Project Phase II

ISeeTher

Digital Game Distributor

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A Report Submitted in Partial Fulfillment of
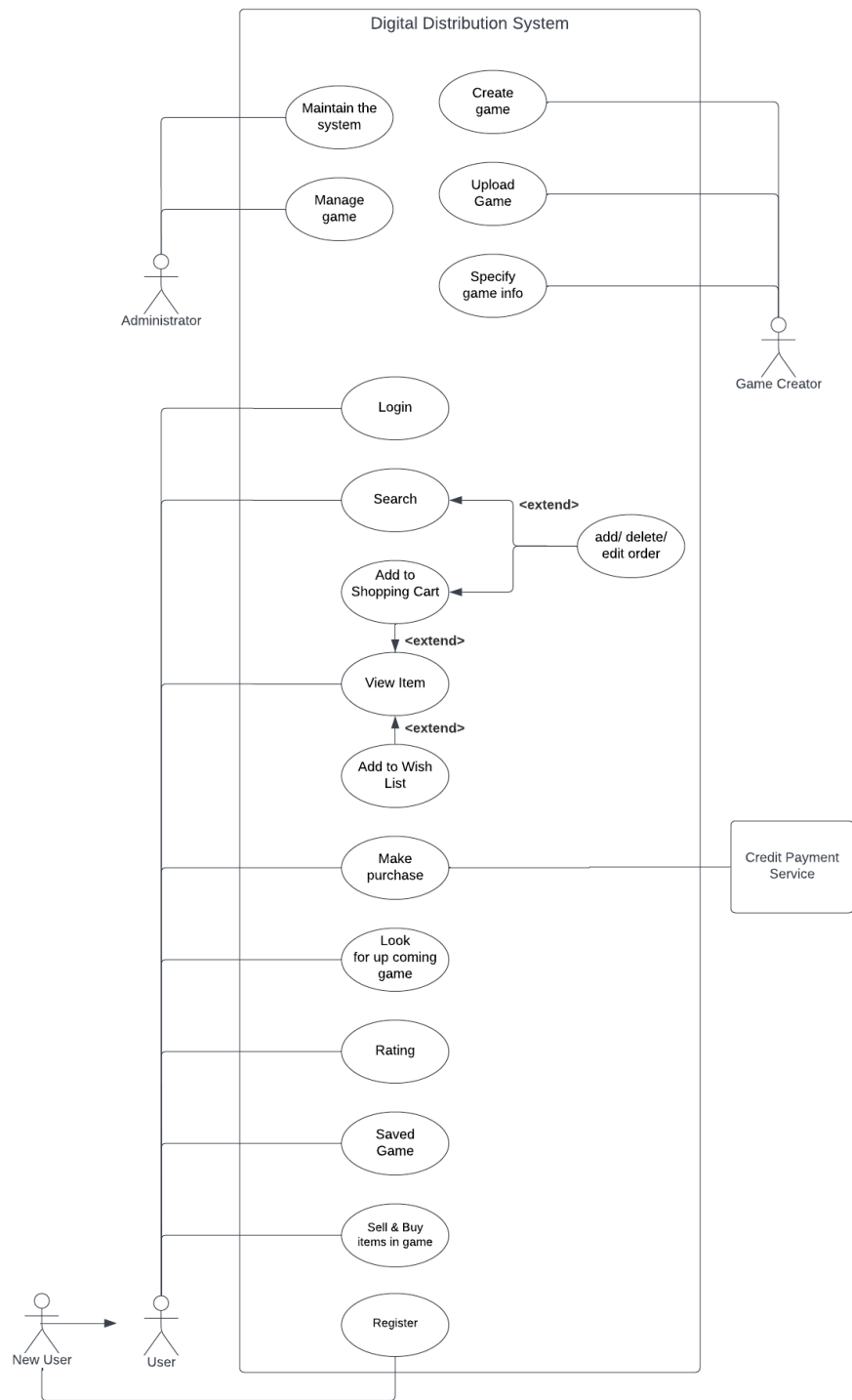
the Requirements for

ITCS371 Introduction to Software Engineering

Faculty of Information and Communication Technology

Mahidol University

Semester 1/2022

Table Of Contents

Revision of phase I

Use case Diagram

Use case narrative

1. Login

Use Case Name	Login
Goal in Context	Customer login into the system.
Primary Actors	Customers
Secondary Actors	Administrators
Precondition	Customers have to register usernames and passwords.
Trigger	Customers want to browse and play games.
Scenario (Typical Flows of Events)	1. Customers download the Digital Game Store program into their personal computers. 2. Customers register usernames and passwords. 3. Customer login username and password into the system. 4. The system will check the customer's username and password in the database for authentication. 5. Customers go to the home page after authentication.
Exceptions	1. If a customer forgot a username or password, the customer needs to reset the username or password. 2. If a customer doesn't log in to the system before using the program, the system will show warning messages to log in.
Channels to actors	Personal Computer

2. Register

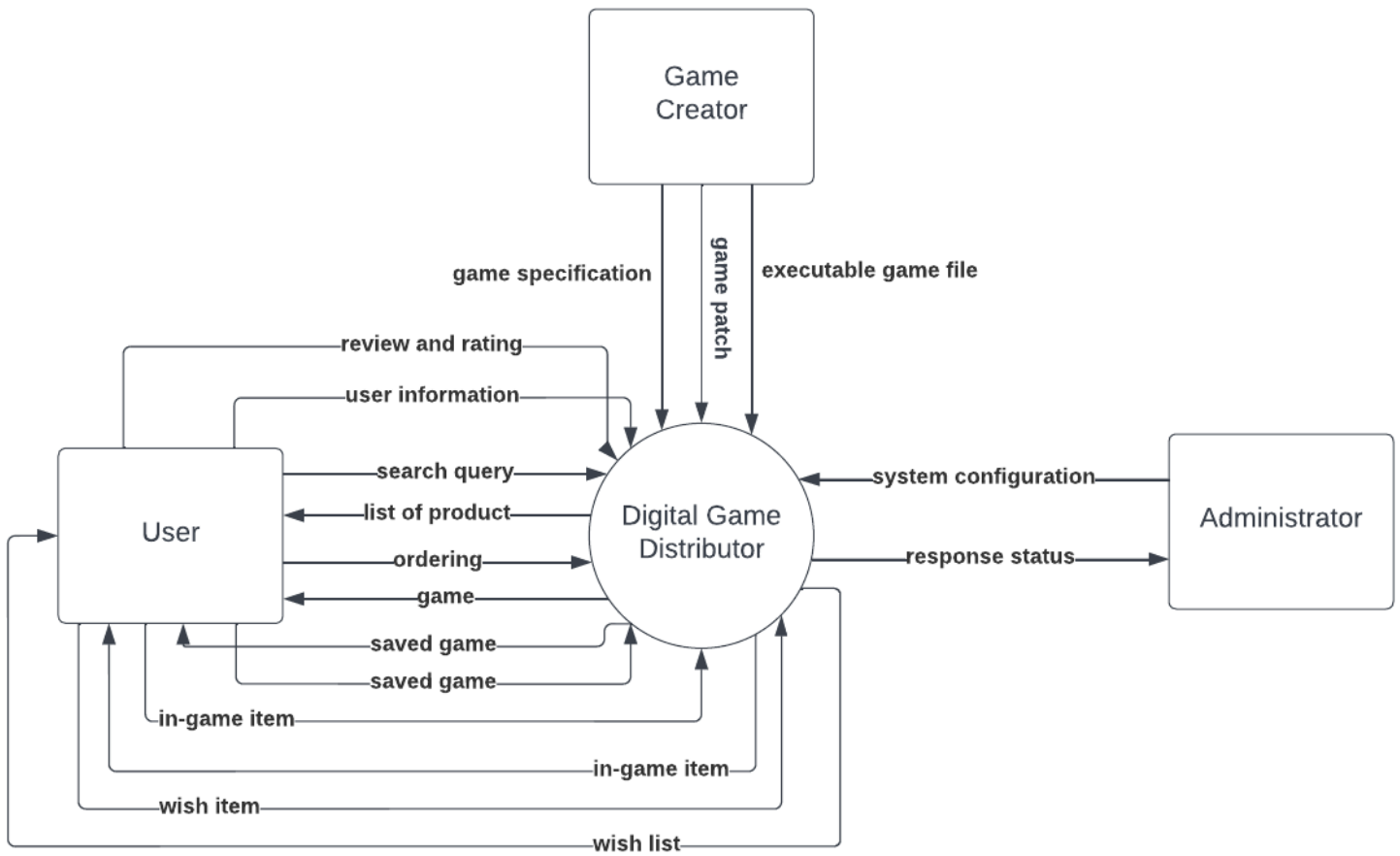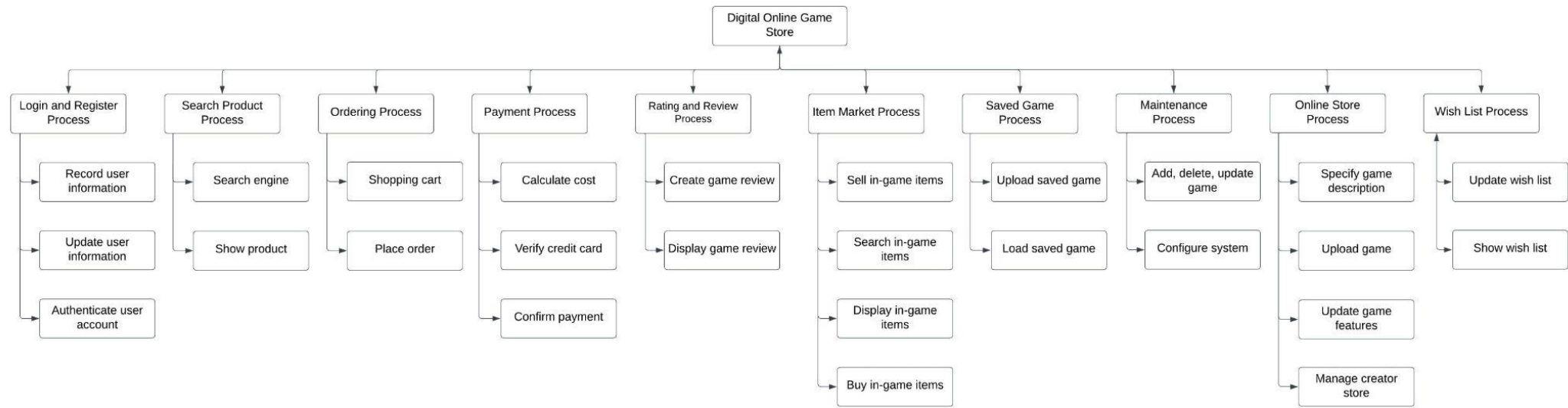| Use Case Name	Register
Goal in Context	Customers register an account for username and password.
Primary Actors	Customers
Secondary Actors	Administrator
Precondition	Customers must have an email for registration.
Trigger	Customers want to create an account.
Scenario (Typical Flows of Events)	1. Customers go to the Digital Game Store website for download. 2. Customers click the register button for registration. 3. Customers fill in the information on the account. 4. Customers receive verification via email. 5. Customers confirm the registration via email. 6. Customers' accounts have already been created.
Exceptions	1. If a customer forgot a username or password, the customer needs to reset the username or password. 2. If a customer doesn't log in to the system before using the program, the system will show warning messages to log in.
Channels to actors	Personal Computer

