Object Oriented Analysis & Design Algorithms, Architecture Design & Patterns

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BSc (Hons) in Computing in IT - Y3

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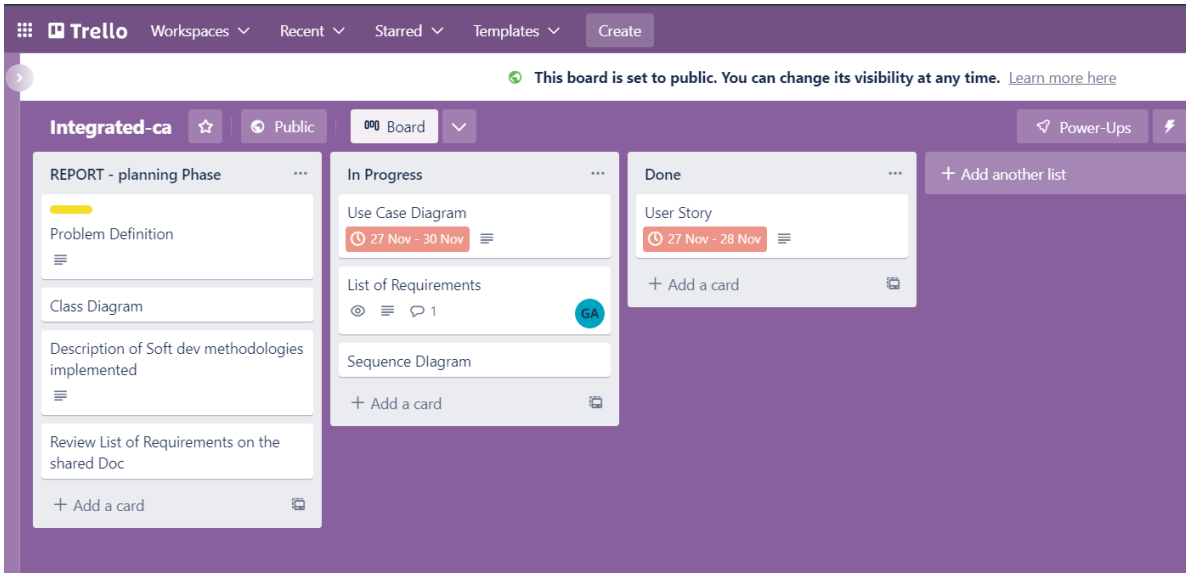
Declaration

By submitting this assessment, I confirm that I have read the CCT policy on Academic Misconduct and understand the implications of submitting work that is not my own or does not appropriately reference material taken from a third party or other source. I declare it to be my own work and that all material from third parties has been appropriately referenced. I further confirm that this work has not previously been submitted for assessment by myself or someone else in CCT College Dublin or any other higher education institution.

Divided tasks between team members:

Each person was designated a part of code. Charles had the task to create Login/sign authentication, Gabriel was responsible for loading and interaction with the database, and also processing the data from the .CSV file by splitting it and creating the appropriate objects. And Luiza had the main menu creation, such as show list of movies to rent, and show rented movies.

For the report part, each team member collaborated as needed, the use of trello for this task was needed, where the team could communicate on what was missing and priority order for each task. Discord was also used as a communication tool, to do team calls and meetings. On the reporting, it was equally collaboration, members were adding information as the coding part flow, such as diagrams.



(Figure I - Trello Kanban Board for project management.)

The code logic was elaborated by the whole team, and a few meetings were held to communicate the points whenever team members got stuck. Over the coding tasks, it is possible to see clearly where each member collaborated, such as each team member has its initials on classes, as well as on top comments whenever a member needed to

collaborate over another member's class. Collaboration can also be double checked on a github account.

Diagrams part: Gabriel did Communicational diagram, Charles did sequence diagram and Luiza did User case diagram.

Problem Definition:

As requested by the lecturer, in this project we are supposed to develop an app where a user can access its account and then be prompted with all the movies in the catalog, then it is also prompted the most popular movies from the last 5 minutes.

Once the user finds a title that he/she wants to watch, then he should be able to rent it for at least 1 minute, and in the output it should appear the user renting the movie, the title of the movie and its price. We also should know all the movies that the user has rented.

Type of system:

Video streaming service. The system functionality is to make available for users to rent movies and see what was rented. In more details the user would be able to login/sign, to an account using email and password, after this first check, inside the system, the user is able to rent movies and see rented options, the movies were provided on a csv file and uploaded in a database, using queries inside the program. For this project, when the user selects a movie, this is stored inside a list which is shown later on, when requested by the user.

