

COMP5524 Individual Project

Film Festival Tickets Exchange System

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1 Preface

This document is written to specify requirements for FFTES, Film Festival Tickets Exchange System. The history versions are shown below in descend order:

Version 3.0 The requirements are further clarified. The system shall provide functionalities like:

- The system shall provide a platform for sellers and buyers to sell/buy tickets. The price shall not exceed the original buying price.
- The system shall provide a communication tool for sellers and buyers to communicate. The system shall not allow discrimination and harassment opinions to appear. The system shall protect user privacy.
- The system shall provide a syndication information system to show detailed information related to any film festivals.
- The system shall provide a functionality that user can generate a film timetable based on their schedule. The system shall remind user upcoming movies.

Version 2.0 One functionality and one regulation are added:

- The system shall provide information related to film festivals.
- The system shall show no tolerance to scalpers.

Version 1.0 The system services people who want to buy/sell movie tickets of film festival. This version is like a prototype, which will be refined in the future.

2 Introduction

2.1 Background

It's hard for people to snap up any kind of tickets. Soccer fans want one ticket for FIFA World Cup Final, Hong Kong music fans want one ticket for Eason Chan's concert, so to cinephiles. However, there's no second-hand ticket exchange platform, like StubHub(one of the biggest soccer ticket exchange website around the world), for film fans. Sellers have to spread the selling information over many social media platform, buyers have to take care of those information all the time to get one ticket, which is inefficient and time-consuming. Hence, I decide to build a system to extricate both sellers and buyers from those difficult problems.

2.2 System Purpose

Those who will benefit from the system are listed as below:

- Sellers: They can sell out their tickets with ease. The communication delay between sellers and buyers will be eliminated.
- Buyers: They do not have to search all over the Internet to buy, to monitor tickets they want. The syndication information system will show all the information within the screen.
- Normal film fans: They can use the system to find upcoming film festivals and information related to specific film festival, including screening schedule, film lists, locations, venue info, etc.. Besides, they can use the system as a memo to remind them when will the next movie start, which movies will he/she watch during the film festival. Sellers and buyers are also applicable for those benefits.

2.3 Project Summary

Project Name: FFTES, Film Festival Tickets Exchange System

Customer: Cinephiles

Project Manager: ZHAO Shuyu

3 Glossary

Cinephile: person who is fond of movies, i.e. film fans

Film Festival: a festival to screen films in a specific city, which includes different programs.

For instance, HKIFF, Hong Kong International Film Festival displays film in Hong Kong with programs like retro, gala, indie every year.

4 User Requirements Definition

The system shall facilitate user requirements as below:

Festival information The system shall provide a scroll view which contains upcoming film festival. The system shall provide a **searching facility** to help user find specific film festival. The system shall provide **detailed film information within each film festival**.

- Rationale: User can get all the information in our syndication system rather than searching all over the Internet. Also, this requirement is closely connected with below requirements. This requirement is the main entrance for user to jump to other pages.

Ticket exchange The system shall provide a **functionality for users to sell/buy tickets**. For every detailed film information page, user can upload a wanted/selling requests on it. The system shall also show a scroll view for wanted/selling information on this page. The system shall provide a **portal for each wanted/selling request to help users get in touch with others**. The system shall **notice sellers** that someone uploads a wanted requests, and vice versa.

- Rationale: User can sell/buy tickets from specific movie pages rather than typing tickets information on second-hand exchanging platform. User can get notification for selling/wanted information from the system rather than checking messages in many platforms from time to time.

Festival memo The system shall provide a functionality for users to **schedule their timetable**. For every detailed film information page, user can click an button to add this movie to their timetable. After user choose movies, the system shall provide a scroll page to **show information of movies they chosen in time ascending order and group them by film festival name**. The system shall **remind user before movie starting**. The system should provide a facility that user can generate a picture of their timetable to **share with their friends**.

- Rationale: User can generate their film festival timetable just like browsing commerce website and adding goods in their shop cart, which is a delighting experience. User can get reminds before movie starting automatically rather than adding films information on calendar manually. User can share their timetable with friends to get the joy of sharing.