3. Rating the game

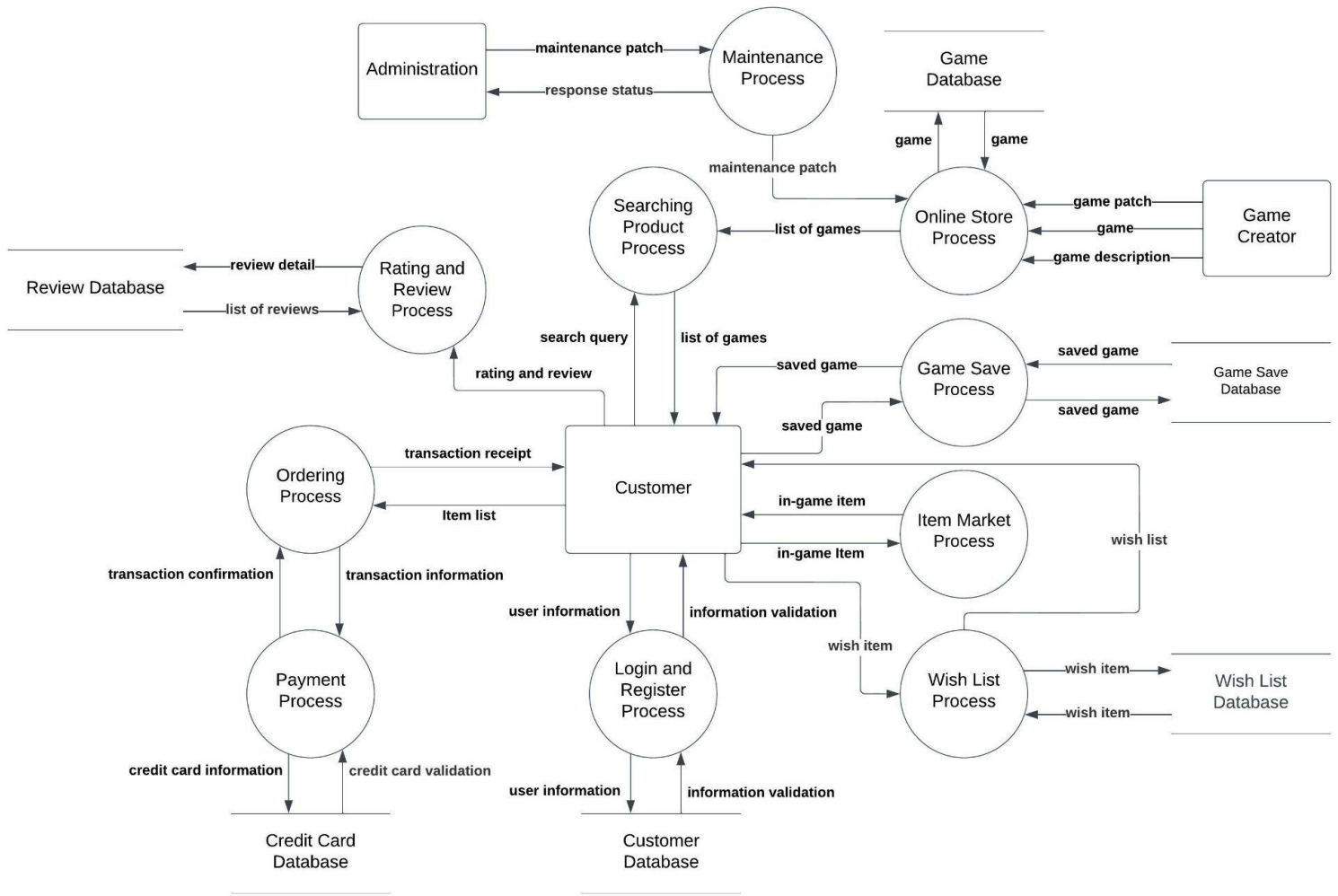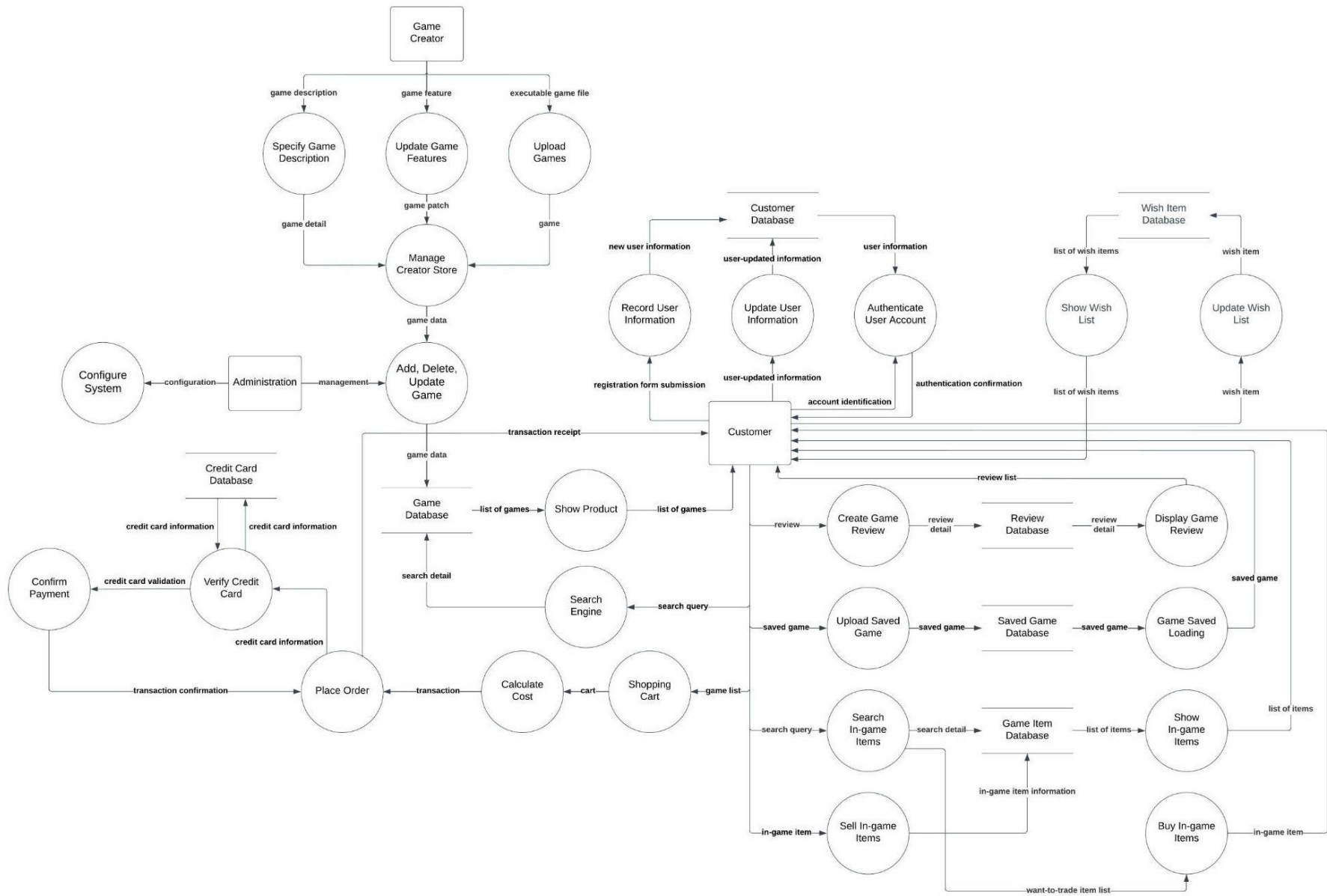| Use Case Name	Rating the game
Goal in Context	Customers rate the game.
Primary Actors	Customers
Secondary Actors	-
Precondition	Customers have to buy the game.
Trigger	Customers want to rate and review the game.
Scenario (Typical Flows of Events)	1. Customers add games to the cart. 2. Customers pay money to play games via credit card. 3. Customers play the game. 4. Customers go to the rating and review page. 5. Customers rate and review the game and other customers can come to see the rating and read the review.
Exceptions	1. If the customers have logged into the system before buying or rating the game, the system will show warning messages to log in first. 2. If customers haven't bought the game, the system will show warning messages to buy the game first.
Channels to actors	Personal Computer

