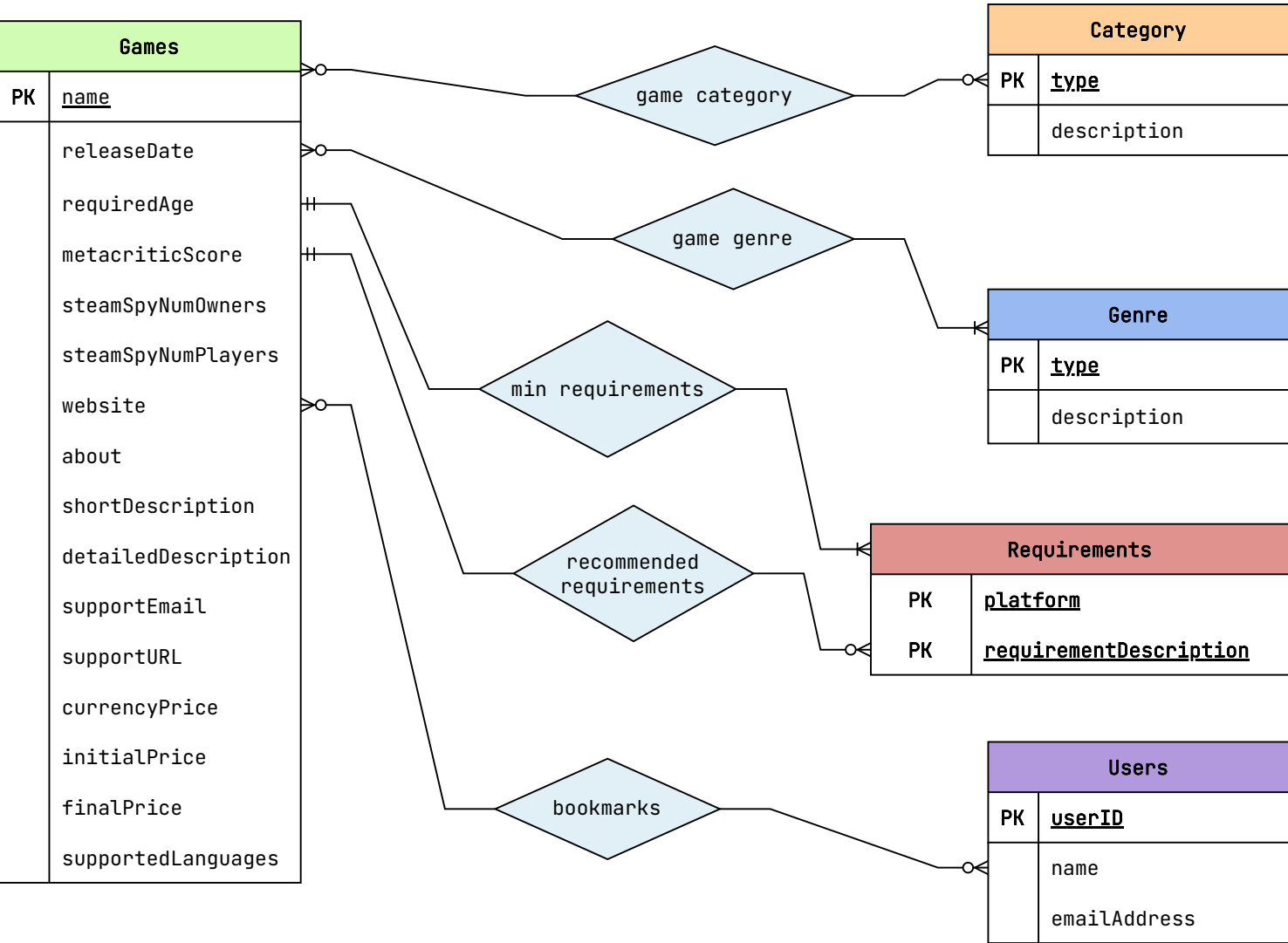


CS 411 Project Stage 2

ER Diagram



Relational Schema

Games(name:VARCHAR(255) [PK], releaseDate:VARCHAR(20), requiredAge:INT, metacriticScore:Decimal, steamSpyNumOwners:INT, steamSpyNumPlayers:INT, website:VARCHAR(255), about:VARCHAR(255), shortDescription:VARCHAR(255), detailedDescription:VARCHAR(511), supportEmail:VARCHAR(255), supportURL:VARCHAR(255), currencyPrice:VARCHAR(20), initialPrice:Decimal, finalPrice:Decimal, supportedLanguages:VARCHAR(255))

Category(type:VARCHAR(255) [PK], description:VARCHAR(255))

Genre(type:VARCHAR(255) [PK], description:VARCHAR(255))

Requirements(platform:VARCHAR(20) [PK], requirementDescription:VARCHAR(255) [PK])

Users(userID:INT [PK], name:VARCHAR(255), emailAddress:VARCHAR(255))

GameCategory(gameName:VARCHAR(255) [FK to Games.name], gameCategory:VARCHAR(255) [FK to Category.type])

GameGenre(gameName:VARCHAR(255) [FK to Games.name], gameGenre:VARCHAR(255) [FK to Genre.type])

MinRequirements(gameName:VARCHAR(255) [FK to Games.name], gamePlatform:VARCHAR(20) [FK to Requirements.platform, gameMinRequirements:VARCHAR(255) [FK to Requirements.requirementDescription])

RecommendedRequirements(gameName:VARCHAR(255) [FK to Games.name], gamePlatform:VARCHAR(20) [FK to Requirements.platform, gameRecommendedRequirements:VARCHAR(255) [FK to Requirements.requirementDescription])

Bookmarks(gameName:VARCHAR(255) [FK to Games.name], userID:INT [FK to Users.userID])

Assumptions and Descriptions of the ER Diagram

Assumptions of the diagram

- A game is uniquely identified by its name only (ie, different games must have different names)
- Every game must have at least 1 genre, but every genre is not required to have any games listed under it.
- Many games can have many categories and vice versa, but are not required to have any either.
- Every game must have at least 1 minimum system requirement, and games can have multiple minimum requirements depending on different platforms (e.g. MacOS or console support). Conversely, minimum requirements are tailored to one specific game.
- Every game can have multiple recommended requirements depending on different platforms (e.g. MacOS or console support), but are not required to list any recommended requirement if the game developer chooses not to. Conversely, recommended requirements are tailored to one specific game.
- Many users can have many bookmarked games and vice versa, but are not required to have either.

Descriptions of each relationship and its cardinality

- **game category:** Relates a game to the categories it has (like VR or co-op). This is a *many to many relationship*.
- **game genre:** Relates a game to its genres (like bullet hell or roguelike). This is a *many to many relationship*.
- **min requirements:** Relates a game to its minimum system requirements (e.g. 4GB RAM and 20GB storage space). This is a *1 to many relationship*.
- **recommended requirements:** Relates a game to its recommended system requirements (e.g. 16GB RAM and 35GB storage space). This is a *1 to many relationship*.
- **bookmarks:** Relates a user to the games they have bookmarked. This is a *many to many relationship*.