5 System Requirements Specification

5.1 Functional Requirements

- Film festival syndication system
 - The system shall crawl **detailed film festival information and movie information** from Internet and reconstruct them to show properly.
 - A typical film festival information contains name, start time and end time, location, key vision poster, movie lists.
 - A typical movie information contains name, director, venue, screening schedule, poster.
 - The system shall show film festival information in film festival detail page, show key vision poster in main page.
 - The system shall provide a **facility to help user to search film festival with abbreviation or full name**.
 - The system shall archive and **do not show past film festival** in the system.
 - The system shall show movie information in movie detail page.
 - The user shall be **able to add/remove specific movies into their timetable**.
- Ticket exchange system
 - The system shall **show wanted/selling requests fairly**, i.e. in time ascend order.
 - The ticket exchange system shall show in movie detail page.
 - The system shall show information of wanted/selling requests clearly, i.e. seller/buyer name, contact type.
 - The system shall **pin wanted/sell requests that user participated** on the top of the requests list.
 - The user shall be **able to close the request** after getting/selling one ticket.
 - The user shall be **able to report any behavior that violating the community rules**, e.g. scalpers.
 - The user shall be able to buy/sell tickets **securely**.
 - The user shall provide contact information while registration.
- Film festival memo system
 - The system shall **show all user added movies in timetable in time ascend order and group by film festival name**.
 - The system shall **protect user privacy**. User's timetable shall only be accessed by user themselves.

- The user shall be **able to click any movie card to enter its detailed page, which is same as the above movie detailed page.**
- The user shall be able to remove any movies if they want.
- The user shall be able to access past film festival memo even though it is archived(only if they made memo for this film festival before).
- The user shall be able to generate a picture of timetable and share with their friends.
- The user shall be able to

5.2 Non-functional Requirements

- Legislative requirements
 - The system shall not allow user to send discrimination and harassment opinions.
 - The system shall show no tolerance to scalpers.
 - The system shall protect user information by transferring encrypted packages for each HTTP requests.
- Hardware requirements
 - CPU: 2 core 1G, at most 10%
 - RAM: 100M at most
 - Network: support 3G, 4G, 5G, WiFi
- Product requirements
 - The reliable service time of the system shall be 99.9% per year (except for unpredictable reasons such as power failure, network jitters).
 - The system mainly support mobile users, The system shall compatible with different resolution and different system, i.e. Android, iOS.
 - The system shall easy to use and provide detailed instructions.

6 System Architecture

The system architecture of FFTES is shown in Figure 1. Manifestations of components are shown in *italic font*, reused components are shown in **bold font**.

