

CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 44

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Kshitij Gomber	18521526	n4i6m	kshitijgomber@gmail.com
Luke Nathan	38946877	a2x9g	lnathan80@gmail.com
Apoorva Devarakonda	66647223	z1o3g	devarka403@gmail.com

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

Project Description

a. What is the domain of the application?

The domain of this application is **gaming and digital commerce** within the context of **game development and player interaction**. It's focused on the relationships between game developers, publishers, players, and the in-app purchase economy. The system allows players to engage with games, write reviews, unlock achievements, follow other players, and buy in-game items, while developers and publishers are responsible for creating and distributing the game.

b. What aspects of the domain are modeled by the database?

The database models several important aspects:

1. **Player Information:** The database models individual players, identified by their unique usernames. Their follow, following, review, and achievement count is stored as well.
2. **Game Structure:** The game entity is central, uniquely identified by the name of the game and the company that developed it. Price, release year, genre, and the platform(s) it's available on is stored as well.
3. **Achievements:** Players can achieve certain milestones within the games and the application itself. These achievements are uniquely identified by their name and the game (or application) they're from. The requirements to achieve them are stored as well.
4. **Reviews:** Players can leave reviews on games with a numeric score and a written portion. These reviews are uniquely identified by the username of the author and the game they're written for, as players can only write one review per game. The time of publishing is stored as well. Other players can also leave comments on these reviews, represented as a weak-entity. The keys for these comments are the username of their author and the time of publishing, alongside the aforementioned review keys.
5. **In-App Purchases:** Games have the option to sell in-app purchases, represented in the database as items. Their price, name, and function are also stored. Because different items can have the same prices, names, and functions, these entities must be uniquely identified with an ID.
6. **Game Creation:** Developers make the games, identified by the company they work for and their employee ID within said company. Their names are also stored. They're further categorized into specific roles, either programmer or designer, through an ISA relationship. For programmers, their specialization (front-end, back-end, etc.) is stored, while for designers, their department (animation, level design, etc.) is represented.
7. **Game Publishing:** Publishers handle game distribution, identified by the name of the publishing company. The city they're located in is stored as well.

As a whole, the database models an application that allows users to write reviews on their favourite games, discover new games, follow other users, track future game development, log their achievements, and trade in-app purchases.

Database Specifications

What functionality will the database provide?

The database will allow users to **track player profiles**, including their followers, reviews, and achievements within the game. Players will be able to **write reviews** for games, leave comments on reviews, and view other players' feedback. Developers can use the database to **manage game creation** by assigning roles (such as programmer and designer) and tracking the game's development. Publishers will be able to **publish games** and update game details such as price, platform, and release year. Additionally, the database will handle **in-app purchases**, allowing storefronts to track and manage transactions related to the games.

Description of the Application Platform

a. What database will your project use?

The project will use the **department-provided Oracle database**, which ensures compatibility with course infrastructure and access to tutorials and support provided by the department.

b. What is your expected application technology stack?

The project will utilize **JavaScript** for the front-end and will directly interact with the **Oracle** database for back-end operations. This stack will allow us to manage data and build user interactions while keeping the setup simple, focusing solely on these two technologies.

ER Diagram

