Steam
Database Design Document (DDD)

Prepared by: Carlxen Brieyl P. Duran
Rynel Jazmin L. Fetalvero

Table of Contents

1 Detailed Database Design

1.1.1 Data dictionary

1.1.1.1 Data dictionary for Element: User

Name	Data Type	Constrain	Description
UserID (Primary Key)	Integer	Min :1, Max:1	Unique identifier for user
Username	String	UNIQUE, NOT NULL	Username for login
Password	String	NOT NULL	Hashed password for authentication

1.1.1.2 Data dictionary for Element: Admin

Name	Data Type	Constrain	Description
AdminID (Primary Key)	Integer	Min :1, Max:1	Unique identifier for the admin
AdminUname	String	UNIQUE, NOT NULL	Admin username
AdminPword	String	NOT NULL	Admin password (hashed)

1.1.1.3 Data dictionary for Element: Game

Name	Data Type	Constrain	Description
GameID (Primary Key)	Integer	Min: 1, Max: 1	Unique identifier for the game
GameName	string	Min :1, Max:1	Name of the game
OriginalPrice	Integer		The original file name assigned by user.

DiscountPercent	Integer		Price of the game
FinalAmount	Integer		Final amount discounted
AdminID (Foreign Key)	Integer		References Admin who manages this game

1.1.1.4 Data dictionary for Element: Library

Name	Data Type	Constrain	Description
LibraryID	Integer	Min :1, Max:1	Unique identifier for the library
GameID (Foreign Key)	Integer		References GameID in the Game table
TimeStamp	DATETIME		Date and Time of the saved application

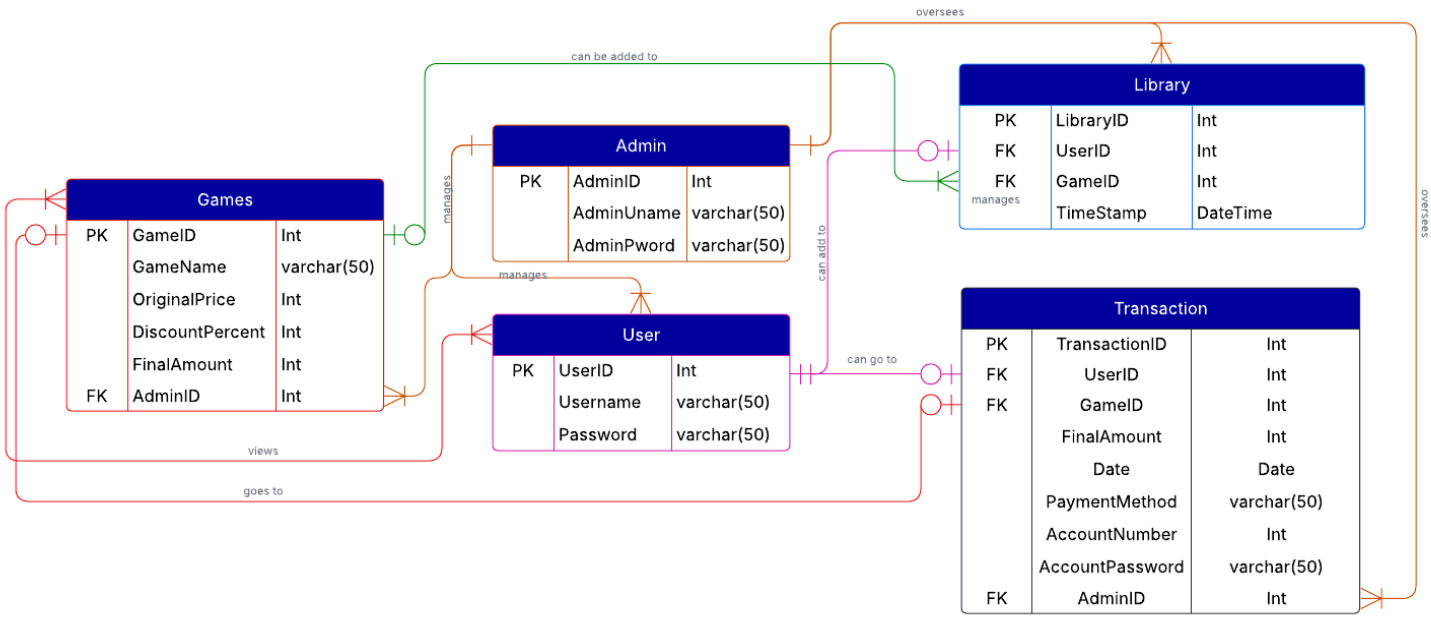
1.1.1.5 Data dictionary for Element: Transaction

