

# Final Project - Video Game Bookcase

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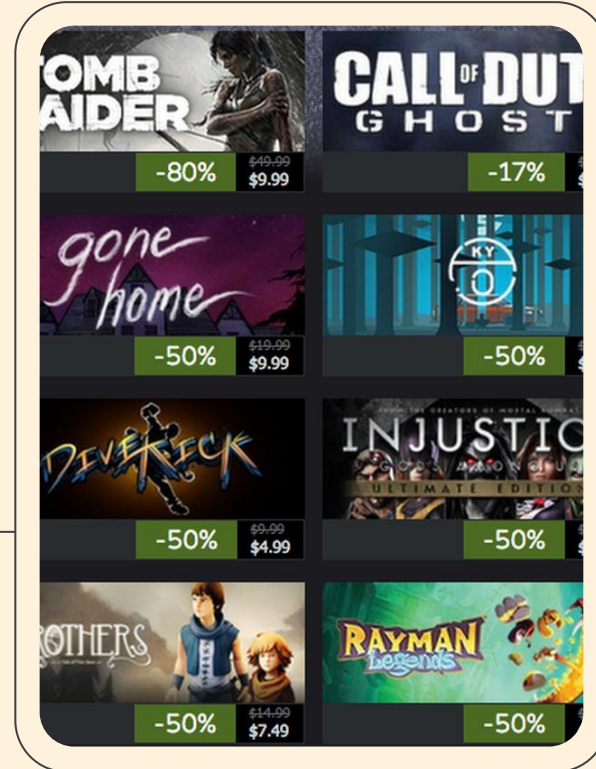
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# Agenda

1. Problem and Vision
2. Research
3. Re-scoping Solution
4. Demo
5. Next Steps

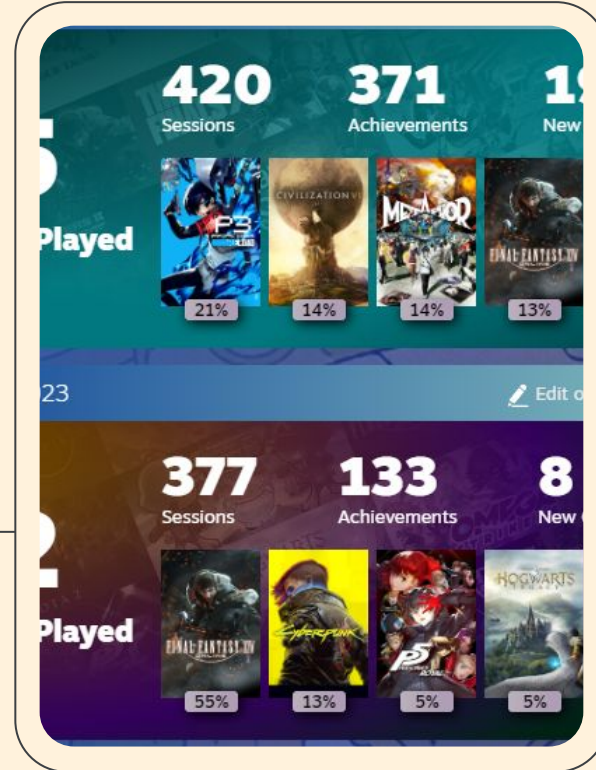
## The Problem

**Steam** is the most popular digital video game marketplace on PC, with more than **100,000 games** and a peak of **40 million concurrent users**. Steam's popularity has resulted in a decrease in physical video game sales. Physical game collection is now a dying art.



## The Vision

An app that displays game information in a bookcase format. The app would update in real-time, showing what games is currently being used and who is playing it. It is intended to be displayed on large monitors as a decoration piece.



# Research

## Information Sources

- Steam Web API
  - User Summary
  - User Owned Games
  - Game Details
  - Achievement List
- Responses are in JSON format
- API Key is required to access information
  - Is provided for free

```
17390: {
  success: true,
  - data: {
    type: "game",
    name: "SPORE™",
    steam_appid: 17390,
    required_age: 0,
    is_free: false,
    detailed_description: "<img class='bb_img' src='https://shared.akamai.steamstatic.com/store_i
Cell to Galactic God, evolve in a universe of your own creations.</h2>Play through Spore's <
unique style, challenges, and goals.<br><br>You can play how you choose: Start in Cell and
civilizations on new planets. What you do with your universe is up to you.<br><br>Spore gives
universe: creatures, vehicles, buildings, and even starships.<h2 class='bb_tag'>Features</h2>
Macrocsmic</strong> From tide pool amoebas to thriving civilizations to intergalactic star
through Five Stages:</strong> It's survival of the funnest as your choices reverberate throu
about the game: "<img class='bb_img' src='https://shared.akamai.steamstatic.com/store_item_as
Galactic God, evolve in a universe of your own creations.</h2>Play through Spore's <strong>fi
style, challenges, and goals. <br><br>You can play how you choose: Start in Cell and nurture
civilizations on new planets. What you do with your universe is up to you.<br><br>Spore gives
universe: creatures, vehicles, buildings, and even starships.<h2 class='bb_tag'>Features</h2>
Macrocsmic</strong> From tide pool amoebas to thriving civilizations to intergalactic sta
through Five Stages:</strong> It's survival of the funnest as your choices reverberate throu
short_description: "Be the architect of your own universe with Spore, an exciting single-
```

