

National Taiwan University
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Software Design Document

Multifunctional Verbatim Management System

Advisor : Jonathan Lee

Member : 李學翰、羅費南、廖盛弘、周語涵、吳詩昀、黃彥鈞

Revision History

Version	Responsibility	Description	Date
0.1	李學翰	Add Outline	2022/10/27
1.0	李學翰	Integration	2022/11/07
2.0	黃彥鈞	Iteration amid implementation. Update class diagram & data design.	2022/12/06

Outline

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1. System Architecture

People often need to participate in a variety of meetings, some of which have the need to record the content of the meeting. Therefore, audio recordings and verbatim transcripts have become an integral part of the meeting.

Our team members observed that there is no software available to automatically generate verbatim transcripts that meets the needs of the general public.

In this project, we have developed a software for verbatim transcripts. In addition to the functions it should have, it can also automatically translate, automatically summarize, and automatically capture keywords. By realizing various functions, it can meet the needs of modern people.

This project is developed by students of National Taiwan University. The content of the project mainly includes page design, functional algorithm design, back-end management interface and other projects.

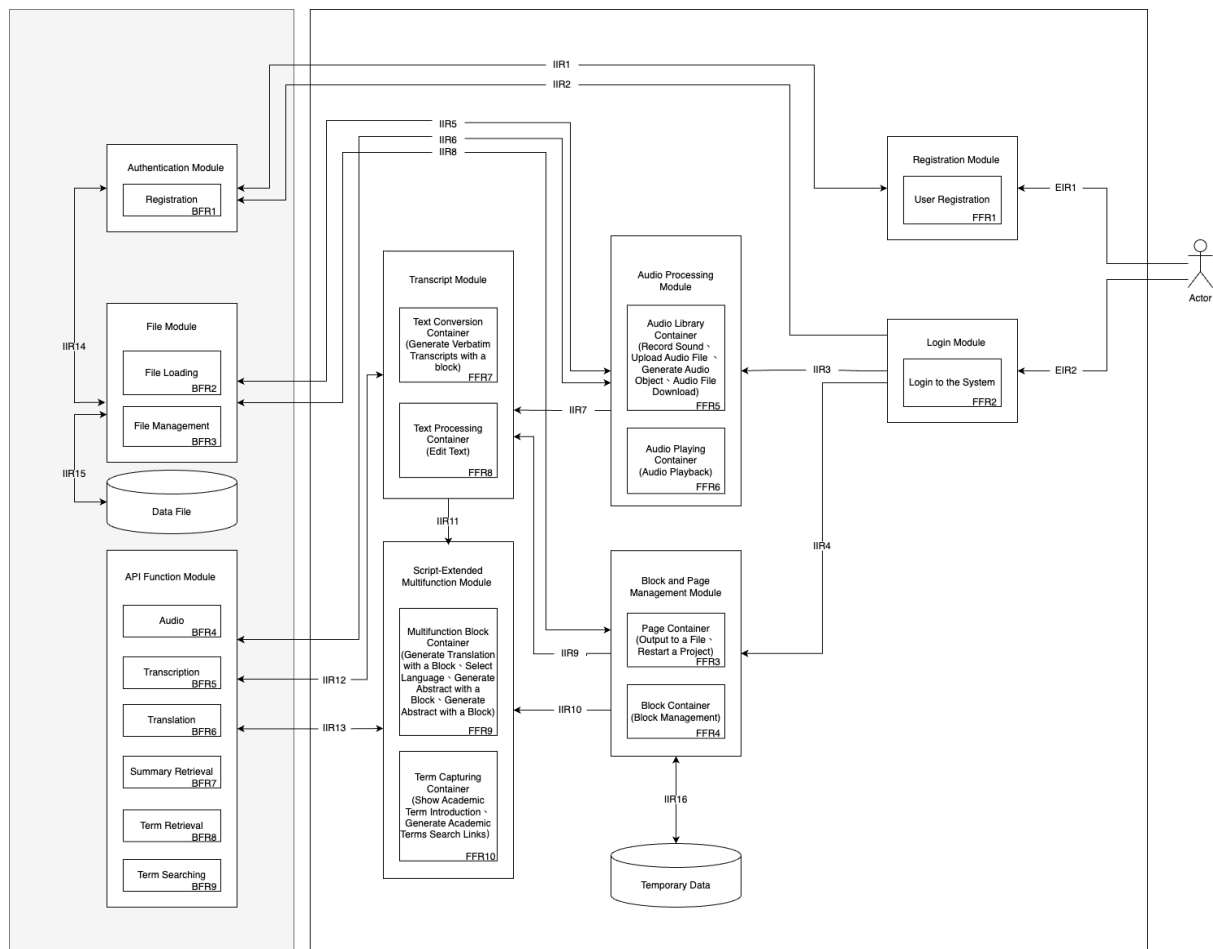


Figure 1. System Architecture Diagram

2. Process Design

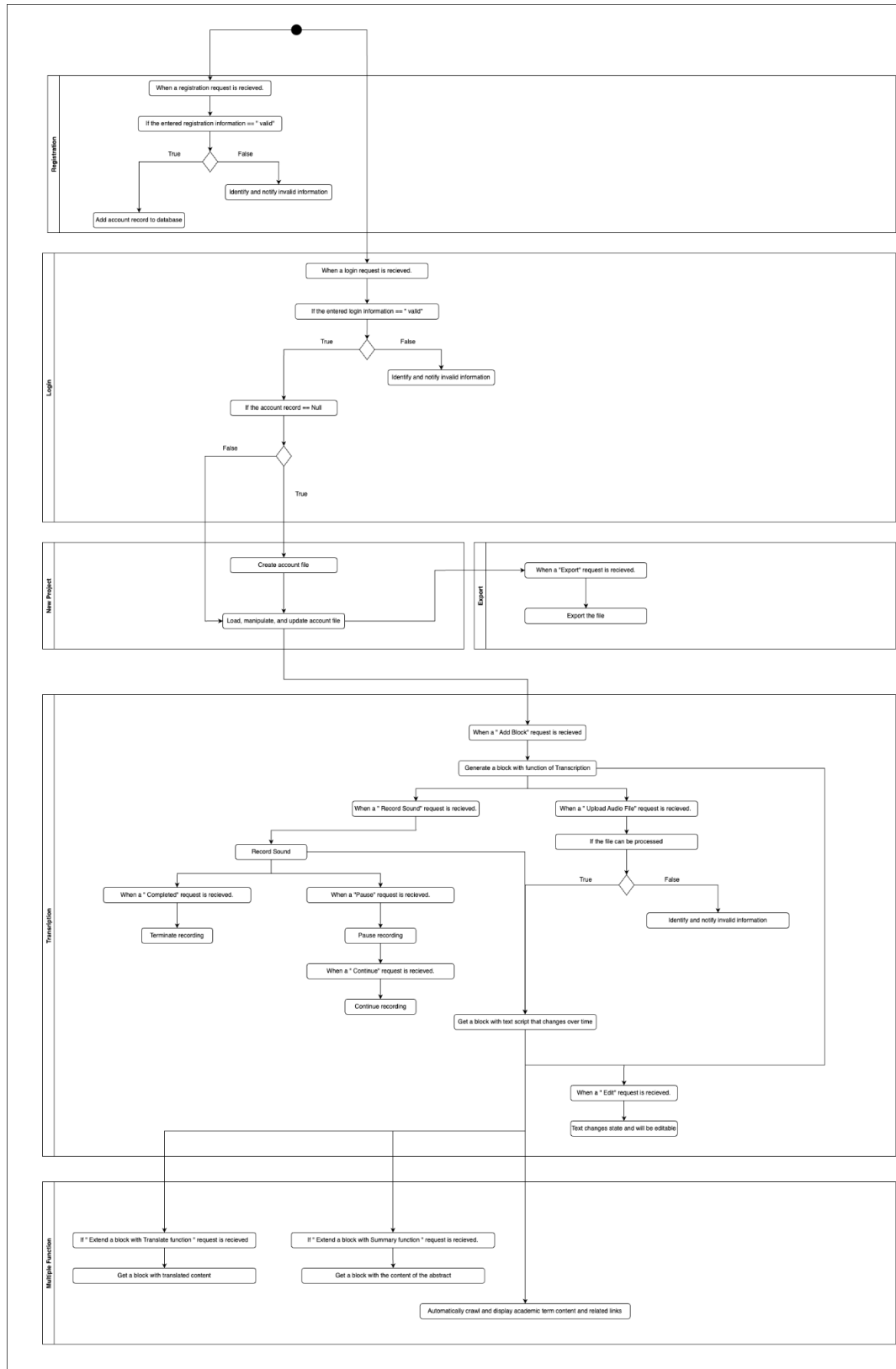
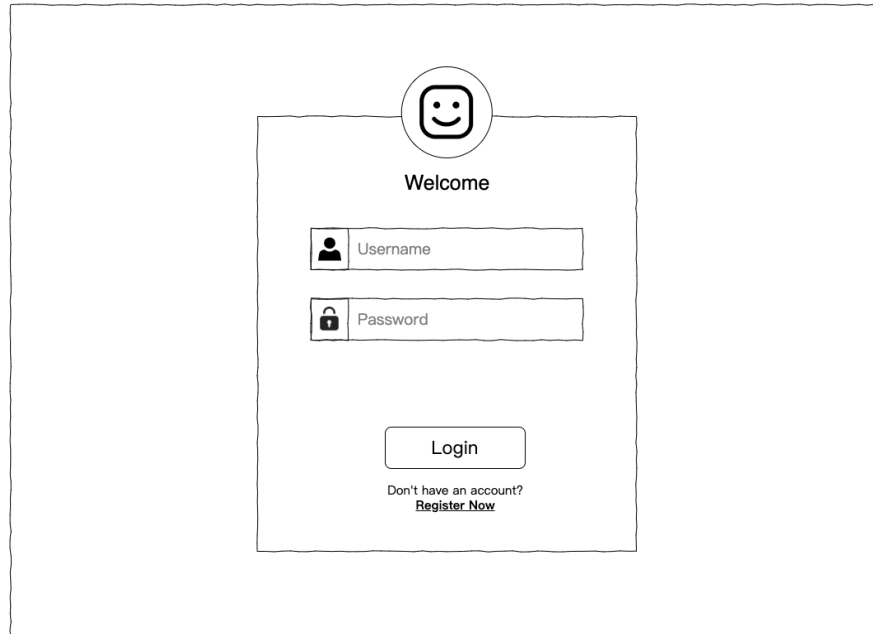