Data Flow Diagram (DFD): Level 0

Functional Decomposition Diagram

Digital Online Game Store

Login and Register Process	Search Product Process	Ordering Process	Payment Process	Rating and Review Process	Item Market Process	Saved Game Process	Maintenance Process	Online Store Process	Wish List Process
Record user information	Search engine	Shopping cart	Calculate cost	Create game review	Sell in-game items	Upload saved game	Add, delete, update game	Specify game description	Update wish list
Update user information	Show product	Place order	Verify credit card	Display game review	Search in-game items	Load saved game	Configure system	Upload game	Show wish list
Authenticate user account			Confirm payment		Display in-game items			Update game features	
					Buy in-game items			Manage creator store	

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Data Flow Diagram (DFD): Level 1

Data Flow Diagram (DFD): Level 2

Mock-up prototype

For the prototype design, our team decided to use Framer as the collaborative tool which the team can use to work together in real-time. Based on the processes that existed, these are the design of each page:
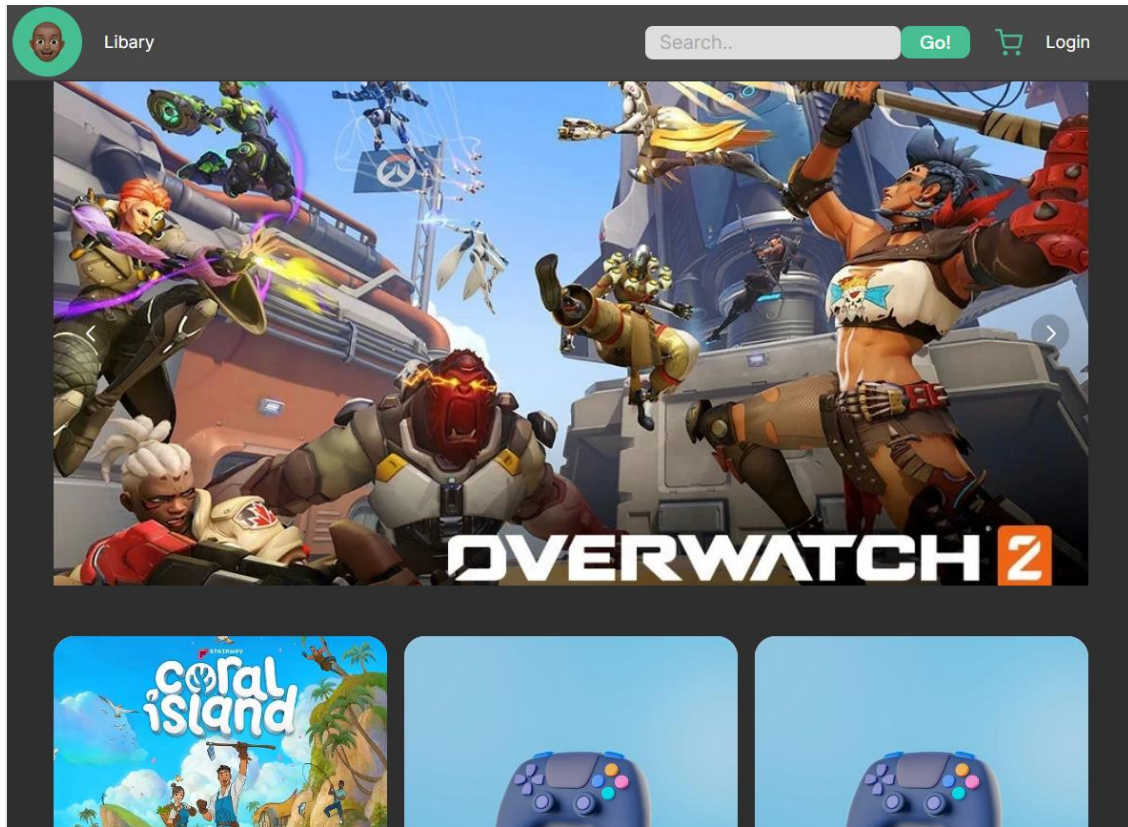
1. Login and Register Process

Figure 1 Home Page of Digital Game Distributor

As we are on the homepage, there will be games displayed on the screen. There will also be a *"Login"* button on the top right corner, which will navigate us to the *Login & Sign-up* page.
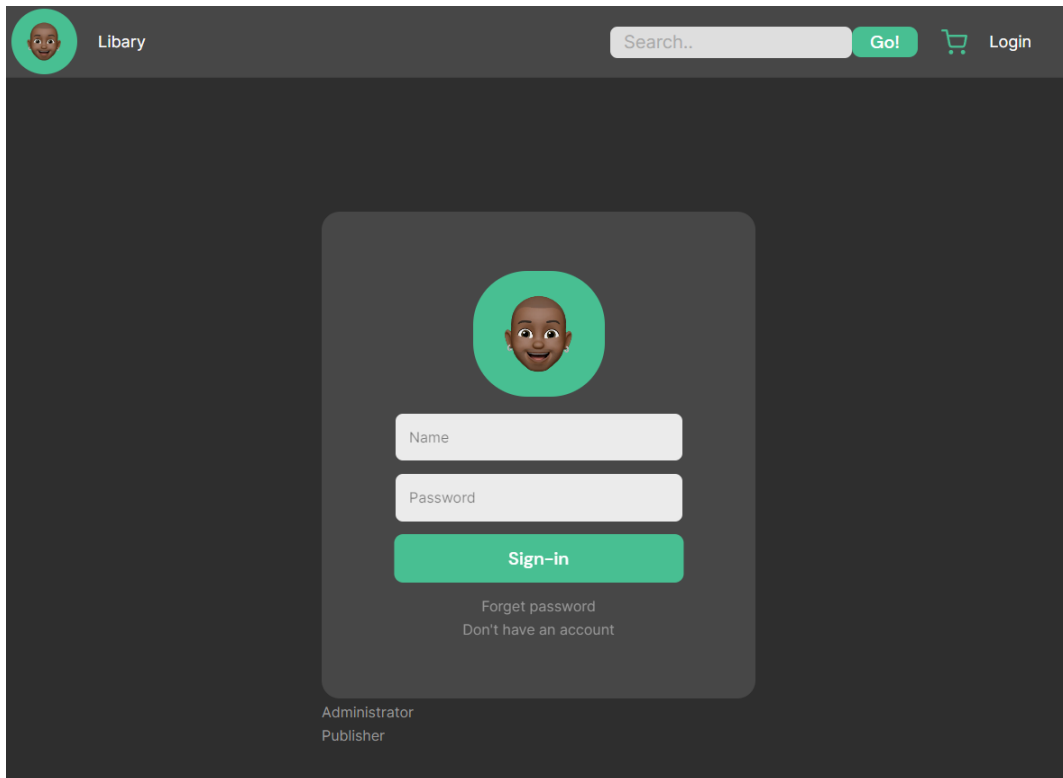
Figure 2 Login / Sign-in Page

