DOKUZ EYLUL UNIVERSITY

ENGINEERING FACULTY

DEPARTMENT OF COMPUTER ENGINEERING

CME 3201

Database Management Systems

Final Report

WEB VIDEO GAME MARKETING

By

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ABSTRACT

The project presents a digital web based marketing platform for the users to be able to purchase, review and comment about a game as desired. The project also requires the users to create a user account by registering into the system to be able to operate the above functions. The project aims to expand digital marketing system for gaming industry to be an acceptable competitor to local stores. This eliminates some minor problems such as stock, access issues, shipment etc. since digital platform does not require these factors and also concludes extra features like review and commenting system. In addition, the project offers plenty of visual content to boost user attraction and satisfaction. Further information will be present down below more detailed.

Completion Report

2.1 Completed Parts

- Visual design of the website is completed using *HTML* and *CSS*. Almost every graphical factor is implemented without an error, excluding a few minor visual bugs.
- Product data are received from the internet and then inserted into a database system that is also created using *Microsoft SQL Server*.
- The database system mentioned above is integrated into the web application using *ASP.NET*.
- After a successful implementation of the database, other functional parts are created using *ASP.NET MVC* such as login/register, dynamic showcase of products, transaction system, sorting/searching of products, review/commenting and voting system.
- An overall exception handling is completed.

2.2 Incomplete Parts

Besides a couple of extra features that was not considered to be added to the project, there is one minor tasks that is worth mentioning.

- Review system shows the votes of users successfully but fails to calculate the overall score of the game.

2.3 Challenges and Solutions

Naturally, in the coding process, there were some new concepts to the group that was a bit difficult to comprehend. Luckily it was possible to find solutions rather quickly and complete tasks without any problems.

2.3.1 Encountered Problems

Data Retrieval : Fetching input data from an .html page to the ASP Controller was one of the first challenges that was encountered.

Multiple Data Processes : Some processes required multiple data to process properly.

Where is the user? : To display the user on top of the page, the header required the user object.

2.3.2 Solutions

Data Retrieval : Using BeginForm structure, received input is sent to the Controller and processed there. In actions that do not require secuity factors, this retrieval is done by using a query string operation.

Multiple Data Processes : Using Tuple structure, necessary variables were first created and initialized, and then passed over.

Where is the user? : Implementing the controllers via "Using", header could access to the user global variable.

