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Section 2

Laoganma

Digital Game Store System

Project 1 Phase 1 (Software Development Company)
ITCS371 Introduction to Software Engineering

Presented by

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Business Overview

What is it and how do they work?

- Laoganma is a **native Windows Digital Game Distribution platform**
- Some of the main processes include:



Digital Game Licenses



Storage Options

(Local Storage / Cloud)



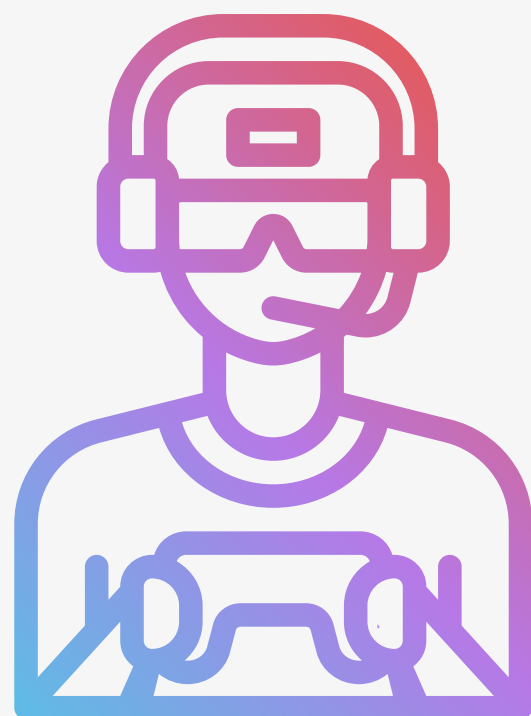
Virtual Marketplace

(In-game trading)



Customers

Who uses the platform?



Gamers

35 – 54 years old



Game Developers

30 – 49 years old



Gamer Persona

- **Name:** Ms. Gawr Gura
- **Age:** 21
- **Occupation:** College Student
- **Interests:** Games, Music, Books
- **Goals:** She wants to buy some games to play for fun, and she wants to play games from her multiple PC devices including her Laptop and Desktop.
- **Challenges:** It's hard to find a game store that sells the game in her local area.
- **How we help:** Providing a platform for buying digital games, so she can purchase the game(s) with just a few clicks.



MUICT Student
(Gawr Gura)



Game Developer Persona

- **Name:** Mr. Simon Salmon
- **Age:** 35
- **Occupation:** Game Developer
- **Interests:** Game Development, UI/UX design, indie-games
- **Goals:** Sell his games that have in-game items to drop for players.
- **Challenges:** Setting up the system to host the game by himself would cost both time and money. Moreover, he has to handle system vulnerabilities on the system he created, so he can't focus on developing the game.
- **How we help:** The platform provides that store page for him to list the game to sell and provides the storage for in-game items for users, so he doesn't have to set up storage on his own.



Game Dev
(Mr. Simon Salmon)



Business Processes

The flow of overall processes



Registration / Sign in



Purchasing game(s)



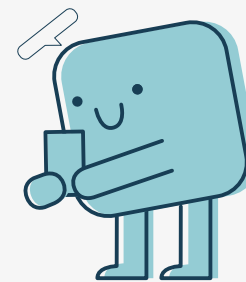
Game Searching /
Filtering



Installing game(s)



Trading in-game
items



Review the
game(s)



Managing the
game(s)



Functional Requirements

Main function, should be done first

1

Purchasing game(s)

FR001

The user can buy the Digital Game on the system with a Credit Card.



FR002

The system must have a shopping cart system that allows the user to put their games in the cart and checkout all items at once.





Functional Requirements

Main function, should be done first

2

Game Searching / Filtering

FRO03

The user can see the **lists of games available** on the store

FRO04

The user can **filter the game** list by genre.

FRO05

The user can **search the game** by genre, name of the game, and creator of the game.

FRO06

The **system** must have a **recommendation system** to advertise interesting upcoming games.





