University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 38

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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

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Question 2
a) The domain of our application is multiplayer gaming, microtransactions and match analytics.

b) Our database intends to model a player-centric client for an online, match-based, multiplayer video game. The entirety of player persistent information, centered around individual player profiles and match history, will be modeled in the database. The database will also model a centralized game shop supporting player transactions.

Question 3
a) Player profiles will be recorded, allowing users to update player information (username, email, password), view their overall game statistics (wins, losses, ranking) and their inventory (champions, skins, boosts). Match history will be recorded to provide detailed match data (participants, outcome) and each participant's individual performance (kills, assists, deaths). A marketplace for in-game items for player purchase will also be recorded, tracking item availability and promotions, as well as each player's transaction history and currency balance.

Question 4
a) For our DBMS, we will likely be using the department provided Oracle DBMS.
b) To facilitate our front end, we will deploy a simple web application with React and JavaScript. Our backend will be implemented using Java, or alternatively JavaScript with Express.js and the oracledb Node.js driver.

Additional notes for ER diagram (next page)
- Ten players take part in each match, and each player ends a match with a record of stats, thus each match contains ten MatchStats foreign keys
- Partial keys of weak entities are represented with strikethroughs rather than dashed underlines
- A player can have multiple inventories, with each identified by an InventoryItem's "invID" partial key. The InventoryItem represents a weak entity, to key a specific InventoryItem, you need all three of: playerID (foreign key), itemID (foreign key), and invID (partial key)
- A ShopItem IS one of A:
    - Consumable with an expiration time and effect upon purchase
    - Cosmetic with some attached rarity (no effect on gameplay)
- There exist multiple shops, including a legacy shop. Items are rotated between shops, and when an item is no longer available, it resides in the legacy shop.
- The CurrBalance entity is intended to track a specific player's quantity of a specific type of currency. The player will have one CurrBalance for each type of the Currency's that they possess
- Username acts a display name, it can be shared by many Player's

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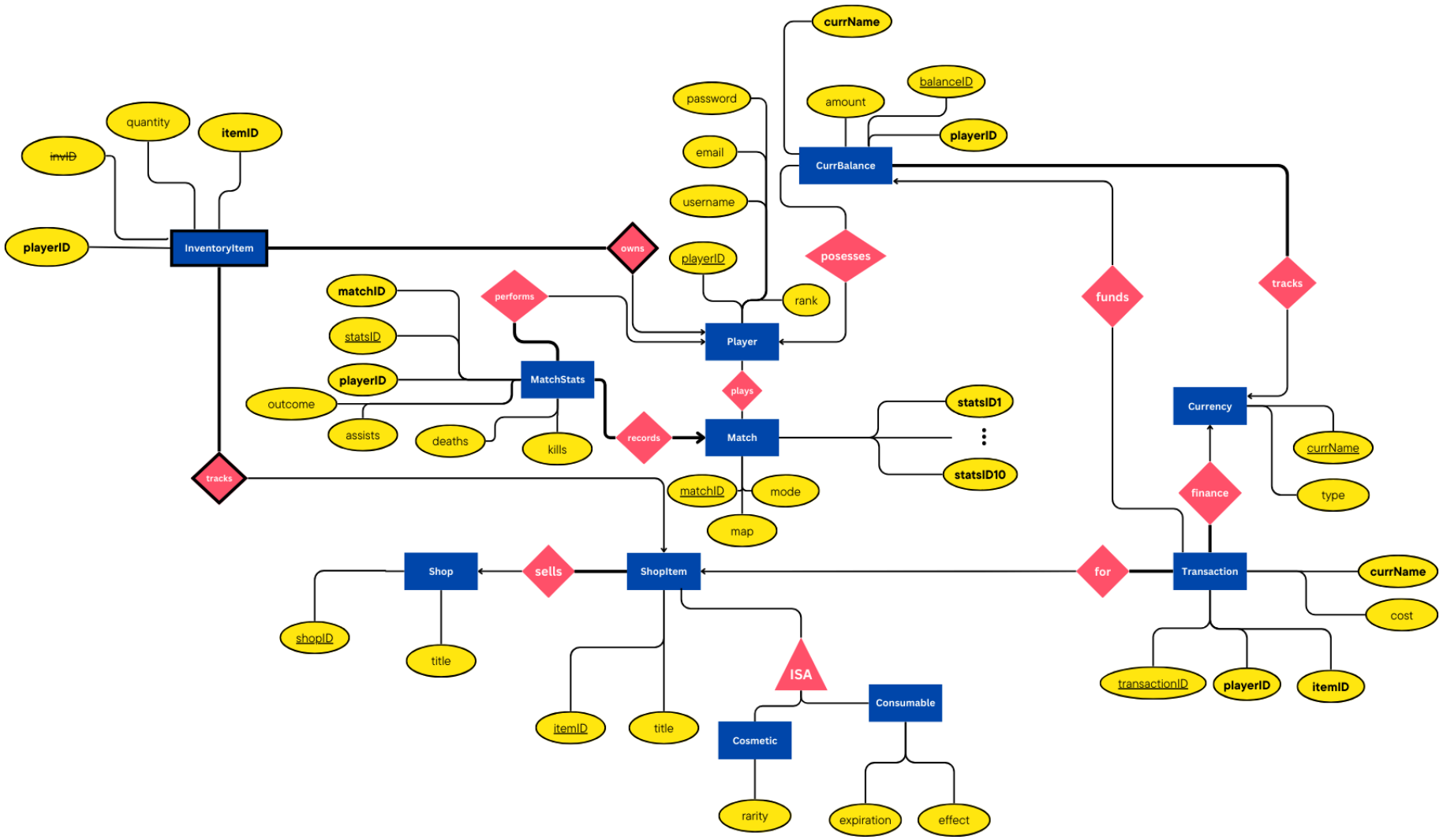

ER Diagram of the proposed application