Functional Decomposition

3.1 Diagram of MVC Pattern

MVC Pattern of Game Web Marketing
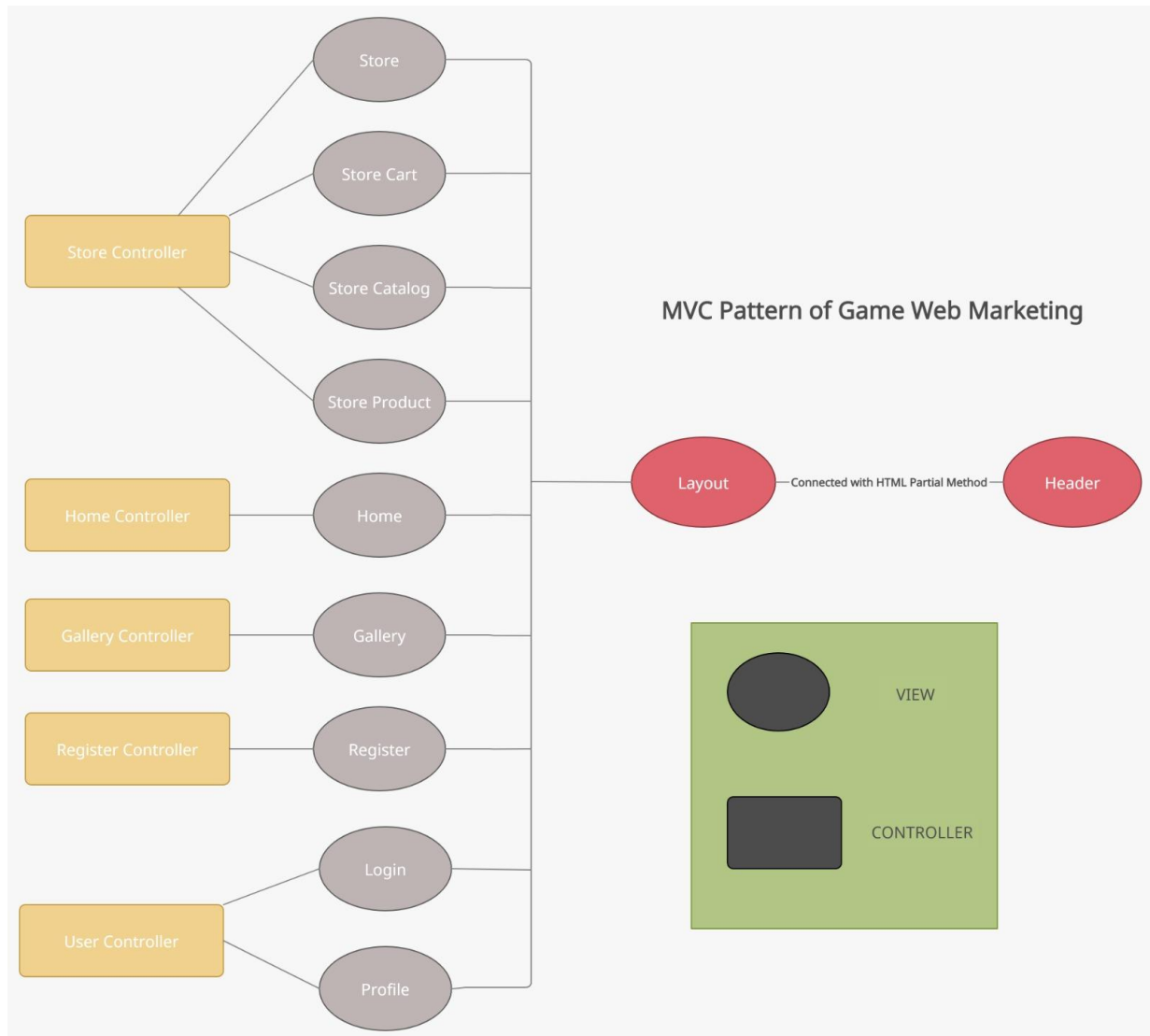
3.2 Explanation of Diagram

<u>Home Controller</u> : The database system that was created via MS SQL previously was defined here and all the necessary entities and relations are created. The controller includes only a Home View that uses the models from the entities that are created from the SQL database system.

<u>Register Controller</u> : Connects to a Register View, that retrieves the necessary information to sign a user up using the BeginForm structure. These information are processed in the ActionResult in the Register Controller, which checks if the given information already exists or not and then registers the user to the system.

<u>User Controller</u> : User controller contains a global variable defined specifically to store the Active User. The Login ActionResult in this controller gets a parameter as login information from the login page via BeginForm structure. The information that are received get controlled within the ActionResult, and defines the user as the Active User if the parameters match with the database. This controller also redirects the user to the profile page if the user is logged in, passing every necessary information to be shown in the profile page of the user.

<u>Store Controller</u> : All the ActionResult's that are related to any transaction and/or displaying of the products are here. Firstly, the Store ActionResult uses a query operation to sort the most popular and best selling games and then send it to the store page to be displayed later on. The Store Cart ActionResult can only be accessible if a global active user is defined, and returns all the games that exist in the Shopping Cart database.

The Store Catalogue ActionResult returns every game that exist in the database. This controller also gets a parameter using BeginForm get method. The returning parameter determines the sorting method, searching keywords and other functions that concern displaying of the products.

The Search ActionResult gets a parameter from the catalogue, and if the parameter exists in the database, it delivers the returning value to the Store Catalogue ActionResult.

AddCart ActionResult simply adds the given parameter to the shopping cart and then updates the database. RemoveCart removes the parameter value from the database and then updates.

UpdateLibrary ActionResult gets the products from the Cart as parameter and then inserts them into the library database and saves.