The user can sign in with a username and password in the box if they have one. If not, they can click on *"Don't have an account"* to sign up and it will navigate to the register/sign up page for registration. If users cannot remember the password, they can click *"Forgot password"*. The system will send an email to the user to create a new password.
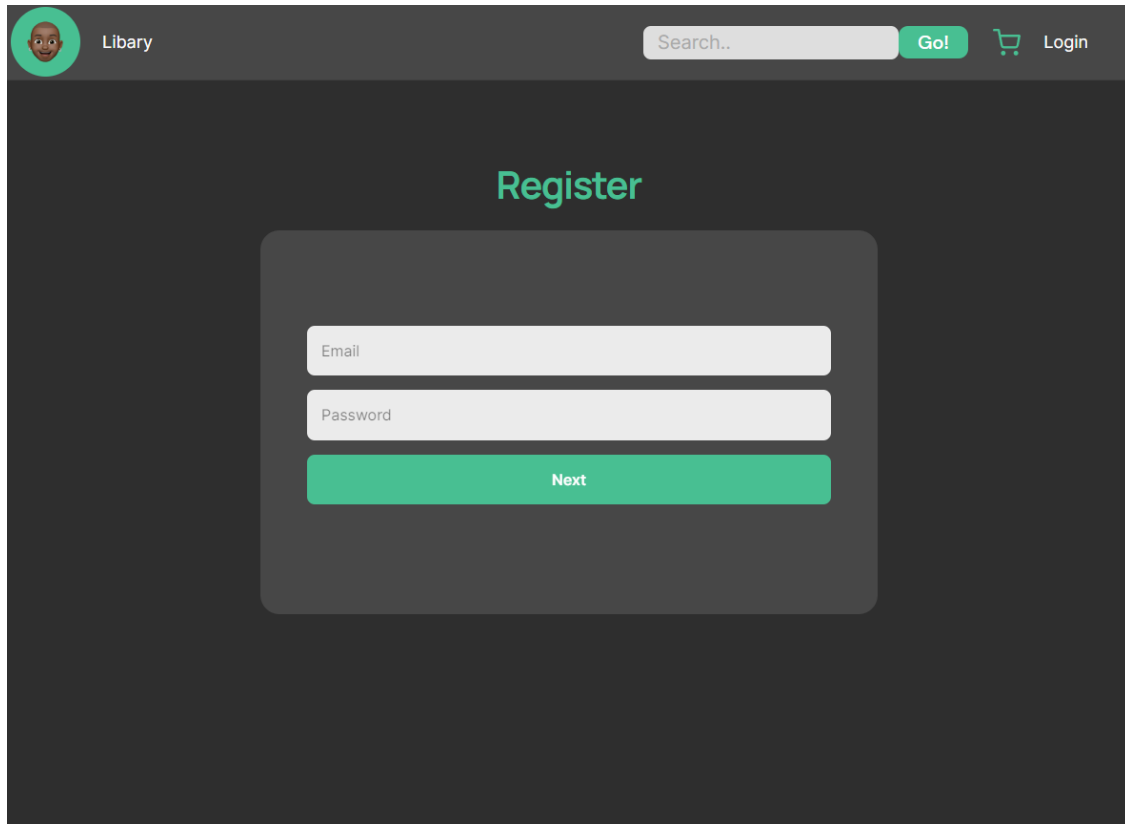
Figure 3 Register / Sign-up Page

Users can create an account by filling in information including email and password to create an account. After that the system will send an email to confirm the registration, the user has to confirm to activate the account. If the registered process is completed, the user will be able to log in into the system.
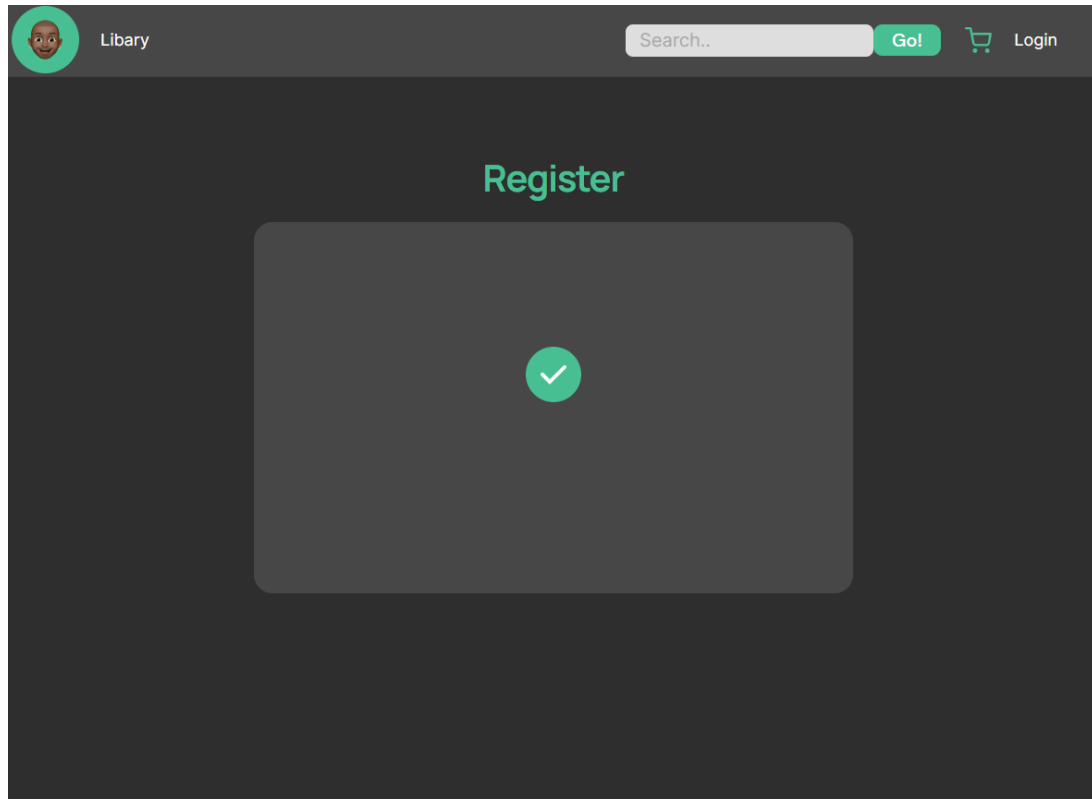
Figure 4 Registration Completed

2. Search Product Process

There will be a search bar at the navigation bar at the top of the page, where the user can search for the product they are looking for.

Figure 5 Search Bar for searching the game

After you type in your keyword and click *"Go!"*, the result according to the keyword will be displayed.
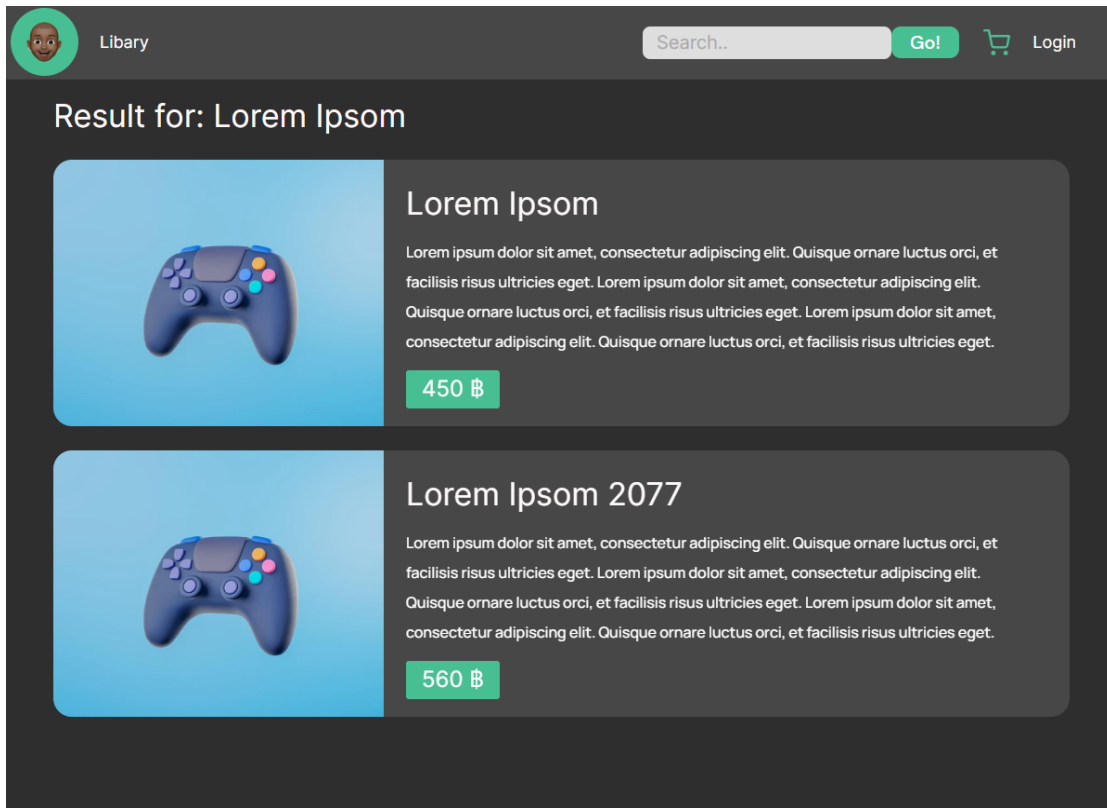
Figure 6 The Result Page of the search

The system will show all the results of the search. The rough description for each game will be shown with the title, description, price, and image. The users can click on each game for more detail.

