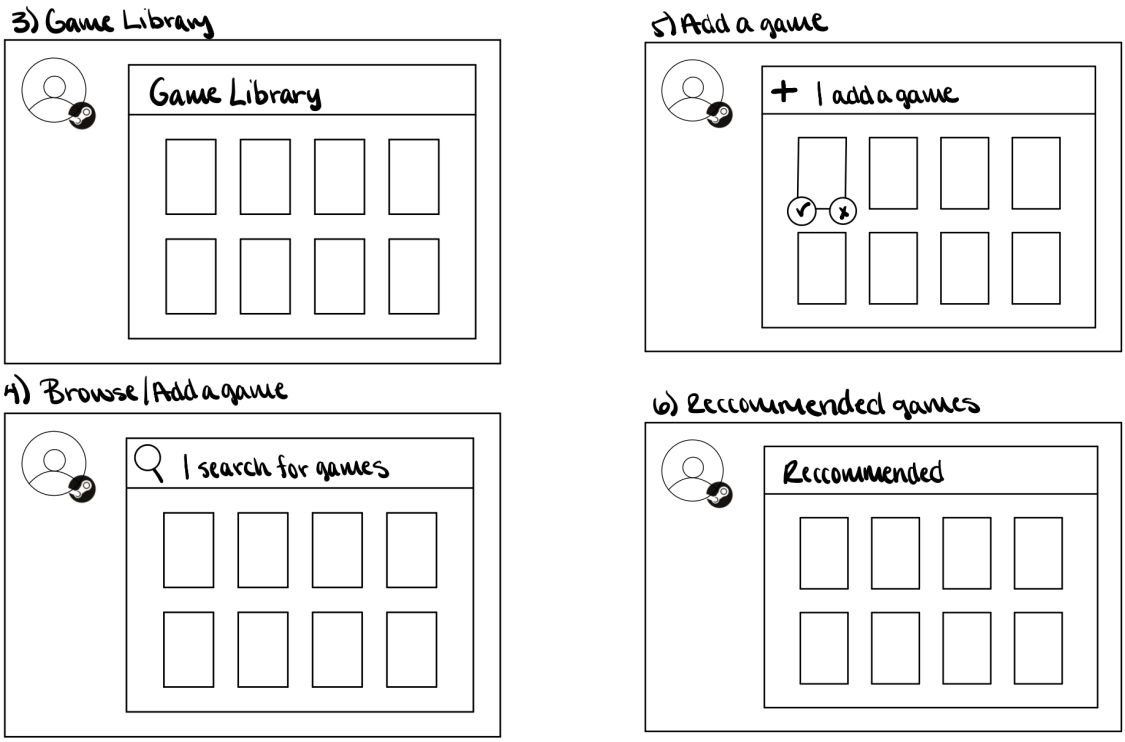
Realness

The data that we will be using is Craig Kelly's "Steam Game Data" dataset on data.world. This dataset includes a list of 13358 games that are on Steam. These games each have data associated with them such as the genre, multiplayer status, the cost, number of players, and the platform. This dataset will be expanded upon by the user base to include non-steam games and games not already in the system. Admins will also be able to add games in the same manner to keep the dataset as true to real life as possible.

Functionality

High level overview of the functionality: Users of our website can create their account and add games to their library. These games are the ones that are already in your Steam library. A user can also find game recommendations that are based off of the game that are already in their library and other information they provide. Finally, if a user plays a game that is not in the database or is not on steam, they will be able to add games as well. This will give indie game developers the opportunity to have their games recommended to people that may like it.
Lower level overview of the functionality: Steam games are stored in the original dataset. The attributes for the steam game data contain at least the same attributes as the ones on the original dataset website. We will also store data in a database table about the users who registered through our web application. Attributes which will be stored for the users include their email address, username, hashed password, type of user (normal vs admin), list of games they play, and favorite game genres. Moreover, users will be able to add games not listed within the Steam game dataset and so we can have another database table which will store games that are pending approval from admins before they are added to the entire dataset of games.

User Interface Mockup



Project Work Distribution

All 4 team members will work on writing SQL and querying data from the database to our web application. Although all team members will work on front-end and back-end, Jacob and Sethu have front-end experience so they'll be leading that, while Yang and Marvin can focus more on the back-end. More specifically, these are the tasks and how they can be distributed. Although specific members are assigned to specific tasks, all members might need to help develop in all aspects of the web application. We will have 2 teams of 2, where each team has a more experienced front-end member but both members will work on the back-end of the web application and the database operations. 1 team will focus primarily on the user database operations, while the other team will focus on the game database operations. The front-end and back-end of either the user or game aspects of the project will be developed concurrently. For example, if the user login is being worked on, Sethu will work on the front-end/back-end and Marvin will primarily focus on the back-end. Together, they will discuss what data is needed from the database and how to render it on the UI and write functionality. Listed below are the specific back-end operations we will need to implement and who will perform what tasks:

User Database Operations (user login/registration, creating/deleting users, allowing users to maintain a collection of games) - Sethu, Marvin

Game Database Operations (searching through the list of available games, adding/deleting games, game recommendations) - Jacob, Yang
Front-End Website (CSS styling, responsive design, etc) - Jacob, Sethu