



## **Project Phase 1**

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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

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## Overall of Business

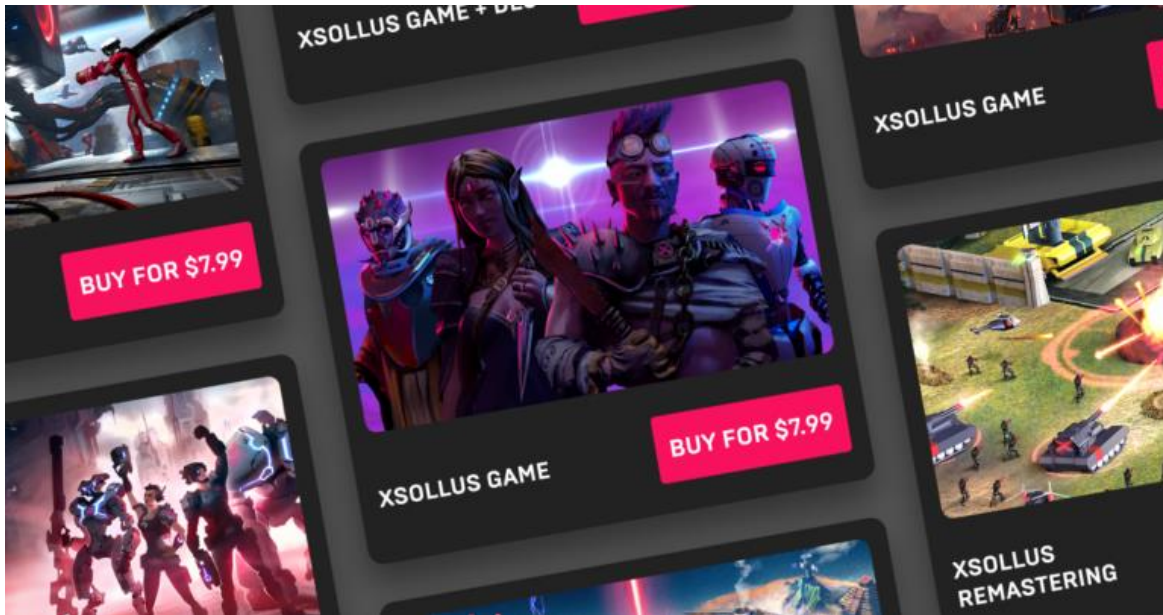


Figure 1 Online Game Store [2]

In this project, our customer wants to launch their system which is a distributor of games that allows small developers, creators, and the company to sell their game products, and customers or users buy games from them via the system.

The domain of the business is a digital game distributor that allows game creators to sell their own games on the platform. This business intends to support small-budget game developers to publish games and make them easier to access by customers. In general, it looks like an existing platform such as Steam, Epic Games, Origin, and so on, which sell games online for customers. The platform not only distributes the games but also categorizes and sorts of games into genres, allowing the customer an easy and convenient experience for browsing and purchasing said games. Games available will also have visible ratings that are made by people who have purchased the game to allow buyers to see the opinions of the player base. Games can also be personally picked by the user for their wish list, as an easy way for a user to view games they want and observe any sales or updates that may happen.

The benefit that the customer will obtain from our digital game platform is that when clients make a game purchase from our platform, they will receive a digital game license, which enables them to simply download the games online without having to hold the actual CD or DVD as before. Furthermore, our digital game distribution system is responsible for managing the digital rights of the clients and checking for the license associated with the customer account, which will allow the

customer to launch the games. Games purchased can be directly downloaded and installed on their device, or they can be stored in our platform's cloud database; either way, the user will own the game. The customers also have access to a virtual market where they can purchase and sell in-game items, tokens, or accessories. This can foster a social and communal environment for the platform's user base.

In an aspect of the game advancement, every progress in games that a player achieved will be saved on the cloud database the firm provides. When a player launches a game, the player's latest progress will be fetched from the database and saved again when a player leaves the game.

Here are some sample lists of our clients' features and requirements for the digital game distribution platform. The customer requires a platform that could purchase any games online through a credit card. Then the customer can choose how they want to store their games played whether on the cloud system or the user's PC. Next, search for specific game products by the games' type, name of the game, or keywords. Furthermore, the user has the option to add any game they want to buy in the future to a wish list and explore other games that will be released soon. And that is a short summary of the requirements that our customer gave us in order to create a digital game distribution store platform.