3. Ordering Process

For the ordering process, the user can click on a certain game and the details will be displayed. The user can decide to add the game to the cart or wish list which is a game that the user wants to buy or play.
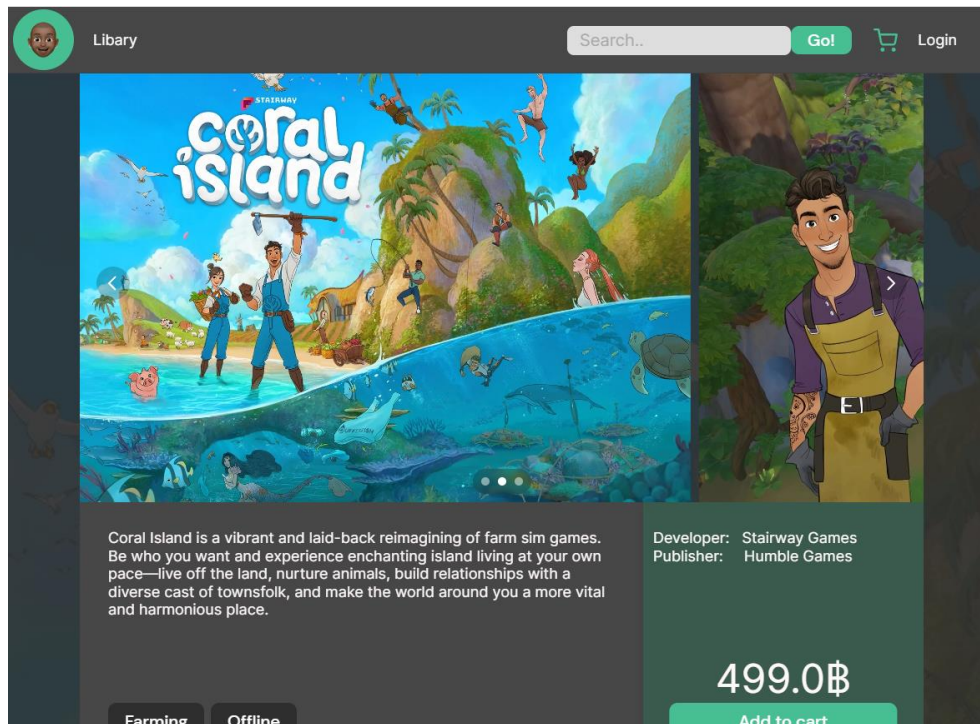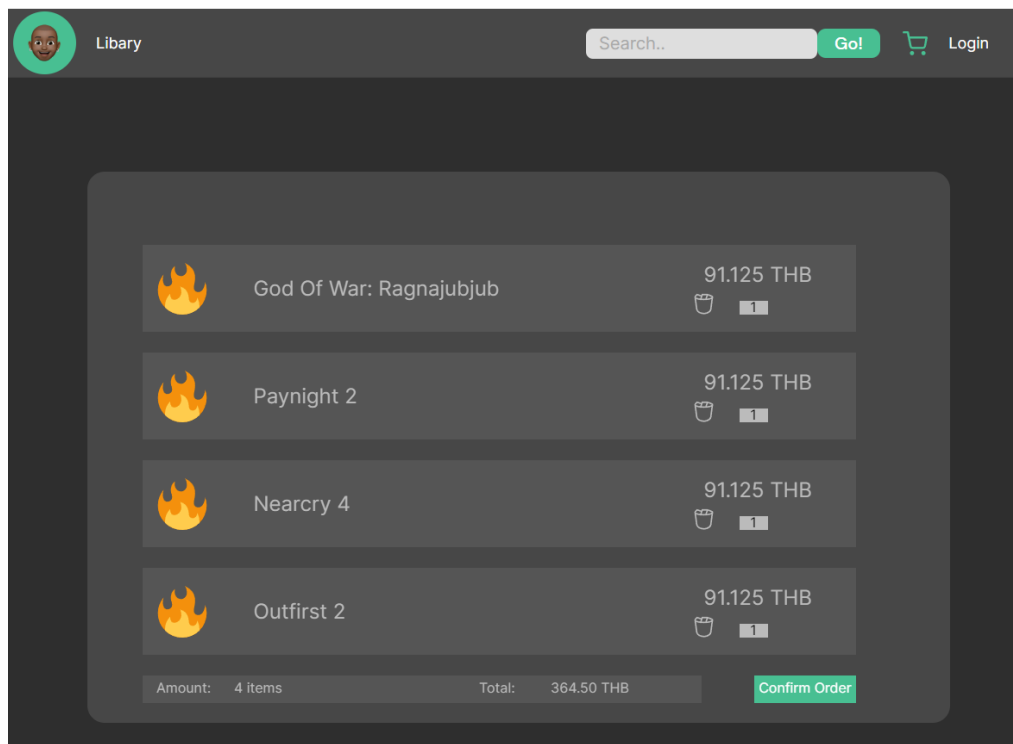
Figure 7 Game's description

Figure 8 List of Games in cart

The user can add the game to the cart and the user can add multiple games to the cart. The user can view and modify the item in the cart.

4. Payment Process

For the payment process, the user can add the game that the user would like to buy and can view the total price and item description in the cart which you can later checkout to complete the payment process.
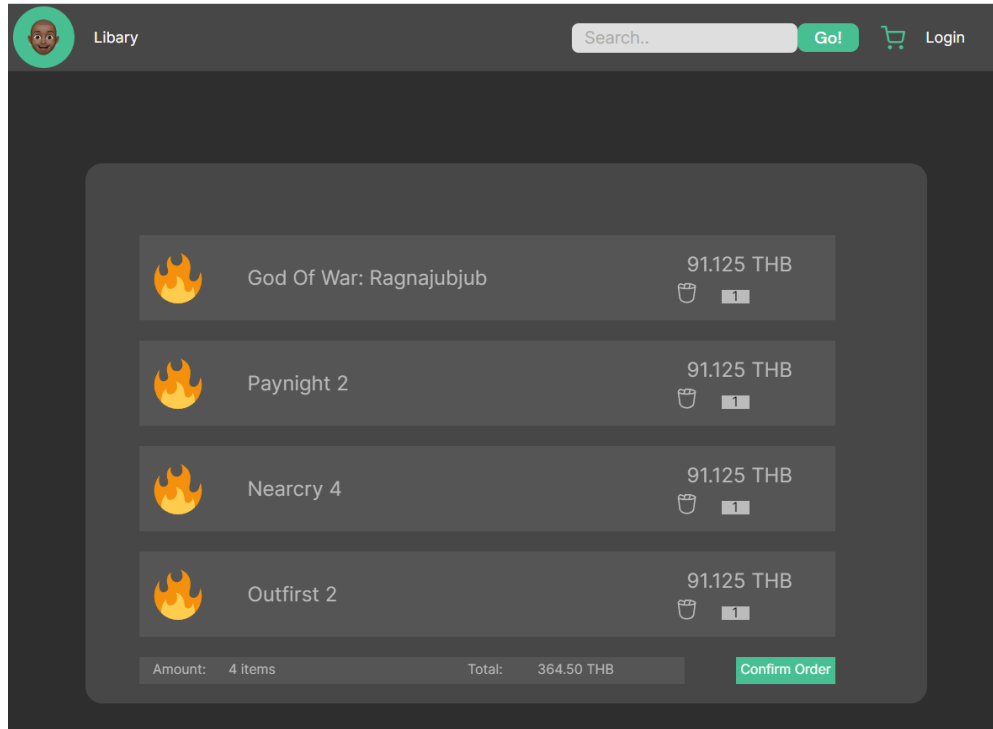

Figure 9 List of Games in cart

The user clicks the *"Confirm Order"* button, to check out the cart and it will lead to the payment page to pay the money.