User Story

As a user, I want to be able to see what movies I have watched before so I do not risk watching it again.

Software Development Methodology

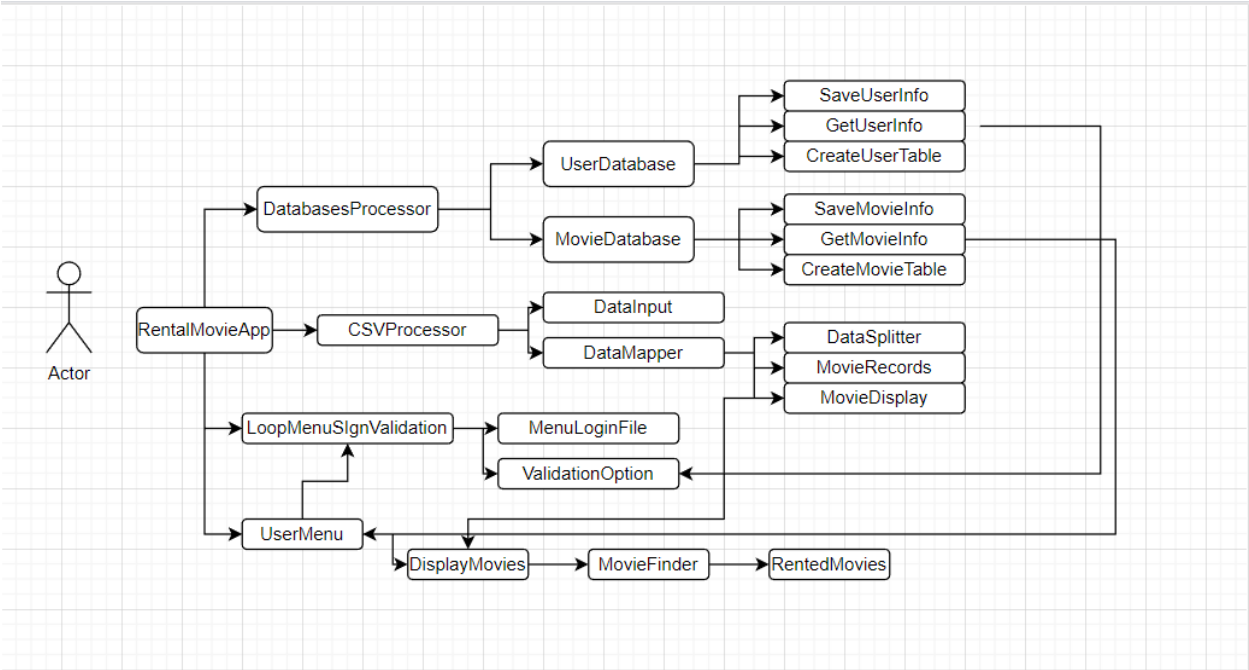
We tried as much as we could to follow the S.O.L.I.D methodology, trying to apply all 5 of the fundamentals, the task was not easy and being honest it could have been done in a much better way than we did, but we have done the best we could considering all the issues we faced throughout the project.

List of Requirements

- Validate csv file before parsing it.
- Allow users to create and log into accounts with an email and a password.
- Do authentication with users in the login screen.
- Allow a user to rent a movie.
- Movies and their prices will initially be provided in a csv file.
- For this prototype: when a customer is charged, output the customer, movie, and price to the console.
- For this prototype, rental duration is 1 minute for each movie.
- Keep track of what movies a user has rented.
- Recommend to users the 5 most rented movies of the past 5 minutes.
- Persist users' accounts into databases.