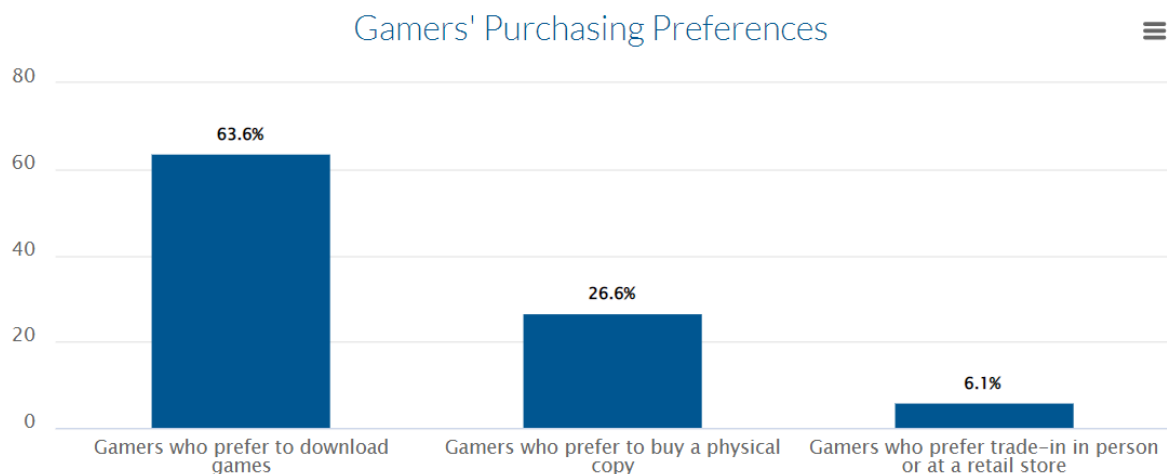


Figure 2 Game Purchasing Statistic [1]

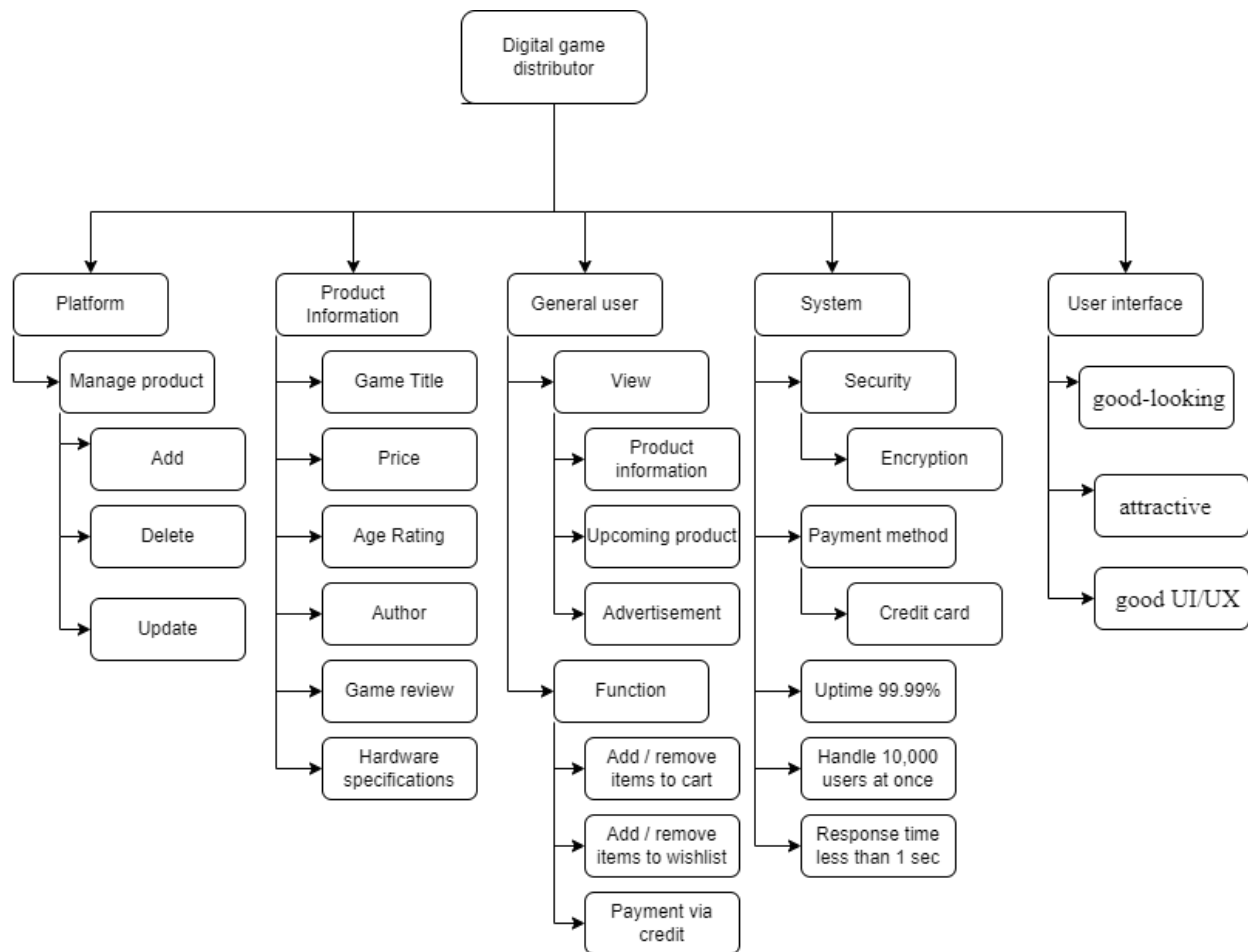
### **Function requirements (15 requirements)**

