Class Design Solution

for

Book Rental and Sales System

Version 1.6 approved

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Table of Contents

Table of Figures

Revision History

Name	Date	Reason For Changes	Version
Trinh Thai Linh	30-Nov-23	Create Document Template.	1.0
Pham Tung Duong	08-Dec-23	Add Database Model.	1.1
Do Tien Dung	08-Dec-23	Make changes to model.	1.1
Trinh Thai Linh	08-Dec-23	Make changes to model	1.1

1. Introduction

1.1 Purpose

This is a report prepared by Group 7 (Object-oriented Analysis and Design Class 20, 22-23) to Describe the Run-time Architecture Solution for Book Rental and Sales System and is written based on the reporting format "IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications".

1.2 Intended Audience and Reading Suggestions

The different types of reader that the document is intended for are:

- **Designers:** Design the classes and the subsystems architecture that satisfies the requirements specified in this SRS.
- **Developers:** Implement codes from the design and these documents. They use this document as a blueprint, and it makes sure that, firstly, their code works properly, and secondly, it is in sync with others' codes.
- **Tester:** Use this document to understand the requirements. They have to create a test plan that outlines the scope of testing, testing objectives, test environment setup, resources required, and a schedule.
- **Documentation writers:** Ensure that the documentation aligns with the software's requirements as specified in the Software Requirements Specification (SRS). Verify that the documented information is accurate and complete.

1.3 Product Scope

The software, "Book Rental and Sales System", is designed to provide a platform for users to rent, purchase, read books in both physical and electrical form.

Additionally, it includes a forum where users can discuss with other readers about the books they purchased, rented or simply ones that captured their interest. The system aims to enhance the reading experience and promote the reading community engagements.

1.4 References

[1] Form of presentation IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

[2] System Requirements Specification Content and Format Standard, which specifies the content and format of this specification.

[3] Previous Project of Object-Oriented Analysis and Design Course, The Cargo Carriage System.

2. Database Design
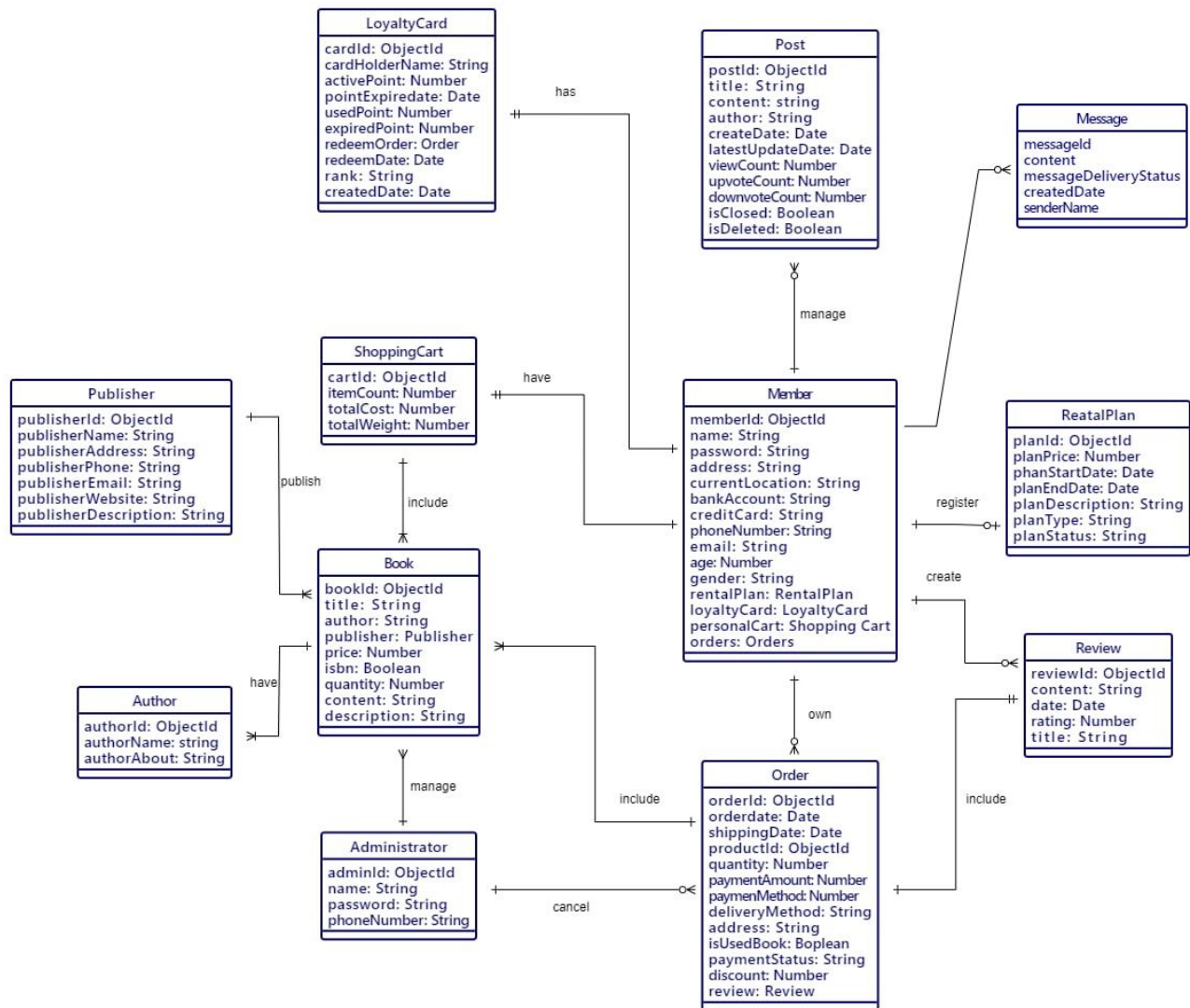
2.1 Database Design Model

Figure 2-1: Database Design Model.

2.2 Database Table Descriptions

- **Member:** Include basic personal information of user (name, age, address, ...) and information about rentalplan, loyalty card, post, review that related to user.

- **RentalPlan:** Include information about the book that user rent.

- **Post:** which is content about the book that user want to review in forum of system. Include information such as upvote, downvote or other interactions of many users.

- **LoyaltyCard:** A card that is given to a customer, used by the business to reward the customer for buying goods or services and to record information about what they buy.

- **Review:** Include information of review of the order after user ordered product.

- **Order:** Include information of order such as order method, payment, date, product, information,... and review from user.

- **Book:** Include information of each book in database such as title, author, content, price, quantity,...

- **Shopping Cart:** Include information about list of books that user added to cart.

- **Author:** Include information of specific book's author.

- **Publisher:** Include information of specific book's publisher.

- **Administrator:** Include information of admin.