THRILLIO – A SOCIAL BOOKMARKING APPLICATION

A PROJECT REPORT

Submitted by

AKHIL NARWAL

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ABSTRACT

Thrillio is a social bookmarking application, made using Core Java and some advanced features. Using this, users can bookmark their favorite bookmarks. It also provides marking certain bookmarks as kid-friendly bookmarks. Certain bookmarks can be shared with a 3rd party sites. Marking of bookmarks as kid-friendly and sharing bookmarks, are methods which can be used by special users (users with administrative access, i.e. Editors and Chief Editors) of the application.

Thrillio requires an object-oriented design and implementation. Java is used for the same along with its additional capabilities like safety, efficient memory management, platform independence and being able to function in networked environment.

A very commonly used design pattern in large applications is the MVC (Model-View-Controller) architecture, which is used in designing Thrillio.

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LIST OF SYMBOLS, ABBREVIATIONS AND NOMENCLATURE

1. OOP: Object-Oriented Programming
2. EER: Enhanced Entity Relationship
3. MVC: Model-View-Controller
4. Java SE 8: Java Standard Edition 8
5. DB: Database
6. Dao: Data access object
7. JSP: JavaServer Pages
8. JSTL: JavaServer pages Standard Tag Library
9. IDE: Integrated Development Environment

1.0 Introduction

Thrillio is a social bookmarking application, made using Core Java and some advanced features. Using this, users can bookmark their favorite bookmarks. It also provides marking certain bookmarks as kid-friendly bookmarks. Certain bookmarks can be shared with a 3rd party sites. Marking of bookmarks as kid-friendly and sharing bookmarks, are methods which can be used by special users (users with administrative access, i.e. Editors and Chief Editors) of the application.

1.1 Problem Statement

There are many websites on the internet. Let's say that we are interested in websites of movies, books and articles. Although they can be bookmarked via the browser, there is no unifying application/method that allows a user to access his/her bookmarks from any other pc around the world. Thrillio is aimed to solve this very problem.

1.2 Requirements

The vital requirements of this application are –

- Implementing real life like design
- Management of bookmarks in efficient way

1.3 Software Used

Technologies used for making of app are

- Java SE 8 for implementing Object-Oriented Design
- Oracle's MySQL for management of records in efficient way
- Apache Tomcat 9.0

2.0 Design Methodology

There are basically 3 designs which are used.