- 1) Users can buy digital games through the system with Credit Card.
- 2) Users can put multiple games into cart and checkout all games at once.
- 3) Users can see the list all the games that available for buy and play.
- 4) Users can browse games by filter including genre.
- 5) The system should show the advertisements of upcoming games.
- 6) Users can search for name of games and games creator.
- 7) Users can choose whether they would like to have their game stored in their physical machine or cloud storage.
- 8) Users can add interesting games to wish list which users can add or delete games in their wish list.
- 9) Users can buy and sell game's items via virtual marketplace.
- 10) Users can rate the game after they are playing game via rating function.
- 11) Users must create an account and login before buy games.
- 12) Game creators can upload new games, edit information of game, fixing the game via the system.
- 13) Administrators should maintain the system to be able every time and stable performance.
- 14) Administrators should protect users' information.
- 15) The system must show detail of the game including rating and price of the game.

### **Non-functional requirements (10 requirements)**

- 1) The game distribution system must be done digitally.
- 2) Digital right and detail for games must be stored in cloud storage.
- 3) There must be a hardware specification requirement for every game
- 4) The program must run on Windows PC only.
- 5) The system must store users' transaction information.
- 6) The system must support multiple language and currencies.
- 7) The interface of the system should be good-looking, attractive, and good UI/UX.
- 8) The response time should be snappy with good performance, the response should be less than 1 second.
- 9) There must be an encryption system for users' safety.
- 10) The system must be able to handle 10,000 users.
- 11) The uptime of the system should be 99.999%.