Figure 10 Payment Page

For the payment, the user needs to fill in the information on the credit card. When the proper credit card information is filled in, then click *"Confirm"* to proceed with the payment. The information on the credit card will automatically remember in the system which is the next time the payment is made, the user doesn't have to fill in the information on the credit card. The system will automatically fill in the information on the user's credit card.
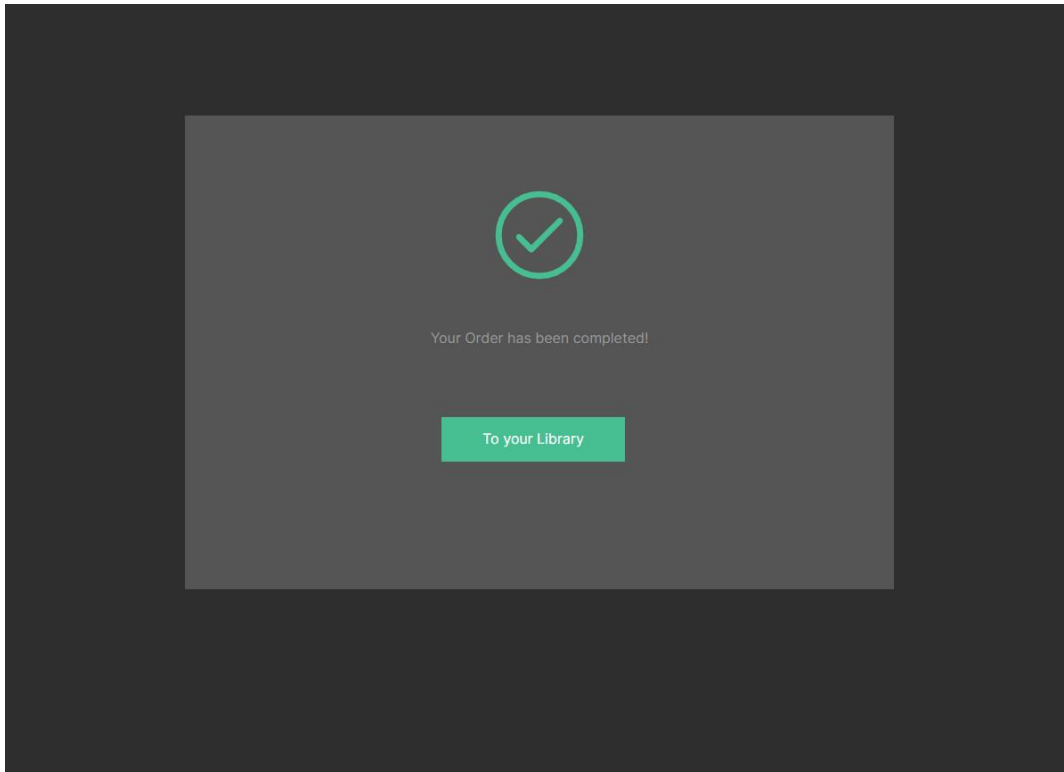
Figure 11 Payment Successful

After the payment is successful, the system will automatically add games to the user's library by displaying *"Your order has been completed"*. The user can then go to the "Library" to view lists of games.

5. Rate and Review Process

For the rating and review process, the user clicks on the game, and it will show the game's description.
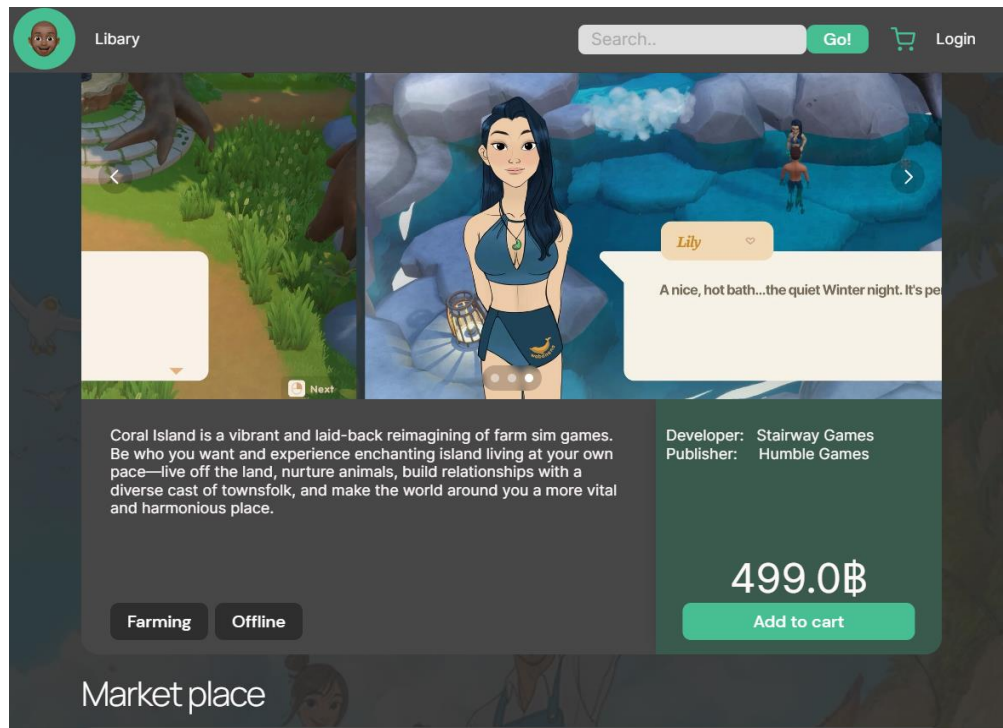
Figure 12 Game's description

　　　If the user scrolls down to the bottom page, there will be a review section where the user can write a review and rate whether they would like to recommend the game or not. Also, the user can see other reviews of this game.
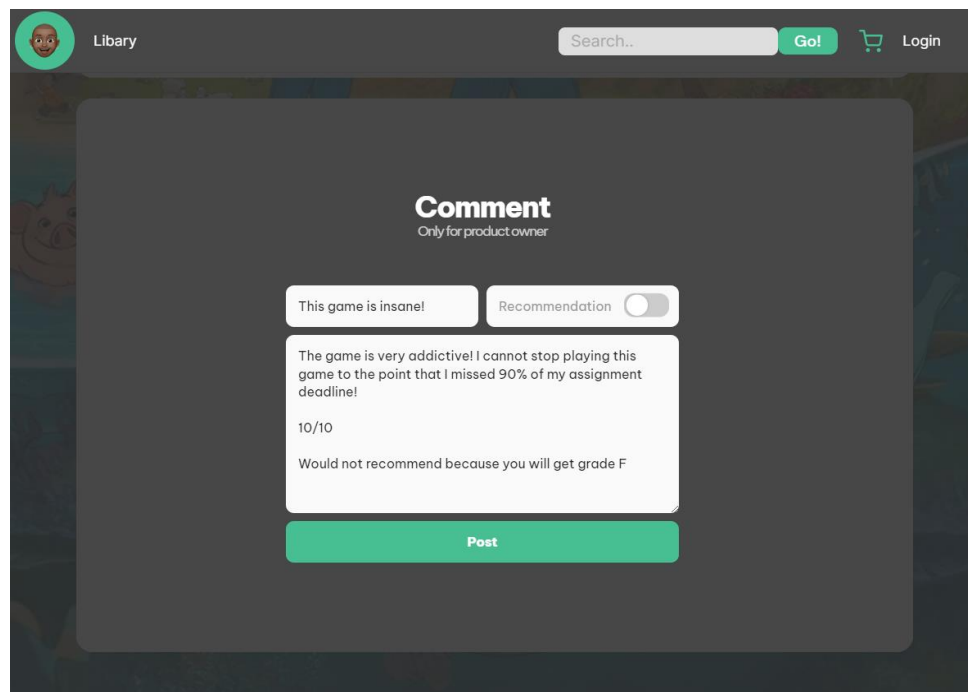
Figure 13 Rating and Review Page