2.1 Object-Oriented Design

The design needs multiple inheritance

Following is the Object-Oriented Design of Thrillio –

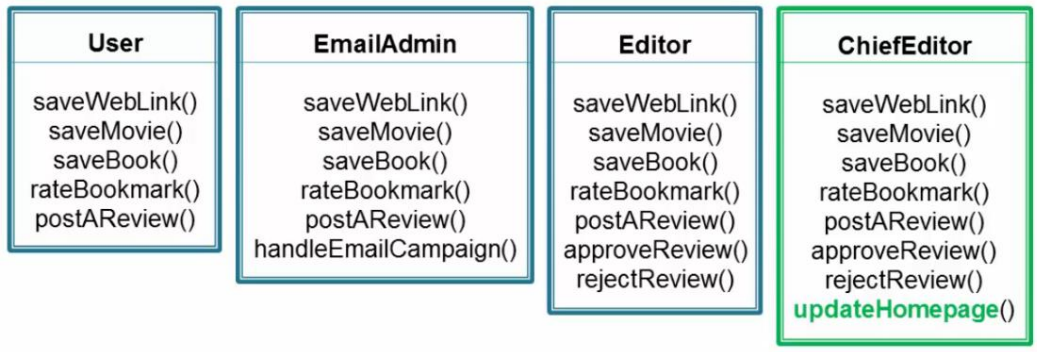

Figure 1: OOP design of Users in Thrillio

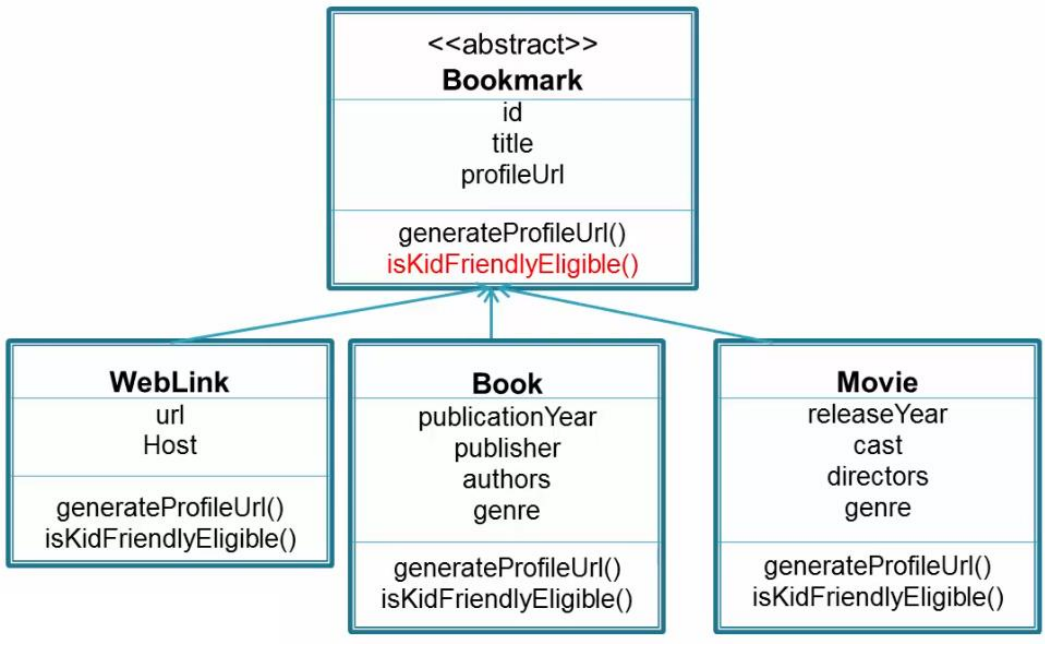

Figure 2: OOP design of Bookmarks in Thrillio

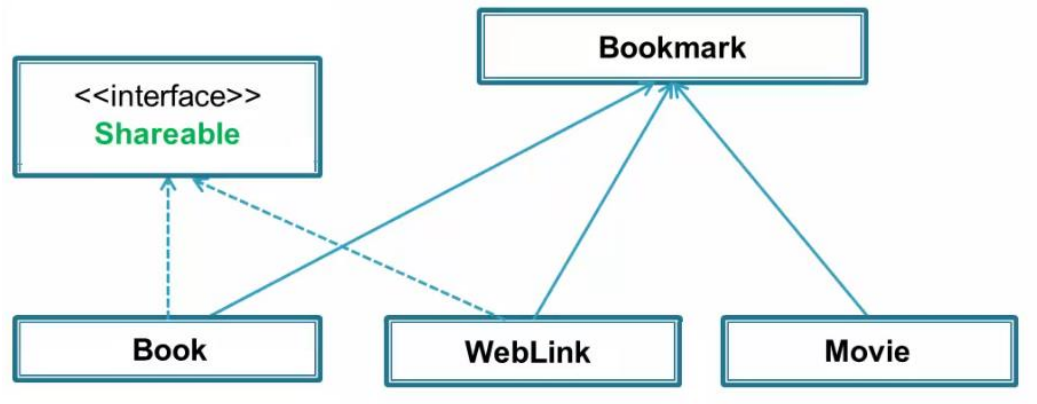

Fig 3: OOP design of Shareable feature of bookmarks (Book and WebLink)

2.2 EER Diagram

Following is the EER Diagram of Thrillio after normalizing upto 3NF.