Functional Requirements

Main function, should be done first

3

Installing the new games



FR007

User can manage their Game Storage by saving the games in the User's machine or Cloud system.



4

Trading in-game items



FR008

Users can buy and sell in-game items on the Virtual Marketplace.



Functional Requirements

Main function, should be done first

5

Managing the games

FRO09

Administrators can tag the game's genres in the system.



FRO10

Game creators can upload executables to the system.



FRO11

Game creators can specify or edit information about their game such as system requirements, and price.



Functional Requirements

Main function, should be done first

6

Others

FRO12

The user can **create an account** with a username, email, and password, and **log in** with a username/email and password.

FRO13

The system should have a **wishlist feature**, so the user can list the games that he/she wants to buy in the future.

FRO14

The user gives the **rating** to the game after he/she played the game between 1 to 5 stars.



FRO15

The system must show the **System requirements, Price, and Rating of a game.**





Non-Functional Requirements

Additional, add on functional requirements

NR001

The **interface** of the application should be nice looking, attractive, and good UI/UX design.

NR002

Good performance on their page shouldn't respond later than 1 second.

NR003

The **user data** should be **encrypted** in the database or during the payment information being transferred to the server.

NR004

The **system** should be able to handle 10,000 concurrent users.

NR005

The **uptime** of the system should be 99.999%.



Non-Functional Requirements

Additional, add on functional requirements

NR006

The system must check the users to set a strong password. (> 8 characters, contains at least a Capital letter, a number, and a symbol)

NR007

The system should provide unlimited storage for storing users' game progress.

NR008

The system can store the login session for 1 month.

NR009

The system should support multiple languages.

NR010

The system should support multiple currencies.



Identifying Actors

Who has permission in which process?

- There are 3 main actors in the system:



- **Register** an account
- **Search** a game (**Filter** included)
- **Purchase** a Digital Game
 - Pay with Credit Card
- **Install** a Game
 - Save Game on the Cloud
- **Review** a Game
- **Buy or Sell** in-game items
 - Pay with Credit Card



- **Managing Games** in the Store
 - **Manage** the games and tag genres
 - **Ensure the performance** of the overall system (e.g., stable, Do the maintenance (e.g., new version))

