

Technical Report - **Product specification**

BoardGamesHub

Course: IES - Introdução à Engenharia de Software

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Project abstract: BoardGamesHub is a web application for comparing board games prices across multiple web stores, providing their current price and showcasing their price history.

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1 Introduction

This project was made in the scope of the class “Introduction to Software Engineering”, with the intention of learning and applying software engineering best practices. In this case, the proposed method was the agile process, alongside with the use of user stories and scenarios, and the theme was given by the students. Our product choice was a web application for board games price comparison, the BoardGamesHub.

This report describes the product concept, the architecture and the information model in which the system is based on.

2 Product concept

Vision statement

The BoardGamesHub application will be used by board games players to find the lowest price of a certain game across the offers of many vendors. This idea was based on already existent websites for price comparison, like “Kuantokusta” and “Trivago”, with the difference being the scope of the product.

The choice of the scope “Board games” was made based on the fact of it being a not very well explored subarea within the price comparison area, and it being a business domain known by one of the team members.

In that sense, alongside with the price comparison, our website will showcase detailed information about the games and a price history to assist the user on making an even better choice on what game, where and when to buy it.

Personas and Scenarios

John is our common user, he is 47 years old, male, and lives in California with his wife.

He's a big board game collector and always wants to keep track of when the newest board games are coming out.

Due to this hobby being very expensive, he requires a way to help him keep growing his collection with a somewhat tight budget.



Matilda is our admin, she is 36 years old, female, and is currently engaged.

She's a very busy person due to running multiple businesses, so her time is short. She wants things done fast and efficiently.

When she hears that there are problems in Board Games Hub, she wants them fixed fast. Be they wrong products in the catalog, outdated information or an inappropriate review.

Scenario 1:

John has been looking forward to buying "Voidfall" but has been waiting for a sale to come around. Suddenly an e-mail notification saying that this game was on sale.

Scenario 2:

Matilda heard a complaint from a company that they do not wish to have their game displayed on our frontend. She is quick to act.

Product requirements (User stories)

John (User):

Epic: Finding the best price for a specific game.

- As John, I want to see all the prices for a game across multiple stores, so that I can buy the game for the lowest price there is.
- As John, I want to consult the price history of a board game, so that I can identify the best time to buy it.

Epic: Searching and comparing various games.

- As John, I want to have access to a list of all board games, along with filters to help me find games within certain categories.
- As John, I want to have recommendations based on the games I play/look at so that I can find similar games with a better price.
- As John, I want to edit my account preferences (price range, board game types, language, etc) so that they match my wants when searching for a game.
- As John, I want to search for board game designers, publishers, companies and artists, to help me find similar games with a better price.

Epic: Wishlist management.

- As John, I want to be able to create a wishlist, so that I can keep track of all the board games I wish to get.
- As John, I want to be able to update my wishlist, in order to add new games that interest me and remove games I'm no longer interested in.
- As John, I want to receive a notification informing me that one of my games in my wishlist is currently on sale, so that I can buy it for a lower price.

Matilda (Admin):

Epic: Website management.

- As Matilda, I want to be capable of adding a new game to be tracked in that site, in order to give more game options to the clients.
- As Matilda, I want to be capable of removing a game upon vendor request, so that the site follows the business rules.
- As Matilda, I want to be capable of updating some game information that it's not automatically fetched, to keep the website up to date.
- As Matilda, I want to create events and send them to my subscribers, to attract new sales.

3 Architecture notebook

Key requirements and constraints

<Identify issues that will drive the choices for the architecture such as: Will the system be driven by complex deployment concerns, adapting to legacy systems, or performance issues? Does it need to be robust for long-term maintenance?

Identify critical issues that must be addressed by the architecture, such as: Are there hardware dependencies that should be isolated from the rest of the system? Does the system need to function efficiently under unusual conditions? Are there integrations with external systems? Is the system to be offered in different user-interfacing platforms (web, mobile devices, big screens,...)?

E.g.: (the references cited in [XX] would be hypothetical links to previous specification documents/deliverables)

There are some key requirements and system constraints that have a significant bearing on the architecture. They are:

- The existing legacy Course Catalog System at Wylie College must be accessed to retrieve all course information for the current semester. The C-Registration System must support the data formats and DBMS of the legacy Course Catalog System [E2].
- The existing legacy Billing System at Wylie College must be interfaced with to support billing of students. This interface is defined in the Course Billing Interface Specification [E1].
- All student, professor, and Registrar functionality must be available from both local campus PCs and remote PCs with internet dial up connections.
- The C-Registration System must ensure complete protection of data from unauthorized access. All remote accesses are subject to user identification and password control.
- The C-Registration System will be implemented as a client-server system. The client portion resides on PCs and the server portion must operate on the Wylie College UNIX Server. [E2]
- All performance and loading requirements, as stipulated in the Vision Document [E2] and the Supplementary Specification [15], must be taken into consideration as the architecture is being developed.>

Architeturual view

→ Discuss architecture planned for the software solution.

→ include a diagram

Module interactions

→ explain how the identified modules will interact. Use sequence diagrams to clarify the interactions along time, when needed

→ discuss more advanced app design issues: integration with Internet-based external services, data synchronization strategy, distributed workflows, push notifications mechanism, distribution of updates to distributed devices, etc.>

4 Information perspective

<which concepts will be managed in this domain? How are they related?>

<use a logical model (UML classes) to explain the concepts of the domain and their attributes>

5 References and resources

<document the key components (e.g.: libraries, web services) or key references (e.g.: blog post) used that were really helpful and certainly would help other students pursuing a similar work>