AddComment ActionResult gets the review input in the product page as a parameter and then includes it inside the review table as well as with the user ID and the game ID. This review input containts a comment and a vote.

Gallery Controller : This controller is only for entertainment purposes. The controller returns pre-selected images and contents to the page and displays them to the users. The controller also sends a few games that are sorted by their release dates to display the newly released games.

High-Level Organization

Site Map of Game Web Marketing
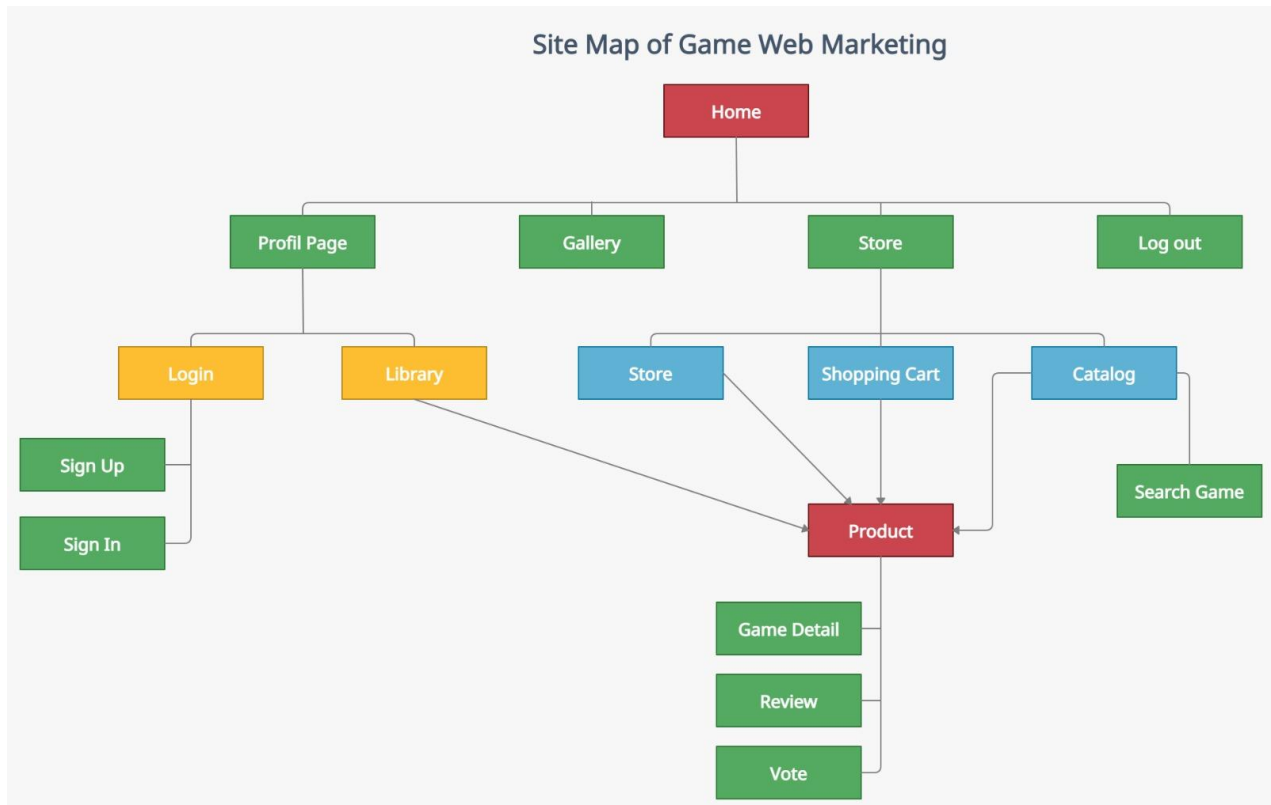
Clickstreams & Layout

Starting from the main page, users can display some articles about the products and can have an insight about the overall quality and offerrings of the page. Although the main page is what the users face with when entering the website, the main tool to navigate through the other pages, is the navigation bar that was implemented in the header section.

