

Application Description Document

Game Database Management System

Course: CMPSC 431W

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Introduction

Purpose: This application description document is necessary for the database design, because it aims to analyze the application requirements of our Game Database Management System as the first stage of database design. The purpose of the document is to provide a detailed and understandable guideline of the usage and background of our database for future implementation of the actual database. It also helps the user and administrator to understand the behavior and functionality of the database.

Scope: Overall working and main objective of the document is to design a Game Database Management System that has some user interactions and data relationships. The value that will be provided to the customer is easy to add new games, delete games, calculate the shopping cart for a user, and etc.

Overview: After all, Game Database Management is a platform for users and administrators to provide a library of games, modify games, make purchases of games, have user game community, modify game records, define game achievements, and etc.

General Description

The general description is used to explain the objective, features, and benefit of the users of the Game Database Management System.

Gamer

- **Features:** Give gamers a vast library of games, a community for discussions, and a platform to showcase achievements.
- **Objective:** Discover and purchase games.
- **Benefits:**
 - Browse and search for games
 - Add games to the shopping cart and process purchases.
 - Community Participation, such as post game reviews
 - Achievement System

Administrator

- **Features:** Provide admins tools to manage and oversee the game library.
- **Objective:** Add new games, set prices, and manage game listings.
- **Benefits:**
 - Game Management such as add game
 - Payment gateway

Function Requirements

The functional requirements are used to explain the expected behavior of the database, the relationships between the datas, and the inputs of the tables.

1. Game
 - a. **A table that contains the information of games, such as name, category, price, and release date. It can add new games or delete games or modify game information.**
 - b. **Attributes:** {gameID, gameName, mainCategory, price, releaseDate}
2. Users
 - a. **A table that contains the information of users, such as userID, user name and password. A user can login to an account.**
 - b. **Attributes:** {userID, userName, password, shoppingCartID}
3. Community
 - a. **A table that connects the game and dashboard, and the community will delete if the game is deleted.**
 - b. **Attributes:** {gameID, dashboardID}
4. Shopping Cart
 - a. **The table is a temporary space to store the games the user wants to purchase.**
 - b. **Attributes:** {gameID, userID}
5. Dashboard
 - a. **This table stores the user's post on the dashboard**
 - b. **Attributes:** {dashboardID, postID, Author, date}
6. Achievement
 - a. **This table stores the user's achievement in the game**
 - b. **Attributes:** {achievementID, gameID, userID}
7. Order
 - a. **This table stores the transactions made from user.**
 - b. **Attributes:** {orderID, gameID, userID, t_price}
8. Category
 - a. **This table stores the subcategory of each main Category.**
 - b. **Attributes:** {mainCategory, subCategory}

Interface Requirements

User Interface:

Interactive web-based UI for users to log in, browse games, manage carts, make purchase, view achievements, and participate in the community with dashboard. Clean and intuitive design for easy navigation and enhanced user experience.

Admin Interface:

A secure interface for administrators to log in, manage game database, and other system aspects.