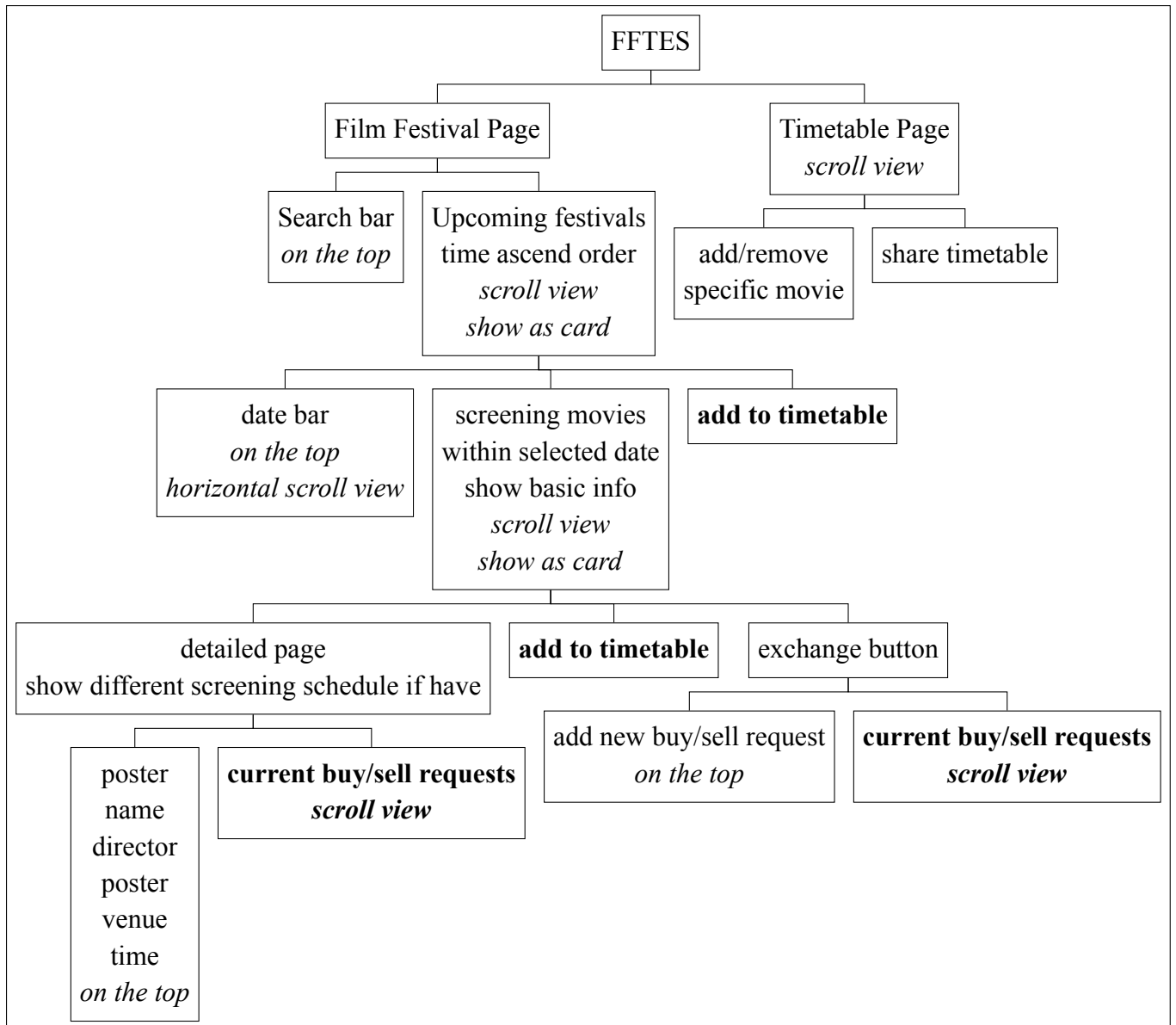


Figure 1: FFTES System Architecture

7 System Models

7.1 Database Model

The database model is shown in E-R diagram form in Figure 2. Primary key is shown in **bold font**, data type is shown in *italic font*.

7.2 Sequence Diagrams

The sequence diagrams are shown in Figure 3. For a typical *film festival memo* related sequence, the illustration see Figure 3a, for a typical *ticket exchange* related sequence, see Figure 3b.