## Work Breakdown Structure (WBS)

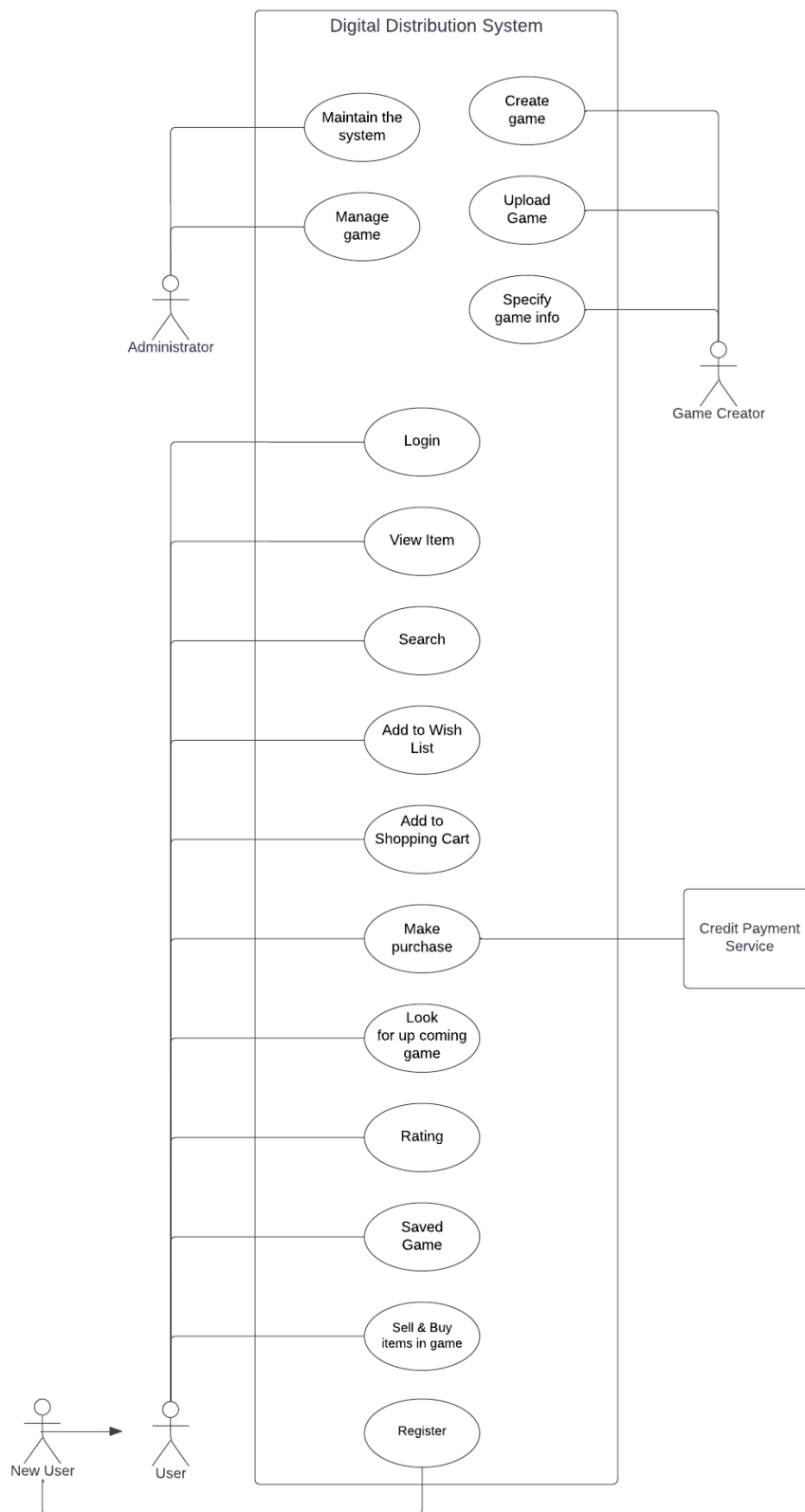


### Identify Actors

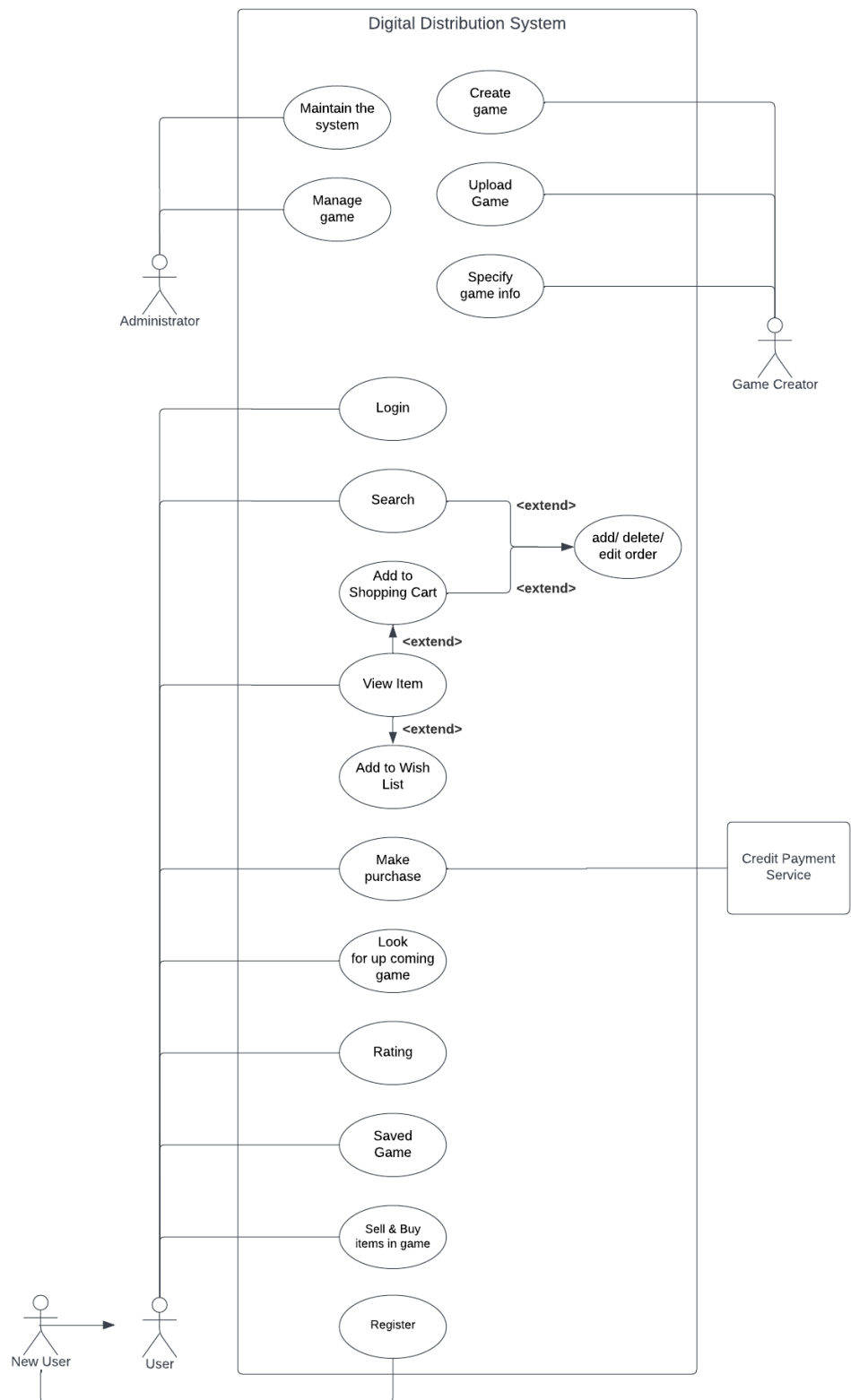
Actors	Roles
1. Administrator	<ul style="list-style-type: none"><li>● Maintain the system</li></ul>
2. Game creator	<ul style="list-style-type: none"><li>● Create new games</li><li>● Upload new games into the system</li></ul>
3. User	<ul style="list-style-type: none"><li>● Login the account</li><li>● Find interesting games (search game)</li><li>● Purchase online games<ul style="list-style-type: none"><li>○ Pay the money via Credit Card</li></ul></li><li>● Play game<ul style="list-style-type: none"><li>○ Store the game on Cloud</li></ul></li><li>● Rating and review the game</li><li>● Trading game's items</li></ul>
4. New user	<ul style="list-style-type: none"><li>● Register an account</li></ul>



# Use Case Diagram



## Detail Use Case Diagram



## Use case narrative

### 1. Customers

Use Case Name	Customers
Goal in Context	Customers can buy and play games.
Primary Actors	Customers
Secondary Actors	Game creators, Administrators
Precondition	Customers have to register and login the system first.
Trigger	Customers want to buy and play games from the system.
Scenario (Typical Flows of Events)	<ol style="list-style-type: none"><li>1. Customers find interesting games from the system.</li><li>2. Customers add interesting games into the cart or wish list.</li><li>3. If customers want to buy games, they have to check out items from the cart and pay the money.</li><li>4. Customers have to pay the money via credit card only.</li><li>5. After finishing the payment, customers can play games.</li></ol>
Exceptions	If the customers haven't registered or logged in the account before buying games, the system will send the warning message.
Channels to actors	Personal Computer

