CEN 4010 Principles of Software Engineering

Spring 2023

Milestone 1 Project Proposal

Group 14: The Web Warriors

GGTracker: A web app to help you track your gaming habits.

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GitHub Repository: https://github.com/cen4010-sp23-g14/ggTracker

03/03/2023

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| --- | --- |
| Revision Date | Description |
| 03/03/2023 | Initial document submission |
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GG TRACKER

Share, rate, and discover new games circling the web.

1 – Executive Summary – Jacob

One hundred years ago, Baseball was considered America's national pastime. However, in this modern age of technology, video games have surpassed it as our favorite leisure time activity. With thousands of games accessible from a multitude of devices at any given time, it can be disorientating trying to keep track of every game that is of interest to the user.

Our team is introducing GG Tracker. A state-of-the-art application for the user to stay informed and discover all their video game needs. GG Tracker allows the user to share, rate and discover new games circling the web. We intend to appeal to those in the gaming industry who want a platform to express their opinion and stay informed on both old and new video games. With some video game collection apps on the market currently, we expect mild competition and are confident we will be able to build a strong market position.

GG Tracker was created by Siobahn Devlin in 2022 and was inspired by her enjoyment of video games. In 2022, Siobahn was tasked with an assignment to create a mobile application with her team for the Mobile Apps course. Now in 2023, her and her new team are looking to expand on GG Tracker by redesigning the app for the web, adding new features, designing a faster and more efficient architecture, and redesigning the appearance for a better user experience. Along with a motivated team with interests in video games, art, and technology, there is no limit to GG Trackers capabilities.

2 – Competitive Analysis: David & Peyton

Main Competitor: GGapp

|  |  |  |
| --- | --- | --- |
|  | GG Tracker (Us) | GGapp (Competitor) |
| Game Library | ✔ | ✔ |
| Create Lists | ✔ | ✔ |
| Add Friends | **✖** | ✔ |
| Profile Customization | ✔ | ✔ |
| Improved Search Options | ✔ | **✖** |
| Comments Sections | ✔ | **✖** |

Comparing our own design with that of our main competitor GGapp (or GG|), we found many of our features to be shared universally. However, a major strength of GG Tracker lies in its improved search options, allowing users to better find the games they want. They may filter through games by release date, popularity, and more. In addition, each game may be viewed alongside its own comments section, encouraging user interaction, something GG| lacks in. Also, the option to add friends did not seem to have many benefits outside having quicker access to view another user’s profile, which we decided was a redundant feature. Generally, our app will implement the best features shared between the video game tracker apps that we researched.

3 – Data Definition (in alphabetical order): Siobahn

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| --- | --- |
| **Term** | **Definition** |
| Comments | A user can comment below a games page to share their opinion with other users |
| Custom List | A custom list that the user can add games to |
| Game | The video game being interacted with |
| Hours | The amount of time a user has played a certain game |
| Password | The password provided by the user and to be stored in the database |
| Profile | A user’s profile featuring their name and list of games |
| Rating | The rating of the game as provided by the API |
| Release Date | The release date of the game |
| Summary | The summary of the game as described by the API |
| Title | The title of the selected game |
| User | The person interacting with GGtracker |
| Username | The username provided by the user and to be stored in the database |
| Wishlist | A list of games the user wishes to purchase in the future |

4 – Overview, Scenarios, and Use-Cases: Peyton

GG Tracker is an online app that allows users to discover new video games on the market in real-time as well as see which games are most recently released. Imagine an avid video-game consumer looking for a clean website to search for recent games online where they are met with easy-to-use, efficient search results.

Users can search for games they are interested in playing where they can view its rating, description, and comments from other users. The user can add the game to their own custom lists, a wish list, or their backlog list. For games the user has completed, they can rate the game, mark the game as “playing”, “in progress”, or “completed” to keep track of their backlog, and record how long it took to beat the game.

Users of this web application are expected to have little experience with applications like it, offering simple functionality and ergonomic design. Users are met with an abundance of game options without the feeling of being overwhelmed.

5 – Initial List of High-Level Requirements - Siobahn

1. Login/Logout Functionality: The user can log in and out of their account. They will be able to see their personal backlog lists and favorite games.

2. Main home page will show a list of trending games that the user can click on.

3. Main home page can sort games based on trending, rating, or system.

4. Any game that the user can click on will have the following attributes: game details, the ability to be added to the user's backlog, the ability to add to the user’s wish list, and the ability to rate the game

5. Ability to search for games: The user will be able to search for a game in the search bar and view information such as overall rating, description, and systems it is available on.

6. Ability to create custom lists: The user should be able to create a custom list to add games to. For example, this could be a top 10 list for a certain genre the user has played or a custom wish list.

7. User Account Functionality: The user will be able to view their backlog list, wish list, and create new lists

8. Ability to change between dark and light mode: The user should have the ability to change the website’s theme between a dark and a light mode

9. Comments on a per game basis: Each game should have a comment section where users can discuss it.

6 – List of Non-functional Requirements - Siobahn

1. Performance: The web app will be expected to deliver query results to the user in under 2 seconds. Traversing between pages of the web app should be under 1 second.
2. Usability: The web app should be very intuitive for the user. The web app should follow familiar design patterns that other information-based websites use.
3. Accessibility: The web app should be compatible with screen reading technology and adhere to Web Accessibility Initiative recommendations
4. Expected load: Since this is a student project, we do not expect there to be heavy load on the site.
5. Security requirements: we will be using Firebase as a backend which handles login/logout functionality securely. There should be no personally identifiable information other than the user’s name.
6. Storage: very little storage will be needed. Storage will be used for saving lists in a JSON format. Data such as images and descriptions of the games will be queried from the API every time they are needed and will not need to be stored in the database.
7. Availability: the web app will be hosted on GitHub Pages and should have limited downtime

7- High Level System Architecture: Kanksha

Several types of software will be used to develop our web app. We will use Figma, a powerful UI design web app, to help us create the visual design for our project. All developers on the team will be using Visual Studio Code for the main development activities and debugging will be done either through Firefox or Chrome depending on the developer's preference. The main languages we are using are HTML, CSS, and JavaScript.  Bootstrap will be one of the main frameworks used for building this website.  For the backend, we are considering using Firebase for user login/logout functionality and database services.

List of core APIs available:

* RAWG Video Game Database API which queries metadata for tags, genres, developers, publishers, official websites, cover art, descriptions, etc.
* Player activity data: Steam average playtime and RAWG player counts and ratings.
* IGDB API shares similar data as the RAWG API with developers who want to build apps and services with other facilities and can be used by other projects as well.

8 – Team

Siobahn: Team Lead, Scrum Master, GitHub Master, Software Developer

Peyton: Front-End Team Leader & Software Developer

Jacob: Software Developer

David: Back End Team Lead, Software Developer

Kanksha: Software Developer

9 – Checklist

A) Means of communication: DONE - Discord

B) Time slot to meet: DONE - 8:00PM – 10:00PM Monday’s

C) Front End Team Lead: DONE - Peyton

Back End Team Lead: DONE - David

D) GitHub Master: DONE - Siobahn

E) Subject to Change

- Front End: DONE - HTML/CSS

- Backend: JavaScript, Firebase

F) Skill of each Team Member DONE

- Siobahn: Project Management (GitHub, JIRA), Backend Development

- Peyton: HTML/CSS/JavaScript, UI Implementation and Design

- Jacob: HTML/CSS/JavaScript

- David: Backend Development, HTML/CSS/JavaScript, Database Structure

- Kanksha: HTML/CSS/JavaScript

G) Team Lead: DONE - Siobahn