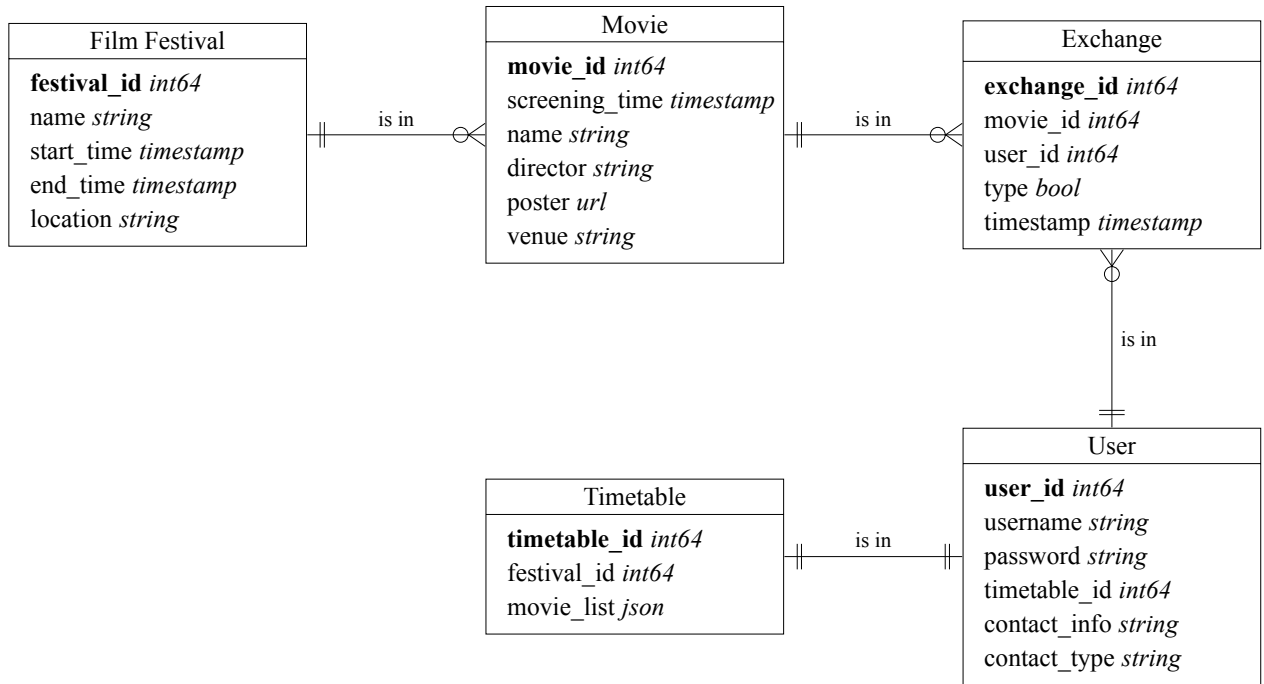


Figure 2: E-R Diagram for FFTES

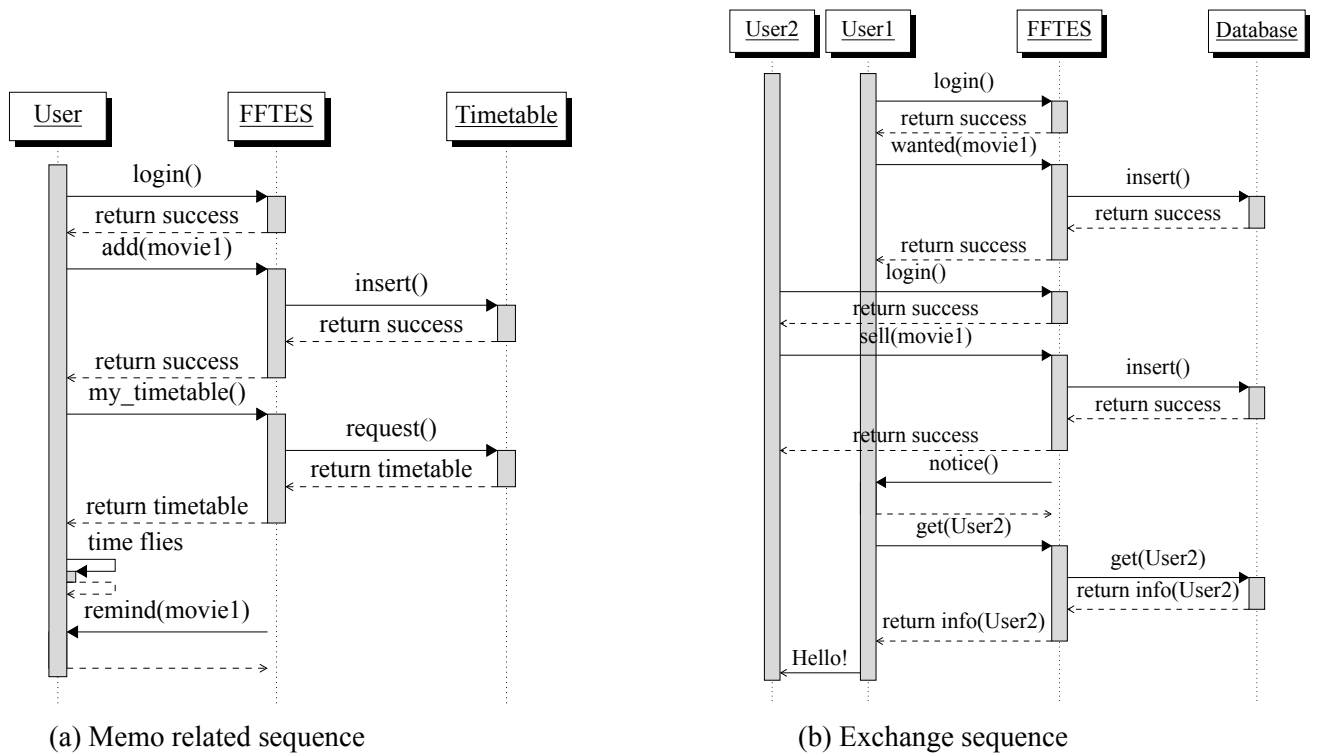


Figure 3: FFTES UML sequence diagram

7.3 Use Case Descriptions(for selected cases)

The below tables show some selected use cases. Table 1 shows the flow of registration. Table 2 shows the flow of login. Table 3 shows the flow of generating and editing the personal timetable.

Table 4 shows the flow of buying and selling tickets.