- The *main page* includes a couple of articles as well as tabs that display *best selling games* and *the most popular games* in the market so that users can acquire a basic and fundamental information about the products.

- Moving on, if wanted users can display *the store page*. *The store page* button has a dropdown feature that expands into the categories of the store, i.e. *Store Cart*, *Catalogue* and *the main store*.

- *The main store* has a couple of examplary products as well as with *featured games*, *best selling* and *the most popular* tabs as mentioned above.

- If desired, users can dive into the *catalogue* which offers all the games that are on the market; with better searching and sorting options, and details of the products.

- When purchasing a product, one can simply open *the product page*, coming upon a very detailed page about the product that ALSO contains *a review section* which includes *comments* that are made about the game by other users. This page contains a tab that displays other games that are related to that genre too. Later on, giving the user has bought the product per se, they can return back to the page, and review the game as well as giving a score using *the voting system*, which may or may not encourage others to purchase the product.

- If the user wants to purchase the game, they can basically add the product to *the shopping cart*. This cart lets users to keep the games that they've added, to be purchased later on in bundles. The bundling system provides users with the possibility to search through the market without making transactions one by one. Users can also remove a game from the cart, if added by mistake or is not wanted anymore. After done, user can checkout all the items in the shopping cart, which also shows the price of each item and the total. The checkout delivers these products to *the library* of the user.

- *The library page* can be opened using *the Profile Page* button on the navigation bar. This page displays the products that have already been purchased. Along with these parts, the page also contains tabs with new released games and their videos.

- Although most of the website is accessible to anyone, some pages like *the Profile Page, Store Cart*. To be able to access these pages, one should either sign in to the website or sign up. Both of these functions lead to different pages where users can proceed. Users can logout from the system using a button at the very top of the page.