## Challenges

- Lack of documentation
  - Some endpoints need API keys, while others do not
  - Outdated output examples
  - No official documentations for certain endpoints
  - Some endpoints do not work
- Re-scoping is needed

### Steam Web APIs available

**ISteamNews:** Steam provides methods to fetch news feeds for each Steam game.

**ISteamUserStats:** Steam provides methods to fetch global stat information by game.

**ISteamUser:** Steam provides API calls to provide information about Steam users.

**ITFItems\_440:** Team Fortress 2 provides API calls to use when accessing player item data.

# Research - FAIR Assessment

1

## Findable

Every user and game has a unique ID attached to it. Each data point has rich information attached to it, with some having their own unique identifier (i.e genre).

2

## Accessible

All results can be obtained through a REST API request. However, the API is not well-documented, and some metadata does not have any known official retrieval methods (i.e genre list)

3

## Interoperable

All results are written in JSON format. The information returned uses a variety of data types, including: DateTime, HTML formatted text, links.

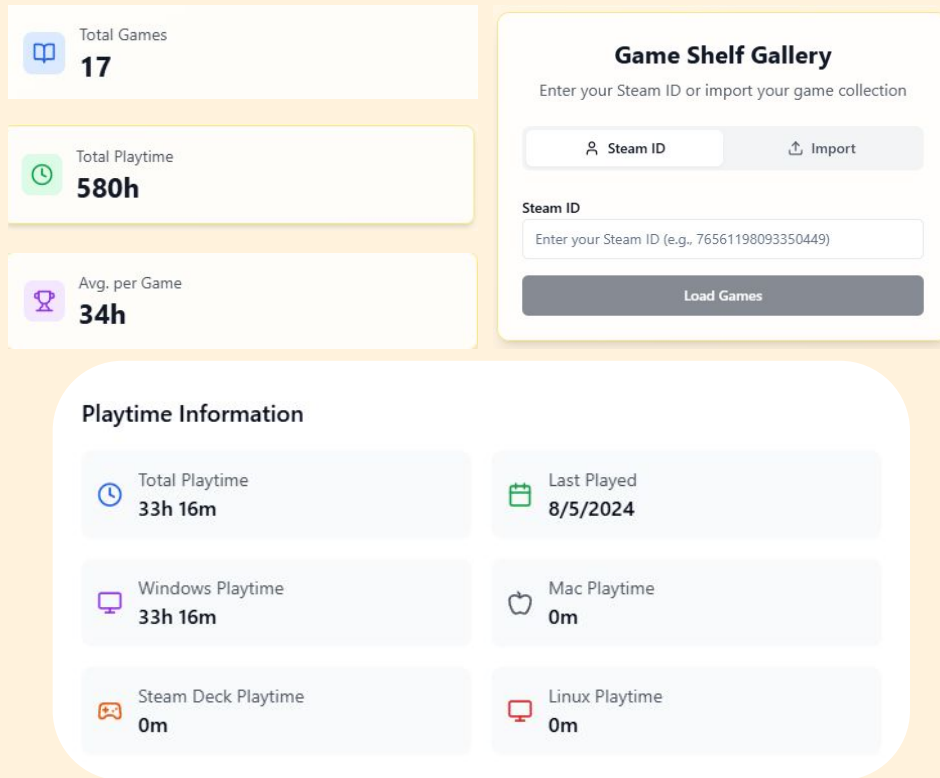
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## Reusable

Steam provides an agreement for usage of the APIs. Rate limiting and API keys are also implemented. However, not every endpoints have API keys, and this fact is not officially documented.

# Re-scoping Solution

- User Summary
  - Name
  - Profile Picture
  - Total Games Owned
  - Total and Average Playtime
- Game Information
  - Name and description
  - Cover art
  - Playtime by system type
  - Last play time
- Other Features
  - Get shelf using Steam ID
  - Export/Import custom list
- Minimum Prerequisite
  - Steam Profile must be public





# Short Demo



# Next Steps

## Testing Plan

The app is a mix of back-end functionality, external service integration and user journeys, I plan to implement 4 layers of testing in sequential order:

- Unit Testing
- Integration Testing
- Smoke Testing
- Performance Testing

## Improve Data Retrieval Method

Steam API is rate-limited at 100,000 request per hour. This can affect edge-cases with a huge number of games.

## Design and Use-case Consideration

The final vision - being able to display on a variety of monitors, mean that the application needs to look good at multiple screen sizes and orientation.

# Thank You!

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