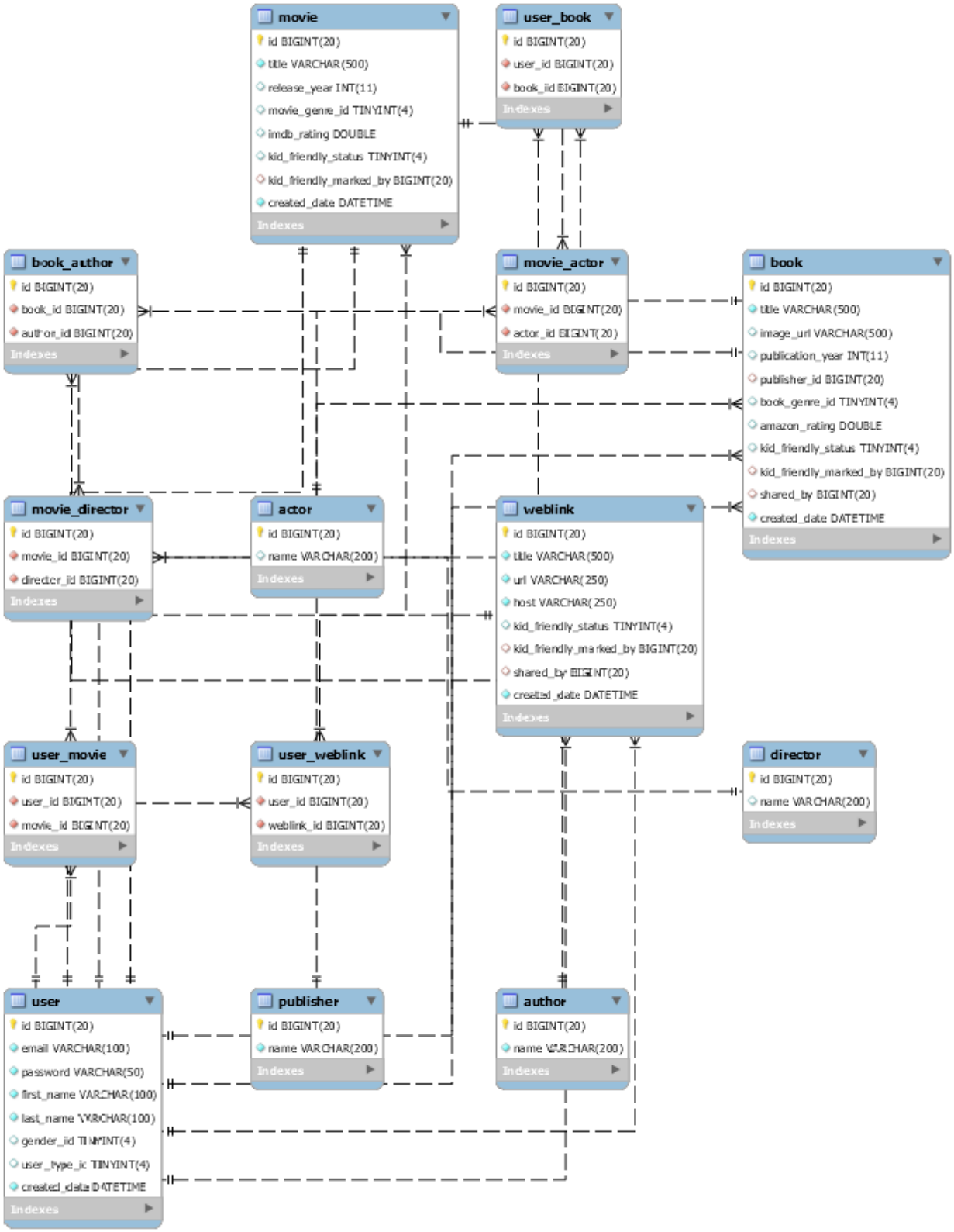

Figure 4: EER of Thrillio

2.3 MVC Architecture

MVC stands for Model-View-Controller. It is a well-known design pattern among web applications. It provides the benefit of separating of Business Logic from Presentation layer which makes the modification easier due to less inter-module dependency.

Following is the MVC Architecture –

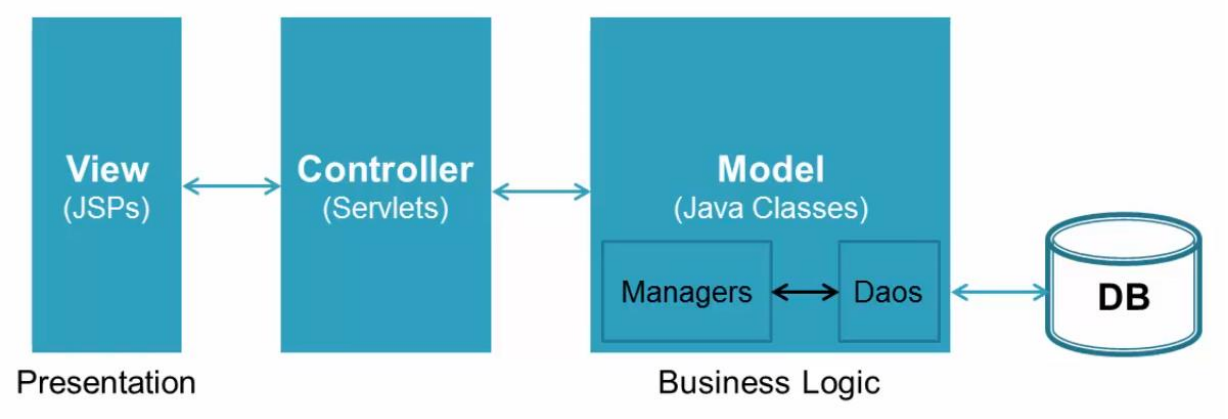

Figure 5: MVC Architecture

3.0 Implementation

The core features and functionalities like entities, manager classes, dao classes, controller classes, view classes, background-job classes, etc. are written in Java (Using IDE Eclipse).

3.1 Functioning of Application

For front-end (View classes), JSP and JSTL are used. For Controller classes, servlets are used. For Manager and dao classes Java is used. The database is designed using Oracle's MySQL.

When the application is launched, first the data is loaded from database.

Then a random method (predefined in java.Math library) is used for each user in database to select/mark any book, movie or weblink as his/her bookmark. If the user is Editor or Chief Editor, then he/she marks the bookmark as kid friendly. These type of users can also share the bookmarks with a 3rd party web application and the decision for sharing any particular bookmark is decided using a random method (predefined in java.Math library).

All the changes are simultaneously reflected in the database.

3.2 Additional Features Used

Some addition features used in making of application are –

- Background processes
- Multithreading
- Test Driven Development (TDD)

4.0 Conclusion and Future Scope

Thrillio is successfully implemented using the core design principles and following the best coding conventions and practices, which makes it less cumbersome to extend it. It can be used widely to manage the bookmarks of any user. The MVC design pattern used, simplifies the task of extending Thrillio and it can be deployed in any network.

- We successfully implemented a social bookmarking app using Java
- We learnt about the core design principles and coding conventions used in large projects
- We learnt how to implement MVC design pattern which is used in most web apps
- Thrillio can be extended and deployed easily.

5.0 References

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