6. Item Marketplace Process

For the item marketplace process where the user can sell and purchase the in-game items, the user can simply click on the game they want to buy or sell an item. Then, scroll down to the bottom page.
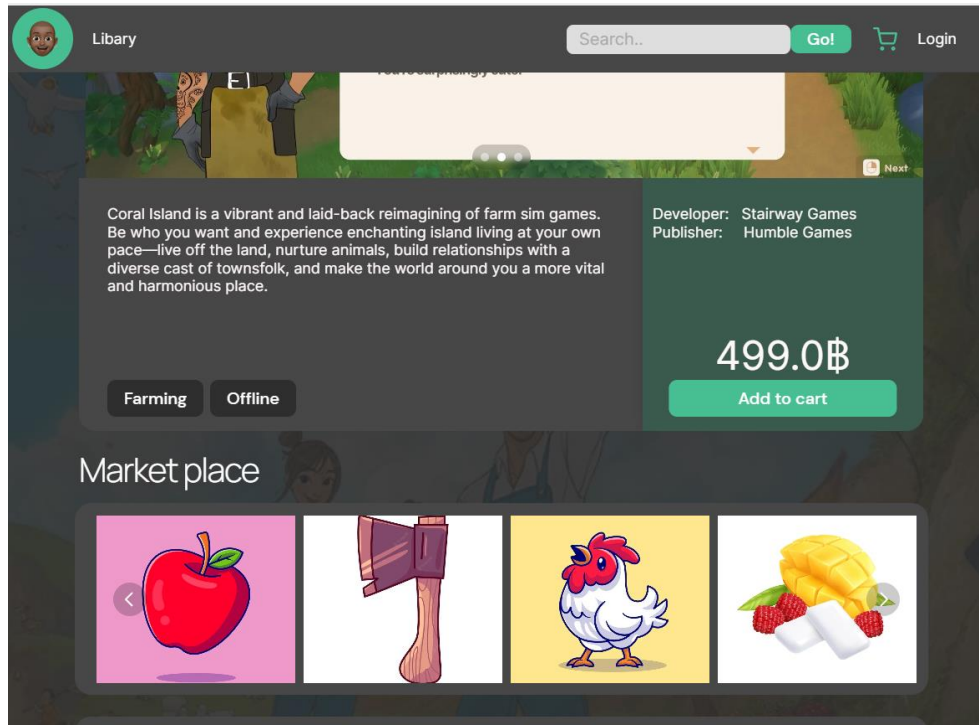
Figure 14 Item Market Page
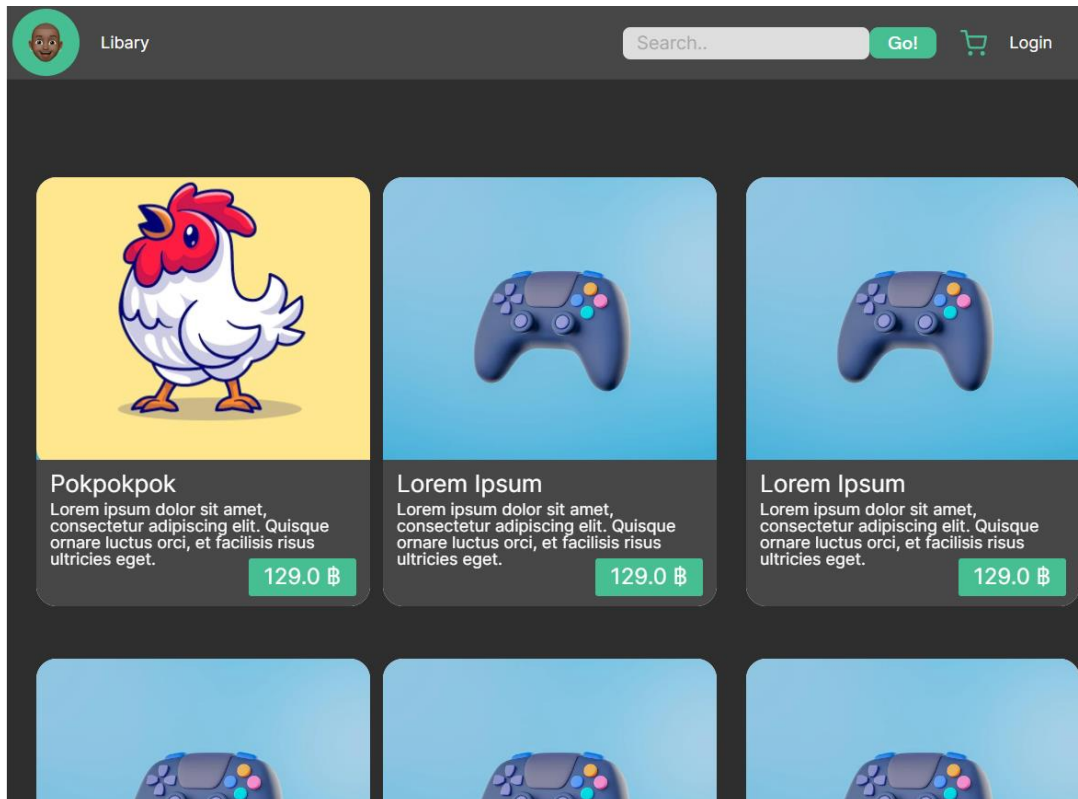
Figure 15 Item Market Page

If the user clicks on the item, it will lead to the items listed in the market. The user can choose which item's game wants to buy and add to the cart to proceed with the payment process.

7. Game Storage Process

For the game storage process, the user can click on the game in their library and choose whether they would like to save their game in the cloud or on their physical machine.
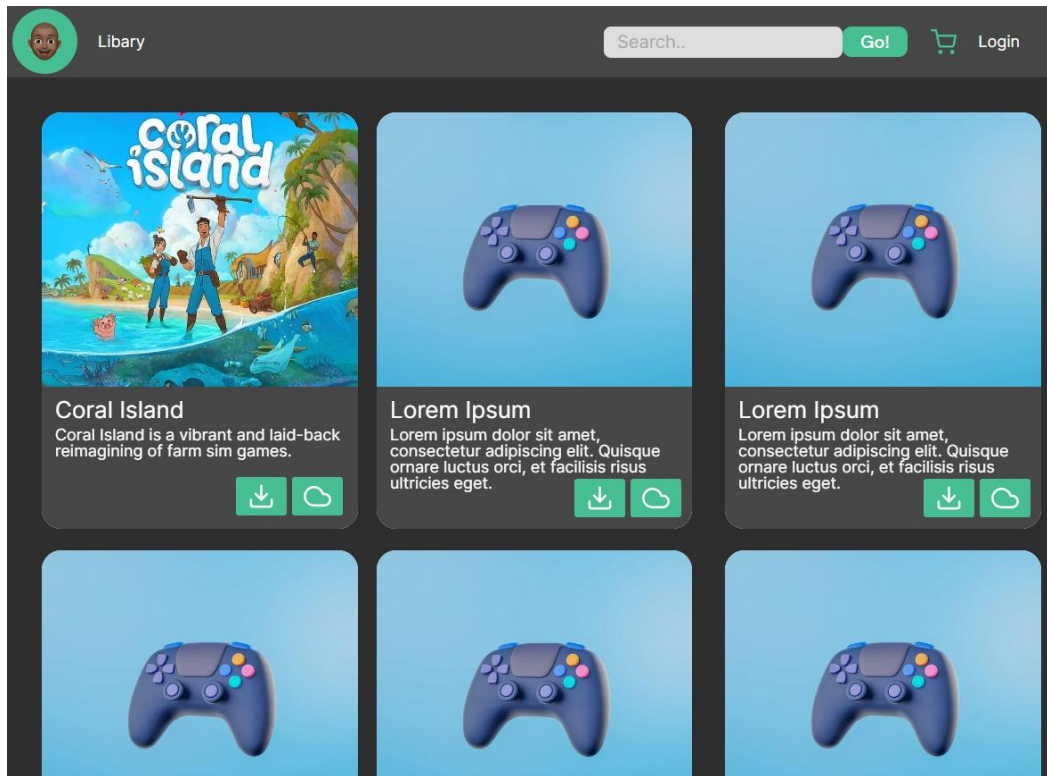
Figure 16 Game Storage Page

8. Maintenance Process

For the maintenance process, the administrator can view, insert, update and delete the game and label the game in the system by logging in as the administrator to verify the account and record who edited the system.
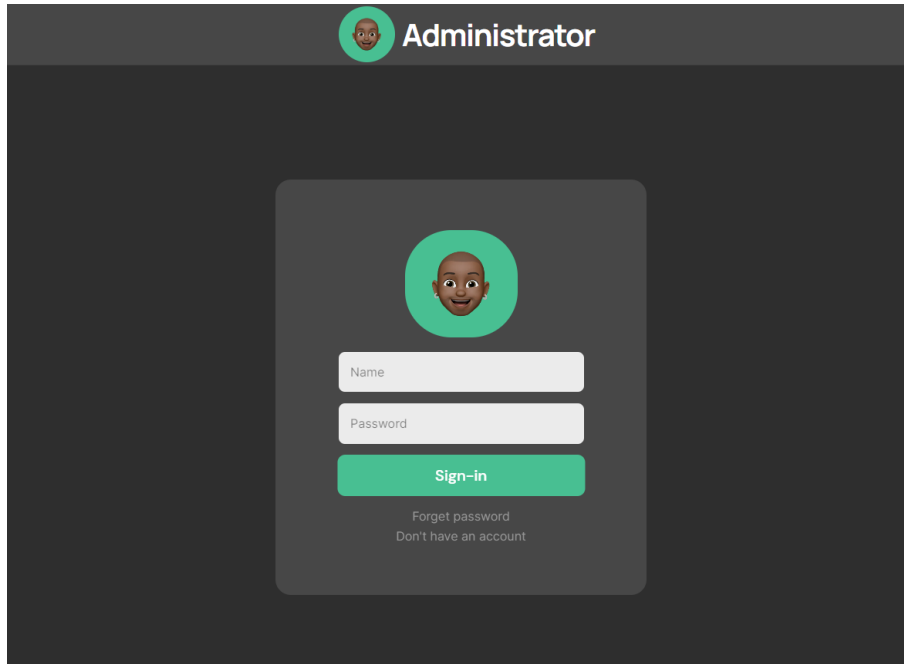
Figure 17 Login / Sign-in as Administrator Page

