**Section 1: Introduction**

This project aims to create a relational database system for managing a personal video game collection. The application allows users to store and manage their own collection of games based on both the game title and the specific platform (e.g., PlayStation 5, PC, Nintendo Switch) on which the game is owned.

The system supports complex relationships such as:

* **is-a**: A game is associated with a genre and can be categorized by gameplay mode.
* **contains**: A user’s collection contains multiple game-platform pairs.
* **related-to**: Games are related to platforms, publishers, and gameplay modes via many-to-many relationships.
* **hierarchies**: Games are grouped under genres and platforms.

Key entities include:

* game – stores game titles and references to genres
* game\_genre – defines the genre of each game (e.g., RPG, Puzzle, Simulation)
* platform – platform on which games are released (e.g., Xbox, PS5)
* publisher – game publishers
* game\_mode – gameplay modes (e.g., single-player, online)
* user\_collection – stores the player’s owned games, referencing both game and platform
* Middle tables such as platform\_has\_game, game\_has\_publisher, and game\_mode\_has\_game handle many-to-many relationships

The system ensures normalized structure while allowing users to input, manage, and report on their own video game collection using Microsoft Access as the front-end and SQL Server as the back-end.

**Section 2: Group Membership and Tasks**

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| **Name** | **Email** | **Task** |
| Jay Chao | chao0024@algonquinlive.com | Writing a proposal, MS Access Front End (form, query, report) Design |
| Dupeng Guan | guan0013@algonquinlive.com | Data organization, input, and relationship/ERD design |
| Jianqi Yuan | yuan0082@algonquinlive.com | Backup, writing user documents |

Each team member will work independently on their assigned components and collaborate during integration and testing. Final submission will include Access front-end, SQL Server database backup, and user documents.