

CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 60

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

The domain of our project is gaming, specifically, designing a database to represent a system that manages games of various types, tracks player statistics, supports player profiles, and leaderboard tracking for each game. We are aiming to model how a company might want to handle and track data related to the games they provide and the players that play them. For example, game platforms such as Steam that host different amounts of games, and players can access it all in one place.

Database Specification - What functionality will the database provide?

The database will provide access to player information, game information, and leaderboard tracking related to each specific game. The database will allow applications to query information, such as player statistics related to a specific game and display it to the user. More specifically:

Player information

- Store player profiles with all relevant information (name, username etc.)
- Keep track of the relationship players may have with each other (friends)
- Maintain player statistics for each game
- Allow applications to display player information to player such as their statistics in a game they play

Game Information

- Catalog games
- Store game specific details (i.e leaderboard, platform, company provider, description)

Leaderboard Information

- Record and update leaderboard data for each game
- Support leaderboard queries, such as being able to look up what a players rank in a certain game may be

These are the many examples of what functionality that database can provide.

What platform will the final project be on? What is your application technology stack?

We plan on using an Oracle server with Java and PHP.

Attributes - Each entity set has at least one non-primary key attribute.

1. Game:

- Attributes: GameID, Title, Genre, ReleaseDate, Publisher, Platform
- Relationships:
 - A game must be developed by at least one Developer

- A game must be published by at least one Publisher
 - A game must have a single Leaderboard, and a Leaderboard must have a game
- Multiplayer Game
 - Attributes: Server, Voice Chat Provider
 - Relationships:
 1. Can have Teams in the game
- Single-Player Game
 - Attributes: (CPU) difficulty
- 2. Player:**
 - Attributes: PlayerID, ProfileID (foreign key), Username, DateOfBirth
 - Relationships:
 - isOn a Team
 - plays a Game (and has a username and password for each game)
 - Must have a Statistic associated with them
 - Must have a Player Profile associated with them
- 3. PlayerProfile:**
 - Attributes: ProfileID, PlayerID (foreign key), Avatar, Bio
 - Relationships:
 - Must have a Player associated with the Profile
 - Can be friends with another player profile
- 4. Team:**
 - Attributes: TeamID, CreationDate
 - Relationships:
 - A Team is on a particular Game
 - A Player can be on a Team, and a Team must have at least one Player
- 5. Statistics:**
 - Attributes: StatID, PlayerID (foreign key), TeamID (foreign key), Score, Rank
- 6. Leaderboard:**
 - Attributes: LeaderboardID, GameID (foreign key), Visibility (public/private), TimeFrame (daily, weekly, etc.)
 - Relationships:
 - A Leaderboard contains Statistics, and a Leaderboard
 - A Game must have a single Leaderboard, and a Leaderboard must have a single Game
- 7. Publisher:**
 - Attributes: PublisherID, Name,
 - Relationships:
 - A publisher publishes a Game and a Game must have a publisher
 - A publisher can hire developers from a developer company
- 8. DeveloperCompany**
 - Attributes: DeveloperID, Name, Headquarter (location)
 - Relationships:

- A developer company develops a game and a Game must have a developer
- A developer can be hired by a publisher

