

CS 5551 Project Proposal

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Project Goal and Objectives

Motivation

For this project, I have chosen to explore a personal hobby: Board Games. This is a growing hobby space that has seen a tremendous amount of growth over the past five to ten years. I have been actively involved in this hobby myself for the last four years, with my current collection including over 80 games and more than 40 expansions to those games. I host regular game events, and with such a large and continually growing collection, I have been looking for better ways to organize and manage that collection.

Significance

While comparable hobby communities such as baseball card or sports memorabilia collectors have a number of resources available to them that fill this role of collection management, the board game community is severely lacking in such tools. Only one website exists - www.boardgamegeek.com - that even attempts to catalog all board games as they are released and provide users tools for collection management. According to 2013 statistics, this site has over 780,000 users and received 570 million page views during 2013 [1], which demonstrates the size of a potential user base. Despite the heavy traffic, this site has become large, unwieldy, and has a notoriously poor search engine. No other gaming website generates even a fraction of the web traffic or approaches the scope of content available. Numerous small niche projects have been started to tackle single aspects of this problem, none of which have gained any wide traction in the community. This means there is room for a more comprehensive tool that can bring together many of the strengths smaller projects have attempted to provide.

Objective

My objective for this project is to create a set of web services capable of managing a user's collection and providing a single point of reference for personally relevant board gaming-related information. I plan to create a single tool that will provide services that should join together all of the currently separate aspects of collection management to improve the hobby experience. I additionally plan to provide tools to help customize game meta-data to user's preference, instead of relying on existing static meta-data. For this project to serve its purpose, it should be optimized for the mobile user.

System Features

The following list represents a selection of features I consider to be essential capabilities a tool such as this should provide:

- Search Tools that allow users to search for Board Games by Name or Publisher
- Distinguish between 'base' game titles and expansion titles, and provide tools to group expansions with their corresponding base game
- Collection Management tools that allow users to add or remove games from their collection
- Game Recommendation tools that generate a list of games from the user's collection satisfying some provided criteria (i.e. 'Games that can be played with six players' or 'Games that play in less than 30 minutes')
- 'Buy List' Management that allows users to track games they intend to purchase in the near future
- Play-through tracking that records information about when each game was played and some statistics about that play
- Game Price comparisons among online vendors (i.e. Amazon, eBay, coolstuffinc.com, etc.)

- Search Tools to find reviews or 'How to Play' videos on YouTube and save desired video references for future access
- Capability to store links for other web documents such as FAQ Guides, Errata, or Game Manuals

Related Work

As mentioned above, there are very few projects that have explored the collection management space for Board Game hobbyists. Boardgamegeek.com released iOS [2] and Android [3] apps that aim to provide limited or incomplete access to all the features of the website, but they both suffer from poor implementation, incomplete functionality, and low adoption rates. The iOS version currently holds a rating of only 2 out of 5 stars, and neither version reaches anywhere close to the same audience of the website.

BoardGameGeek also released an XML-based REST API [4] for accessing read-only content found from their site with the hope of inspiring hobbyists to develop tools on their own, but very few applications exist that attempt to do more than simple tasks with that data. There were two interesting examples I found. The first is a relatively new website called Board Game Menu [5]. With this site, you provide your BoardGameGeek user name, answer a few questions about what type of game you want to play, and it generates a random 'menu' of games that fit the criteria as recommended games. This is a feature I consider to be important for any collection management tool to provide. Another standalone application called WhatToPlay Deluxe [6] provides a much more comprehensive set of interactive questions designed to choose a game from your BoardGameGeek collection to play. This application has not been worked on in almost three years, and the lack of support and compatibility issues have prevented it from expanding further.

A sample of tools found for collection management in other hobbies gives an idea to the variety of tools that exist in this space already. From open-source tools for music collectors [7], movie enthusiasts [8], recipe collectors [9], and LEGO enthusiasts [10] to free apps for book collectors [11], coin collectors [12], or baseball card collectors [13], these tools share several common features. First, they rely on an external source of truth, such as IMDB for movies or US Mint reports for Coin Collectors, to help define the collection. Second, they provide the user with means to organize and sort their collections. Third, they access external price sources or other information to help determine the value of one's collection. Fourth, many of these tools provide ways to share the collection with others or make recommendations based on their current collection. These are all elements I believe are necessary to make a complete hobby collection management system viable.

Backup Project

Another area I feel strongly about is Aquariums. I have personally maintained aquariums of some form or another for nearly 15 years. One of the most difficult tasks in managing aquariums, and in particular salt-water aquariums, is the routine maintenance. There are a variety of tasks that have to be performed (water changes, chemical treatments, water tests, rotating food schedules) that can be challenging to keep up with.

If my first project is not acceptable, I would like to work to develop a tool to help manage the process of maintaining and supplying personal aquariums. This could include collecting data on the feeding and space requirements of fish owned, calendar-based notifications of when tasks need to be performed or supplies restocked, as well as compatibility analysis for potential new acquisitions (i.e. Aggressive vs Communal behaviors, schooling properties, etc.) compared to the currently owned fish.

Bibliography

- [1] - <http://boardgamegeek.com/thread/1096301/2013-boardgamegeek-analytics>
- [2] - <https://itunes.apple.com/us/app/boardgamegeek/id295454682?mt=8>
- [3] - <https://play.google.com/store/apps/details?id=com.boardgamegeek>
- [4] - http://boardgamegeek.com/wiki/page/BGG_XML_API&redirectedfrom=XML_API#
- [5] - <http://boardgamemenu.com/>
- [6] - <http://s3.amazonaws.com/WhatToPlay/download.html>
- [7] - <https://www.behance.net/gallery/21540589/Hobby-Collection-django>
- [8] - <http://sourceforge.net/projects/datacrow/?source=directory>
- [9] - <http://sourceforge.net/projects/recipeTools/?source=directory>
- [10] - <http://sourceforge.net/projects/brickutils/?source=directory>
- [11] - <https://play.google.com/store/apps/details?id=net.lp.collectionista>
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