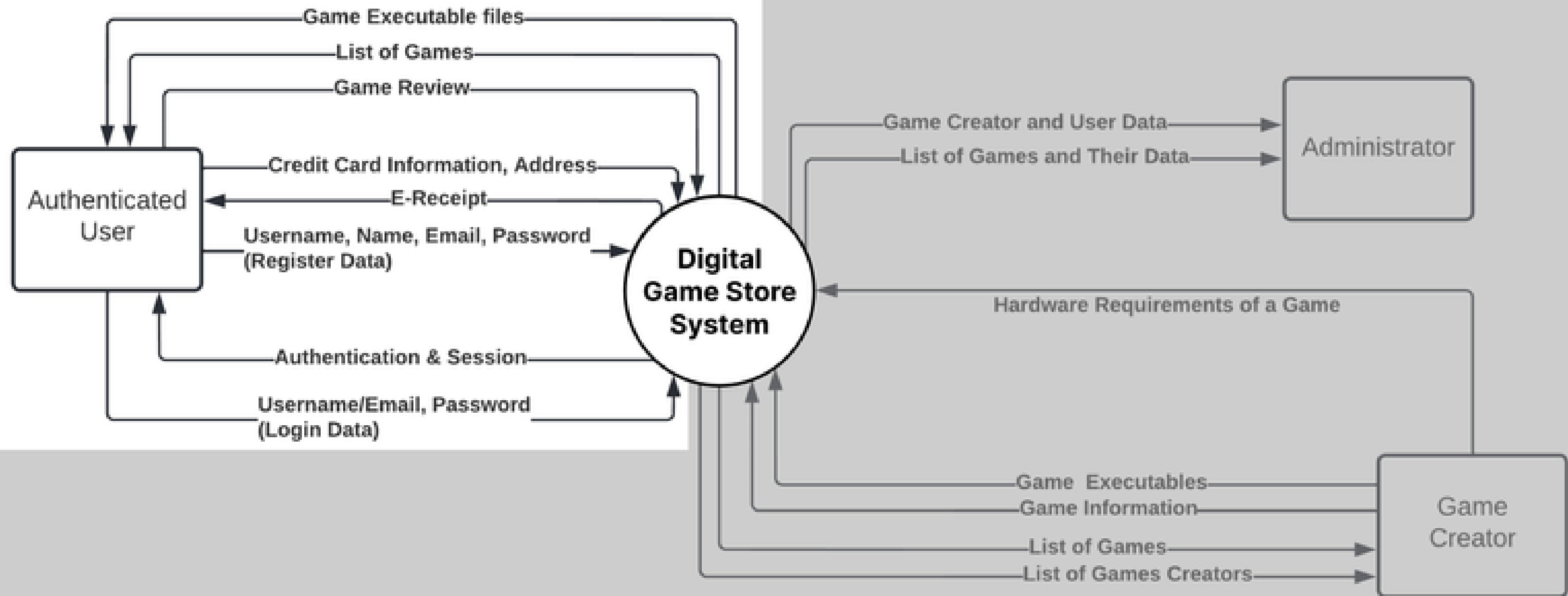


- **Managing Games** in the Store
 - **Upload** an executable game files
 - **Specify** the price and system requirements of the game.



Data Flow Diagram Level 0 (Context Diagram)