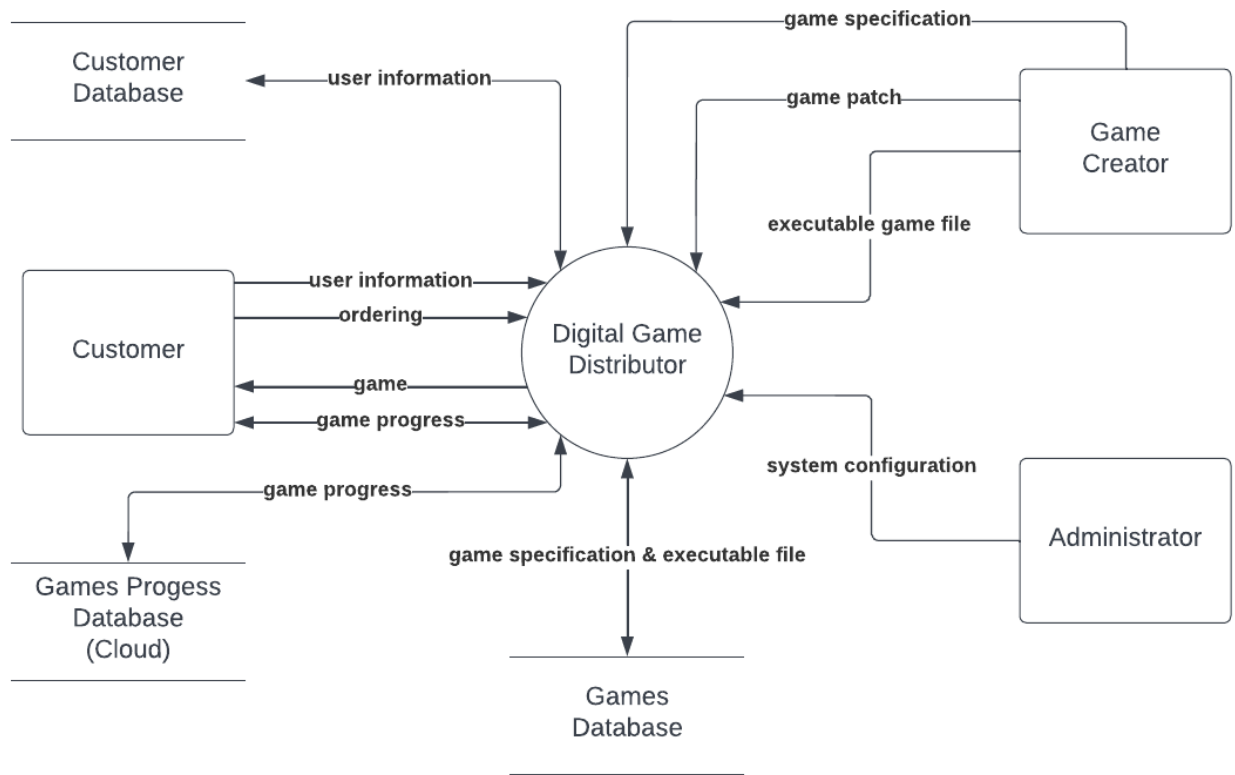
## 2. Administrators

Use Case Name	Administrators
Goal in Context	Maintain the system.
Primary Actors	Administrators
Secondary Actors	Customers
Precondition	Administrators must login the system to identify the users' role.
Trigger	Administrators have to maintain the system.
Scenario (Typical Flows of Events)	<ol style="list-style-type: none"><li>1. Administrators check the ability of the system and improve the system for more games.</li><li>2. Administrators fix the error.</li></ol>
Exceptions	If administrators haven't logged in the account before fixing the system, the system will send the warning message.
Channels to actors	Personal Computer

### 3. Game Creators

Use Case Name	Game Creators
Goal in Context	Create new games
Primary Actors	Game creators
Secondary Actors	Customers
Precondition	Game creators must login the system to identify the users' role.
Trigger	Game creators want to add the new game into the system.
Scenario (Typical Flows of Events)	<ol style="list-style-type: none"><li>1. Game creators create new games.</li><li>2. Game creators add new games into the system.</li></ol>
Exceptions	If game creators haven't logged in the account before adding new games into the system, the system will send the warning message.
Channels to actors	Personal Computer

## Data flow diagram



## References

- [1] Chang, J. (2022) *51 significant video game demographic statistics: 2022 data on age & gender*, *Financesonline.com*. FinancesOnline.com. Available at: <https://financesonline.com/video-game-demographic-statistics/> (Accessed: October 9, 2022).
- [2] 2022. [online] Available at: <<https://xsolla.com/blog/how-to-generate-game-sales-from-your-online-store>> [Accessed 9 October 2022].