Use Case Name	Register User
Summary	User can register with username, password, contact type and information
Basic Flow	1.open the application 2.type username and password 3.choose contact type 4.type contact info 5.enter the application
Alternative Flows	user may quit from any step if he/she wants
Preconditions	download and open the app
Postconditions	open the main page
Business Rules	the system should never store any info unless the whole process is done

Table 1: Registration Case

Use Case Name	Login User
Summary	This case allows user to login
Basic Flow	1.open the application 2.type username and password 3.click enter
Alternative Flows	user may quit from any step if he/she wants
Preconditions	download and open the app, registered before
Postconditions	open the main page

Table 2: Login Case

Use Case Name	Edit User's memo
Summary	This case allows user to generate personal timetable
Basic Flow	1.open one film festival page 2.select some movies by click add button 3.back to main page 4.click timetable on the bottom bar 5.browse the timetable and make modifications 5.user can change to another film festivals' timetable by swipe left/right
Alternative Flows	user may double click add button to withdraw user may remove any movie in the timetable by click delete button user can click share button to generate a timetable picture
Preconditions	user already open the app and login
Postconditions	show the timetable and refresh silently after every modifications

Table 3: Memo Case

Use Case Name	Buy/Sell tickets
Summary	This case allows user to buy/sell tickets
Basic Flow	1.open one film festival page 2.select specific movie 3.click the message button to contact seller/buyer 4.the system responds in different ways
Alternative Flows	user can click add button to add wanted/selling requests rather than click message button the respond may be differ based on seller/buyer's contact type - if it's email, the system will automatically compose email to seller/buyer - if it's wechat, the system will store wechat number in system clipboard and raise a toast to notice user
Preconditions	user already open the app and login
Postconditions	show the timetable and refresh silently after every modifications

Table 4: Buy/Sell Case

7.4 UI Sketch Design

The simple UI design sketches are shown in Figure 4.

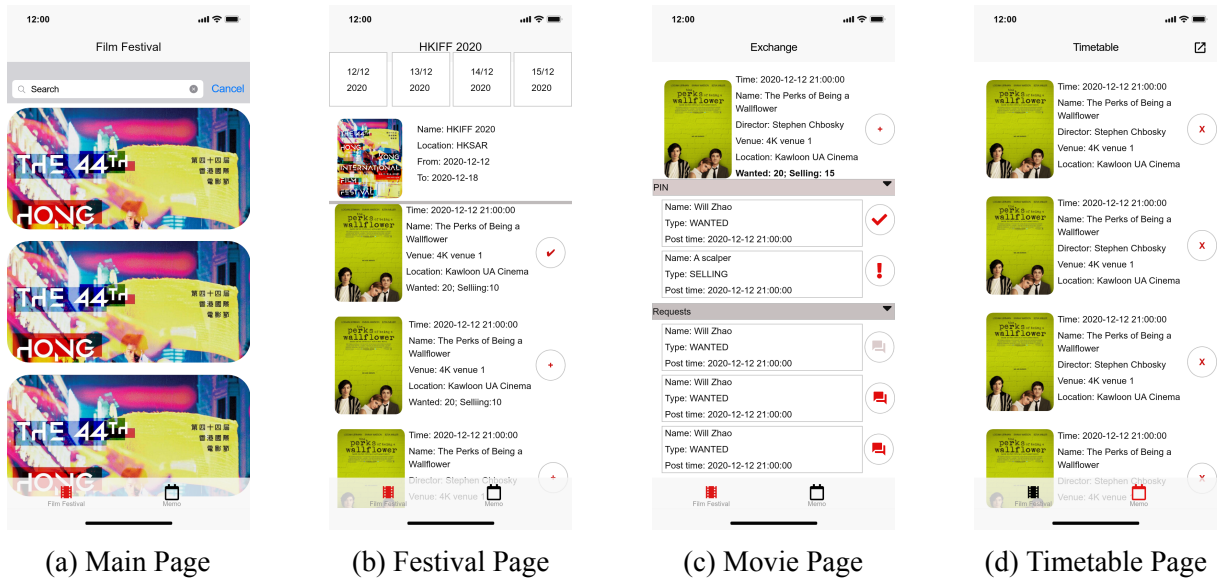


Figure 4: UI Sketches

8 Acknowledgements

The UI prototypes are drawn with [Modao](#), All rights reserved. The document is written with \LaTeX and template [lazylatex](#), licensed under MIT license.