Name	Data Type	Constrain	Description
TransactionID (Primary Key)	Integer	Min :1, Max:1	Unique transaction ID
GameID (Foreign Key)	Integer		References GameID in the Game table

UserID (Foreign Key)	Integer		S References UserID in the User table
FinalAmount	Integer		This will store the final amount for the transaction
Date	DATE		Date of the transaction
PaymentMethod	String	NOT NULL	Payment method used (GCash, PayMaya, etc.).
AccountNumber	Integer	NOT NULL	User's account number
AccountPassword	String	NOT NULL	Password for verification
AdminID (Foreign Key)	Integer		References Admin who oversees transactions

1.2 Database Design (Entity Relationship Diagram)

1.2.1 Conceptual diagram



1.2.2 Description

The entity-relationship (ER) diagram using Crow's Foot Notation represents a structured relational database for a gaming platform, illustrating the relationships between users, administrators, games, transactions, and libraries. The User table is linked to the Games table, allowing users to view available games. When a user purchases a game, a record is created in the Transaction table, which connects users, games, and administrators. The Library table keeps the user's games, ensuring users can access their favorite ones. The Admin table plays a crucial role in managing games, transactions, and overseeing the platform's operations. The relationships follow a structured hierarchy: one admin can manage many users, games, transactions, and library entries. One user can make many transactions and own multiple games in their library. One game can be purchased multiple times and exist in many users' libraries. One transaction links one user, one game, and one admin. One library entry links one user and one game. These relationships establish a well-structured system where users interact with games, administrators manage platform content, and transactions are securely recorded.

1.3 Purpose of Tables (Database Design)

1.3.1 Purpose of User Table

This table stores user credentials, including user ID, username, and password, allowing users to log in, view, and purchase games on the platform. Each user can have multiple transactions and a personal game library.

1.3.2 Purpose of Admin Table

This table contains administrative accounts with admin ID, admin username, and admin password, enabling admins to manage the games and oversee transaction. Each game entry is associated with an admin responsible for its management.

1.3.3 Purpose of Games Table

This table stores information about available games, including game ID, game name, it's original price, the discount percent, and it's final amount. Each game is linked to an admin through admin ID, indicating which administrator is responsible for managing the game details.

1.3.4 Purpose of Library Table

This table tracks the games added by users. It contains the library ID, user ID, game ID and the time stamp, ensuring that users can access their liked games. Each record indicates when a game was added to a user's personal collection.

1.3.5 Purpose of Transaction Table

This table record purchases made by users, containing transaction ID, user ID, game ID, the final amount, date of transaction, payment method, account number, account password and admin ID. It establishes a link between users, purchases games, and administrators who oversee the transactions.

1.4 Relations

From Table	To Table	Relation
Admin	User	Admin oversees and manages users.
Admin	Games	Admin is responsible for managing games.
Admin	Library	Admin oversees the library.
Admin	Transaction	Admin oversees transactions.
User	Games	Users can view available games.
Games	Library	Favourite games are added to the user's library.
Games	Transaction	Games are involved in transactions when purchased.
User	Transaction	Users initiate transactions when purchasing games.
Library	Transaction	Library records are linked to transactions.