Project Report 1

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Client

We intend for the app to be used by people who are looking for video game titles to play or consider. Although our app, a video game browsing app, will be concise and not overwhelming like most game browsing sites are, it would work best for people who are at least cursorily aware of what kind of games are available. In other words, it would be best suited for people who have played at least one title or at least know what genre to look for.

About 65% of adults, or more than 164 million people, play video games in the U.S., according to a new report by the game industry trade group Entertainment Software Association. Video game titles are incredibly expansive and it can be overwhelming for people to choose. We want to satisfy users' need to browse games in a minimal mobile app and have tailored game suggestions if they have games that they enjoyed in the past. A mobile app in this case would be preferred over a web-based site because our app goal is to be minimal, seamless user experience, and it's easier for people to open up an app that saves their favorite titles than to login onto a website that requires credentials. Overall, the user(s) will open up our app, search for a specific game title or publisher. They will have the option to save the game to their profile for future tailored recommendation and interest-based sorting.

Project Overview

The purpose of our application is to create a convenient way for mobile users to find video games that are similar to games they enjoyed. Furthermore, our application will also allow for mobile users to perform broad searches for video games by title, developer, platform and genre.

Currently, most video game search engines force a user to type in a specific name of a game they are already interested in. Alternatively, some of these engines may ask the user what tag(s) they would like to filter by, and then return a list of games satisfying the user's request. In all of this, however, there is a key process missing: the ability of users to find a list of games they may be interested in without knowing the exact title or tags that the games they are interested in have. In our application, the user will type in a list of games which they enjoyed playing. From there, our algorithm will find other potential games that the user may be interested in, without the user needing to specify what type of game they are looking for!

Functional Requirements

Our application will be a mobile Android application written in Kotlin using the Marshmallow API (API level 23). Our application will use the RAWG.io API to access information about specific video games, and will use the retrofit architecture to handle calls to the API. Below is a list of features which our application will have:

1. **Video Game Profile List:** Our application will include a search bar which will let users search for specific games that they have played and enjoyed. Games would include title, year published, genre, and genre-specific thumbnail. From there, the user will have the option to add the game to their list of enjoyed games, which in turn will be used to find games similar to the ones selected. Additionally, users will be able to see games they have already added to their profile list, and they will be able to delete games from their list as well.

2. **Similar Games Search:** Our application will include an option to search for games similar to the games in the user's profile list. The list of games returned by our application will be divided into pages, with 20 games per page. Additionally, the list will be sorted such that the games the user is most likely to be interested in will appear on the top of the first page, and games the user is less likely to be interested in will appear on subsequent pages. These results will nevertheless be filtered, however, so only games whose tags match some criteria of the user's list of games will be included in the list. Furthermore, the list will return suggestions which are similar enough to what games the user enjoys that for more than 50% of searches performed by users of our app, a game will be included in the first 20 games of the return list which the user is interested in playing. Lastly, there will be an overall negative correlation between page number and user interest in video games on a page. In other words, as page number increases, the games on a page will be less likely to be games the user is interested in. Besides the interest-based order, users will have the option to sort by alphabetical order, date published, or popularity (this is via RAWG.io).

3. **General Game Search:** There will be a general search feature that a user can select, which will allow for a user to search for games containing certain words in their title, games by certain developers, games for certain platforms, games for certain genres, or any combination of the above categories. Like the similar games search, the results will also be displayed in pages with 20 games per page and has identical sort options.

4. **"I'm Feeling Lucky" button:** Return a random title (or a random title based on our algorithm.) This adds the spontaneous aspect to the app.

Non-functional Requirements

1. **User Interface:** The application will have an intuitive, easy to use interface. The components of the app will not overlap with each other, and the buttons and text in the app will be large enough to easily read.

2. **Security:** The application will not compromise the security of the user's phone, and will not forward the user's preferences to anyone (including to the developers of the application as well).

3. **Legality:** All game information for the application will be acquired legally through RAWG.io, and no terms of service of RAWG.io's API will be breached. Additionally, no laws or copyright protections will be violated by the application.