Implementation
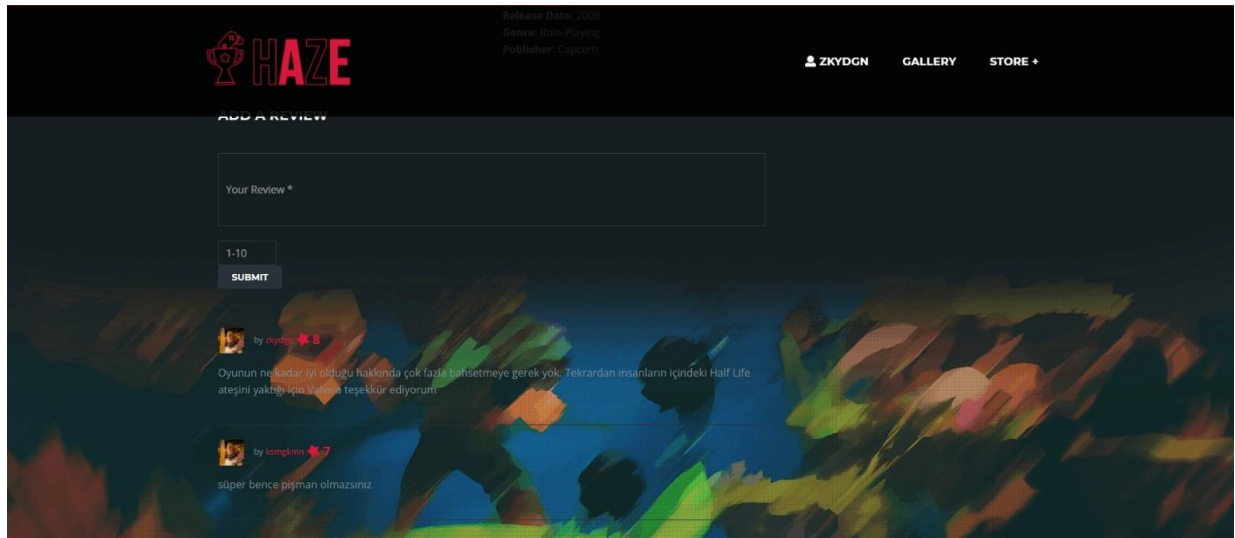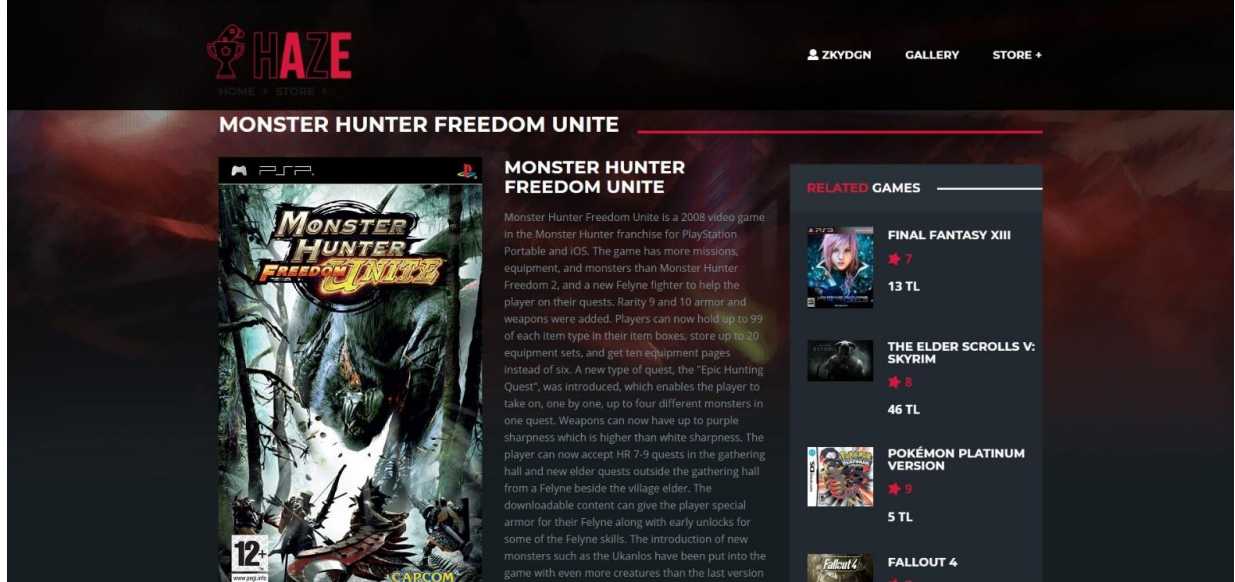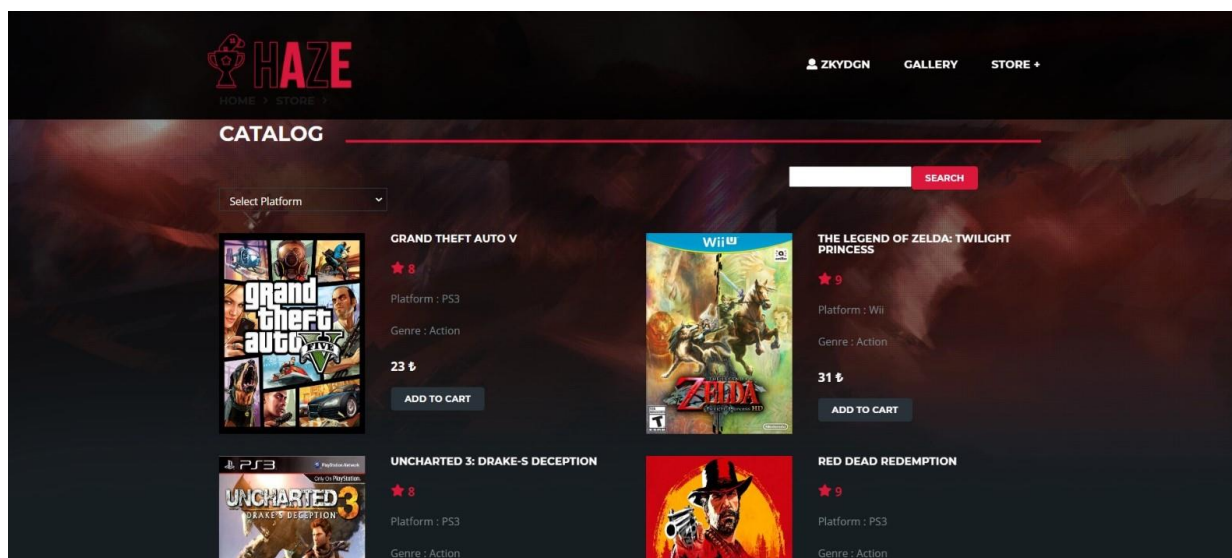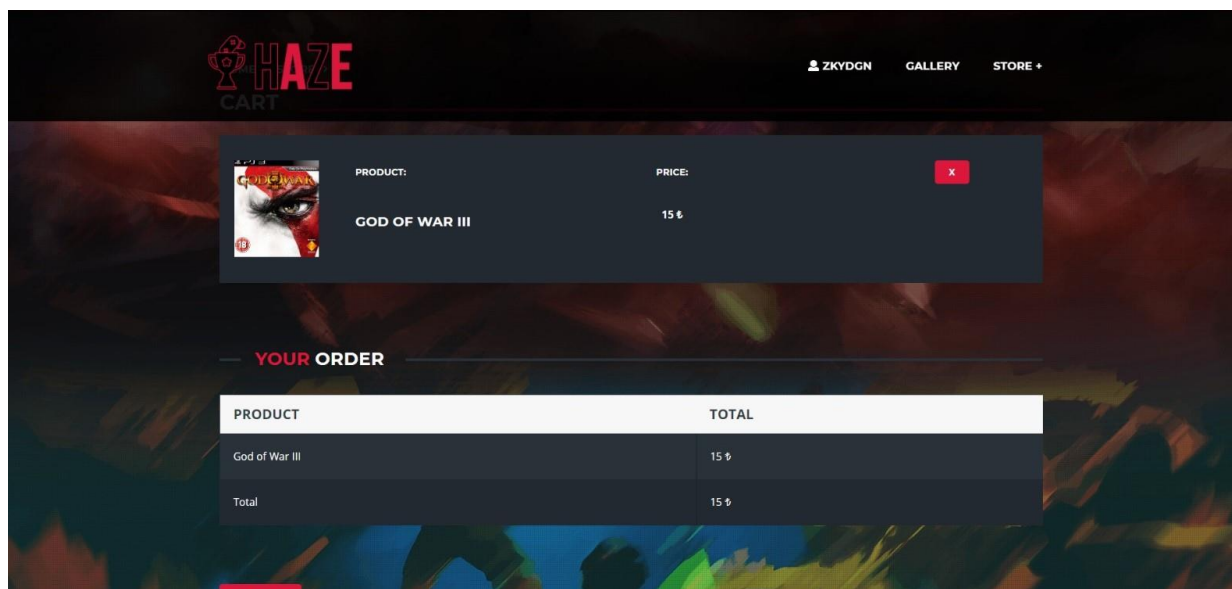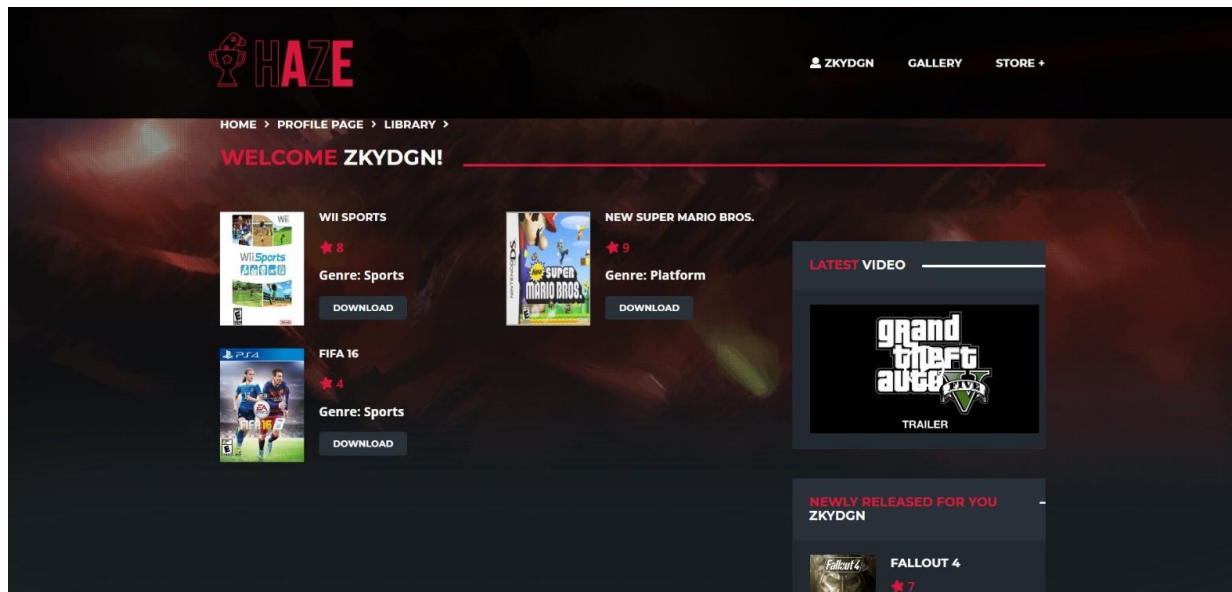