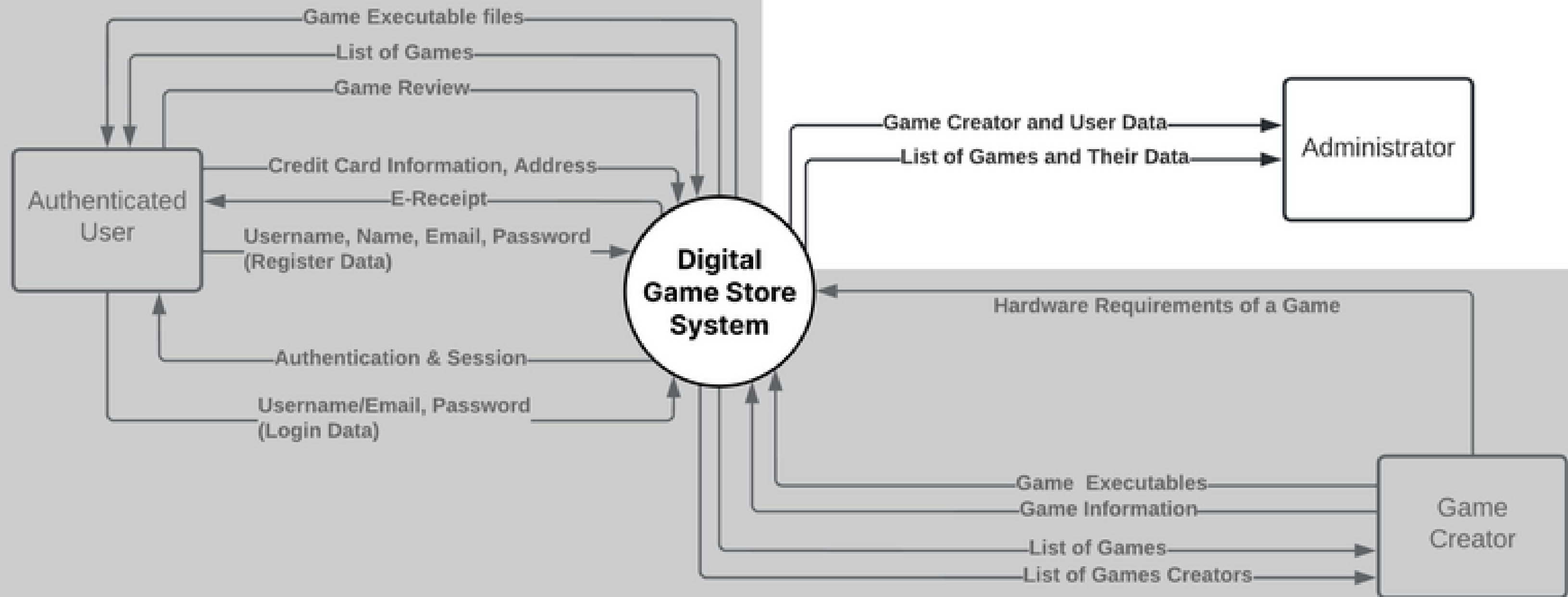
Data flow in the system





Data Flow Diagram Level 0 (Context Diagram)

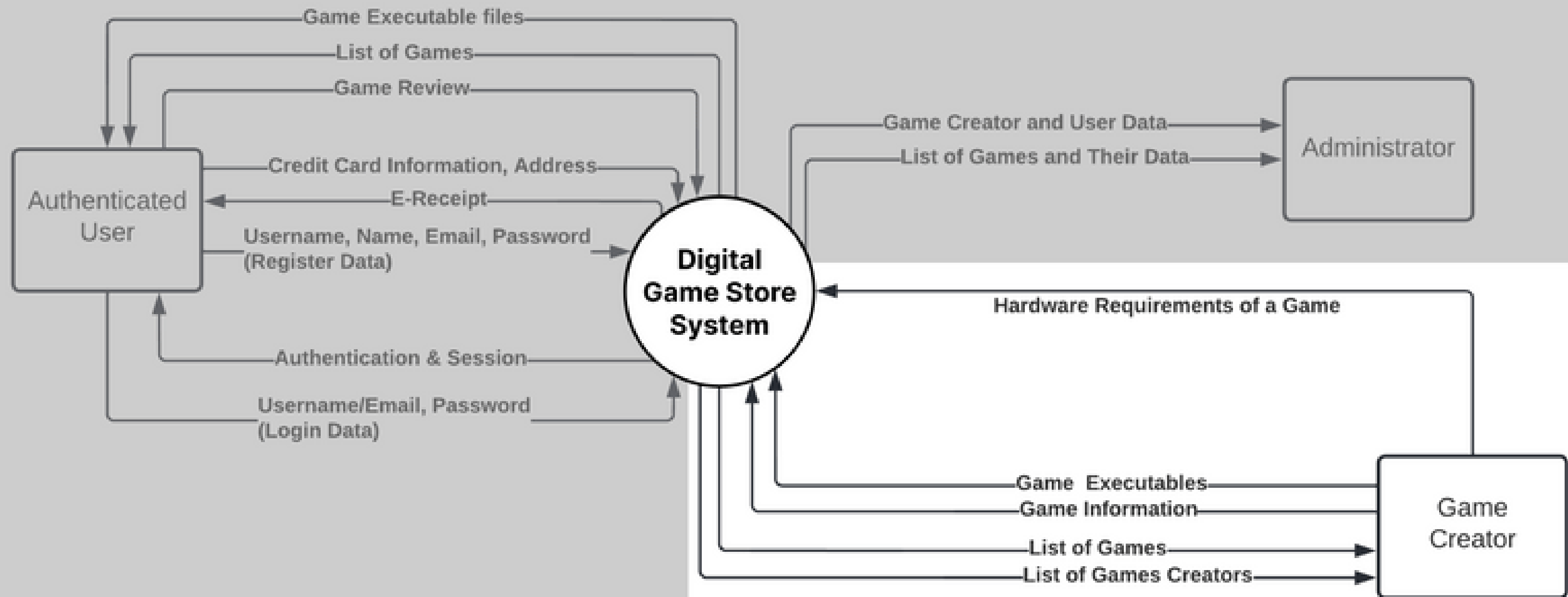
Data flow in the system





Data Flow Diagram Level 0 (Context Diagram)

Data flow in the system





GAMMA GAMES

Thank You

ANY QUESTIONS OR COMMENTS ARE WELCOMED