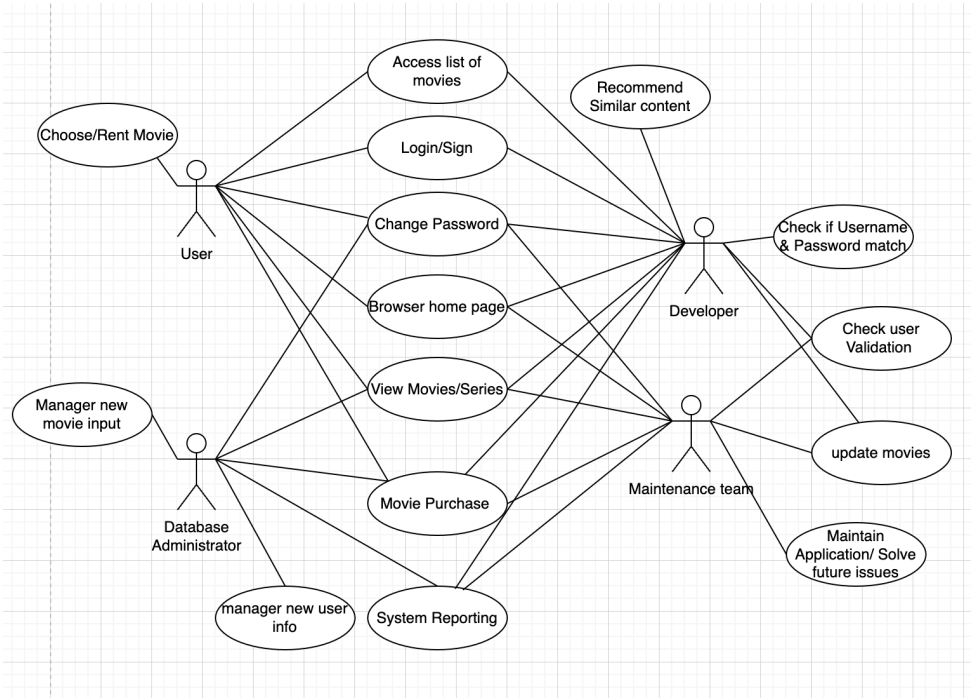
Diagrams:

Communication Diagram



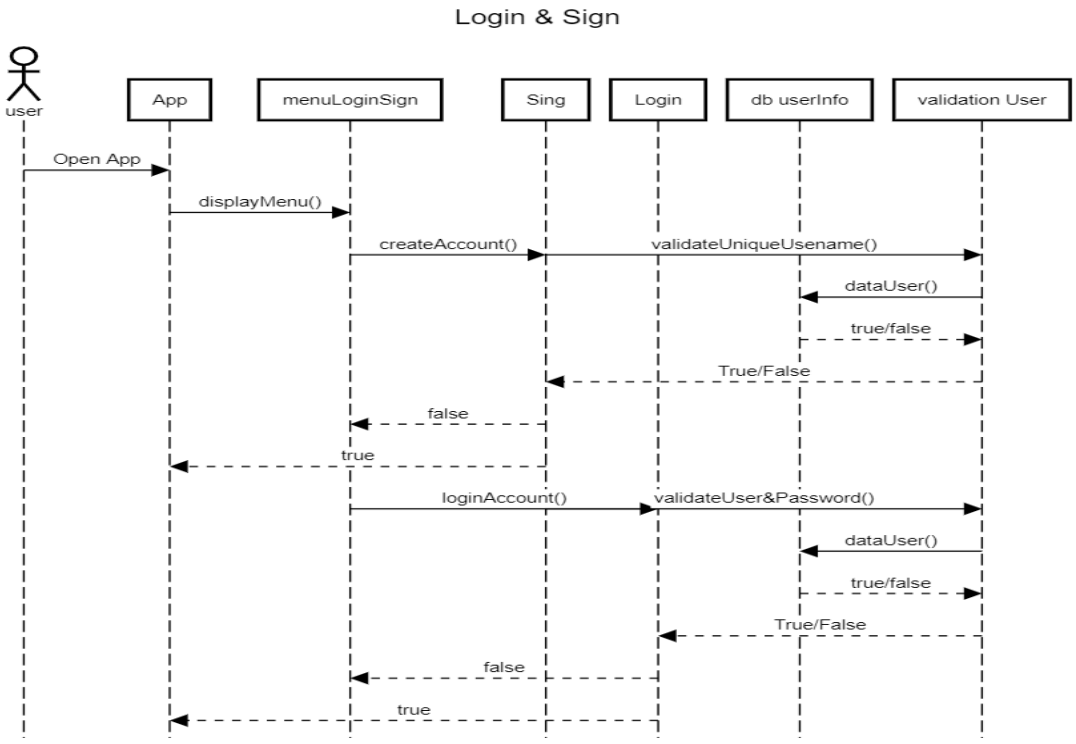
(Figure II - Communication Diagram - Gabriel.)

Use Case Diagram



(Figure III - Use Case Diagram - Luiza.)

Sequence Diagram



(Figure IV - sequence diagram - Charles .)

Tool's Links

[Google doc]
[GitHub Repository]
[Sequence diagram]
[Draw io]
[Trello]