Final Report
Methods and Tools in SW Development

I. Group Information

Group Number: 4

Group Member names/netIDs:
- Eleftherios Vganges
  - epv15
- Allison Lyons
  - acl523
- Milton Lewis
  - ml1462
- Jake Wilson
  - jbw622
- Colton Earls
  - cce114

Group GitHub/GitLab repo link: https://github.com/Bruvce/Group-4

Who was assigned to do what?

Allison – Constructing the Menu
Milton – Construction of the initial database
Eleftherios – Database/Classes
Jake – Constructing the Cart Class
Colton – Initial Design and Final Report

II. Updated Detailed Class Diagrams

Originally, we expected to have 4 classes managing 4 different databases, but this was narrowed down to 3 classes and 3 databases. This reduction was due to better understanding of the original requirements. Since the store can run on a single machine with a single user some classes weren't even required. The User, Item, and Orders classes were completely removed. The cart class was modified, and the changes included dropping some functions and variables. The inventory class was split into two sub classes: movies and games. Each of the new classes manage their own database.

Original Classes:
- Inventory
- Shopping Cart
- User
- Orders
- Item

Original Databases:
- User List
- Item List
- Cart List
- Order History

Current classes:
- Games
- Movies
- Cart

Current Databases:
- Games
- Movies
- Cart

```
┌─────────────────────────────────────────────┐
│                   Games                      │
├─────────────────────────────────────────────┤
│ +ViewAllGames(self): query                   │
│ +ViewGamesbyGenre(self, genre_type): query   │
│ +getCartGames(self): query                   │
│ +addGametoCart(self, name): query            │
└─────────────────────────────────────────────┘
```

Functions:
- Function 1 – Prints a query of all games in the database
- Function 2 – Prints a query of all games of a certain genre from the database
- Function 3 – Returns a query of the names of all games
- Function 4 – Adds a game to the cart

Changes:
- Deleted -movieTitle: string
- Deleted -director: string
- Deleted -gameTitle: string
- Deleted -designer: string
- Deleted -itemNum: int*
- Deleted +movies()
- Deleted +games()
- Deleted +all()
- Deleted +popularItems(): void
- Deleted +discounted(): void
- Added +ViewAllGames(self): query
- Added +ViewGamesbyGenre(self, genre_type): query
- Added +getCartGames(self): query
- Added +addGametoCart(self, name): query

Notes:
    The Games class is a modified child-class of the original inventory class. It manages the
Games database

```
┌─────────────────────────────────────────┐
│                 Movies                   │
├─────────────────────────────────────────┤
│ +ViewAllMovies(self): query             │
│ +ViewMoviesbyGenre(self, genre_type): query │
│ +getCartMovies(self): query             │
│ +addMovietoCart(self, name): query      │
└─────────────────────────────────────────┘
```

- Function 1 - Prints a query of all movies in the database
- Function 2 - Prints a query of all movies of a certain genre from the database
- Function 3 - Returns a query of the names of all movie names
- Function 4 – Adds a movie to the cart

Changes:
- Deleted -movieTitle: string
- Deleted -director: string
- Deleted -gameTitle: string
- Deleted -designer: string
- Deleted -itemNum: int*
- Deleted +movies()
- Deleted +games()
- Deleted +all()
- Deleted +popularItems(): void
- Deleted +discounted(): void
- Added +ViewAllMovies(self): query
- Added +ViewMoviesbyGenre(self, genre_type): query
- Added +getCartMovies(self): query
- Added +addMovietoCart(self, name): query

Notes:
  The Movies class is a modified child-class of the original inventory class. It manages the Movies database

III. Conclusions

If you were to flesh out your project more, what requirements do you think could be added?

Are there any overall design choices you wish you could have changed in hindsight? What are they and why?

What difficulties did your group have?

What did your group learn overall from the project?