Before the administrator login, the administrator has to register by creating the account. After the administrator has logged in, the administrator can search for a certain game to moderate and maintain the system to support 10,000 users.
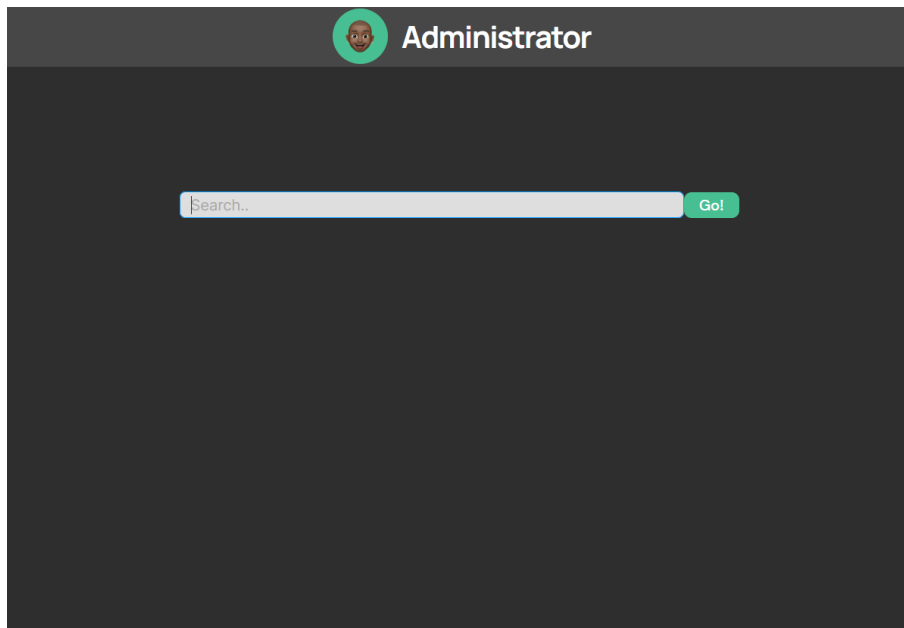
Figure 18 Search Bar for the Administrator

The administrator can search the game's name and maintain the game by improving the game's ability to support multiple users.

9. Online Store Process

For the online store process, the publisher can log in as a game creator via the login page. The publisher can edit the game's description, create a new game and upload a new game into the system.
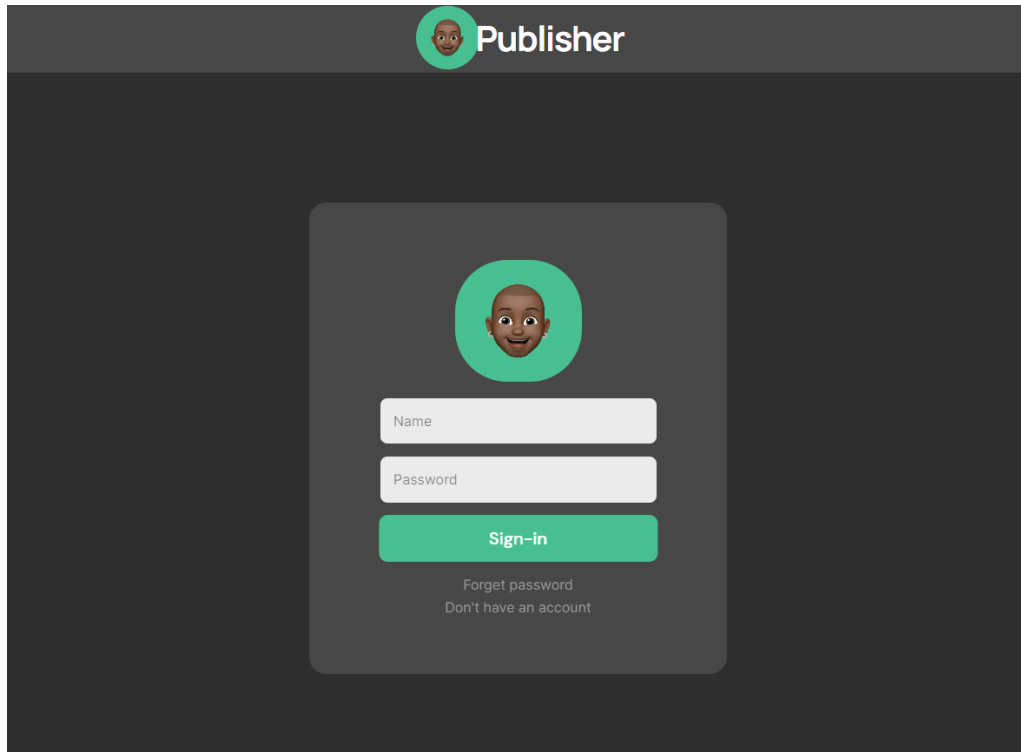
Figure 19 Login / Sign-in as a Game Creator Page

Figure 20 Upload a new game

After the publisher has successfully logged in, they can add a new game with the game's description for the game that they would like to publish.

Test Case

Test Case ID: func_search	**Test Designed by:** Napat V.
Test Priority (Low/Medium/High): Med	**Test Design date:** 2022/11/15
Module Name: search result	**Test Executed by:** Napat V.
Test Title: Verify the searching system with a valid game name.	**Test Execution date:** 2022/11/15
Description: Test the search system and search result page	

Pre-conditions: The user has a valid game name to search for.

Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the homepage					
2	The user clicks on search box					
3	The user provides the game name	Search= God of War: Ragnarok				

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
4	The user clicks "Go!" button		The search result page provides the most related result	The user is navigated to search result page with related result	Pass	

Post-condition: The user has navigated to the search result page with the most related result.

Test Case ID: func_signin		Test Designed by: Napat V.
Test Priority (Low/Medium/High): Med		Test Design date: 2022/11/14
Module Name: sign in		Test Executed by: Napat V.
Test Title: Verify Sign in with a valid username and password.		Test Execution date: 2022/11/14
Description: Test the Sign in page		

Pre-conditions: The user already has a valid username and password.

Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the homepage					
2	The user clicks the "Login" button					
3	Navigate to sign in page					
4	Provide valid username	Username = example@gmail.com				

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
5	Provide valid password	Password = 1234				
6	Click the "sign in" button		The user should be able to log in to the website.	The user is navigated to the dashboard with their account.	Pass	

Post-condition: The user is validated with the database and successfully logs in to their account. The account session details are logged in the database.

Test Case ID: func_publish **Test Designed by: Napat V.**

Test Priority (Low/Medium/High): Med **Test Design date: 2022/11/15**

Module Name: publisher **Test Executed by: Napat V.**

Test Title: Verify the publisher page function **Test Execution date: 2022/11/15**

Description: Test the publisher page

Pre-conditions: The publisher has a valid Game name, tag, rate, description, logo, and background.

Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the publish page					
2	Select Name	Name= Doki Doki Literature Club!				
3	Select Tag	Tag= Visual novel				
4	Select Rate	Rate= 20+				

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
5	Select Description	Description = The Literature Club is full of cute girls! Will you write the way into their heart? This game is not suitable for children or those who are easily disturbed.				
6	Select Marketplace	Select= enable				
7	Click on upload game logo	File= Monika.jpg				
8	Click on upload game background	File= Classroom.jpg				
9	Click on publish button		The publisher should be able to publish their game	The publisher is successfully published their game	Pass	

Post-condition: The publisher has successfully published their game. The game information will be logged into a database.

Functional Requirement Traceability Matrix

REQUIREMENTS TRACEABILITY MATRIX							
Project Name: Digital Game Distributor							
Business Requirements Document BRD		Functional Specification Document FSD				Test Case Document		
Business Requirement ID#	Business Requirement / Business Use case	Functional Requirement ID#	Functional Requirement / Use Case	Priority	Test Case ID#	Execution Status	Defect#
BR_1	Signin Module	FR_1	Login to the website	Med	func_signin	pass	
BR_2	Search Module	FR_2	Searching with game name	Med	func_search	pass	
BR_3	Game Seller Module	FR_3	Publish game with custom detail	Med	func_publisher	pass	

Video Presentation and Prototype link

Our group also provide the video presentation and prototype link in files .txt.

Video Presentation link: https://youtu.be/r7YQkrMtNCs

Prototype link: https://framer.com/projects/Untitled--havkkKjP69HrbStNfhLc-eghsu