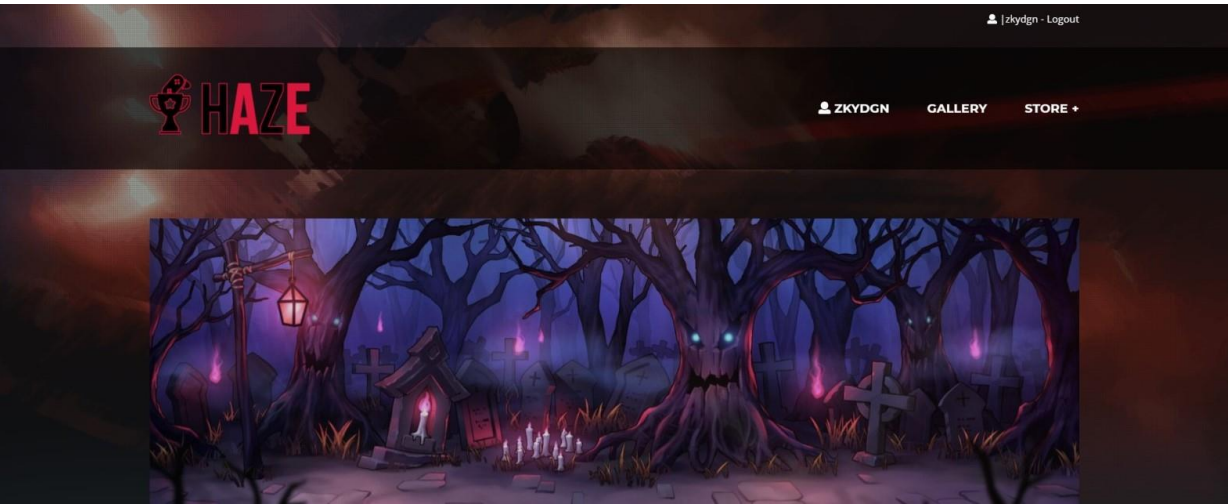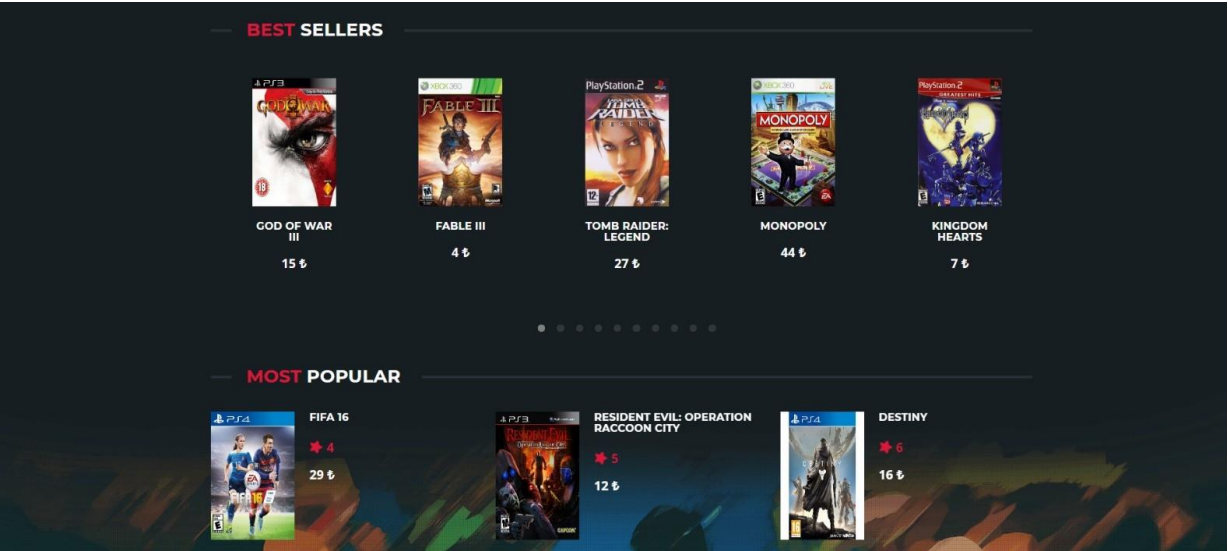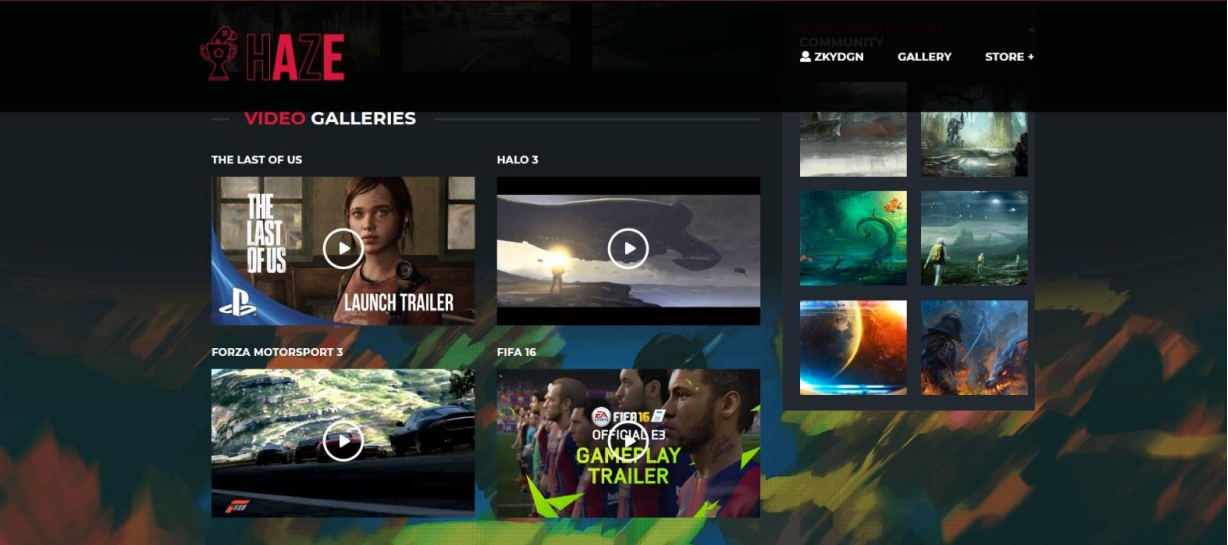
Future Work

If time could be used more sufficiently :

- A better GUI for the voting system
- Visual enhancements; icons, images, styles etc.
- A social interaction platform with friending, messaging, gifting and recommending systems
- A blog section with featured news and announcements
- A better GUI for sorting/searching parts
- A footer section including social media platforms and a contact box to mail the developers of the website
- A notification box that notifies users for related news and articles

would be implemented to the website.