Figure 2. Process Design

3. User Interface Design

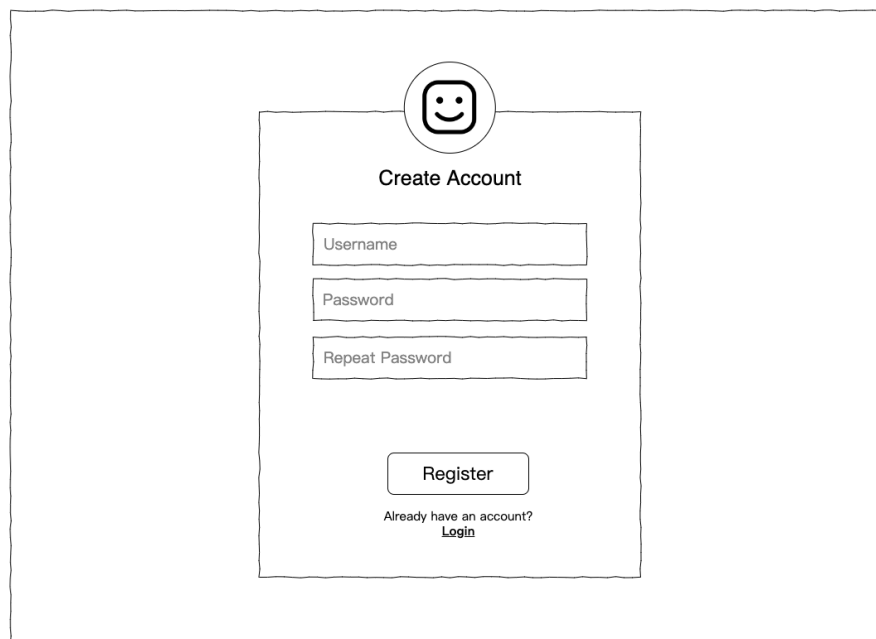
Login Page



The login page features a central white box with a rounded border. At the top center of this box is a circular icon containing a simple smiley face. Below the icon, the word "Welcome" is centered. Underneath, there are two input fields: the first is preceded by a small person icon and labeled "Username"; the second is preceded by a small padlock icon and labeled "Password". Below these fields is a rounded rectangular button labeled "Login". At the bottom of the box, the text "Don't have an account?" is centered, followed by a link labeled "Register Now" in a smaller font.

Figure 3. UI Design for Login Page

Registration Page



The registration page features a central white box with a rounded border. At the top center of this box is a circular icon containing a simple smiley face. Below the icon, the text "Create Account" is centered. Underneath, there are three input fields stacked vertically, labeled "Username", "Password", and "Repeat Password". Below these fields is a rounded rectangular button labeled "Register". At the bottom of the box, the text "Already have an account?" is centered, followed by a link labeled "Login" in a smaller font.

Figure 4. UI Design for Registration Page

Main Page

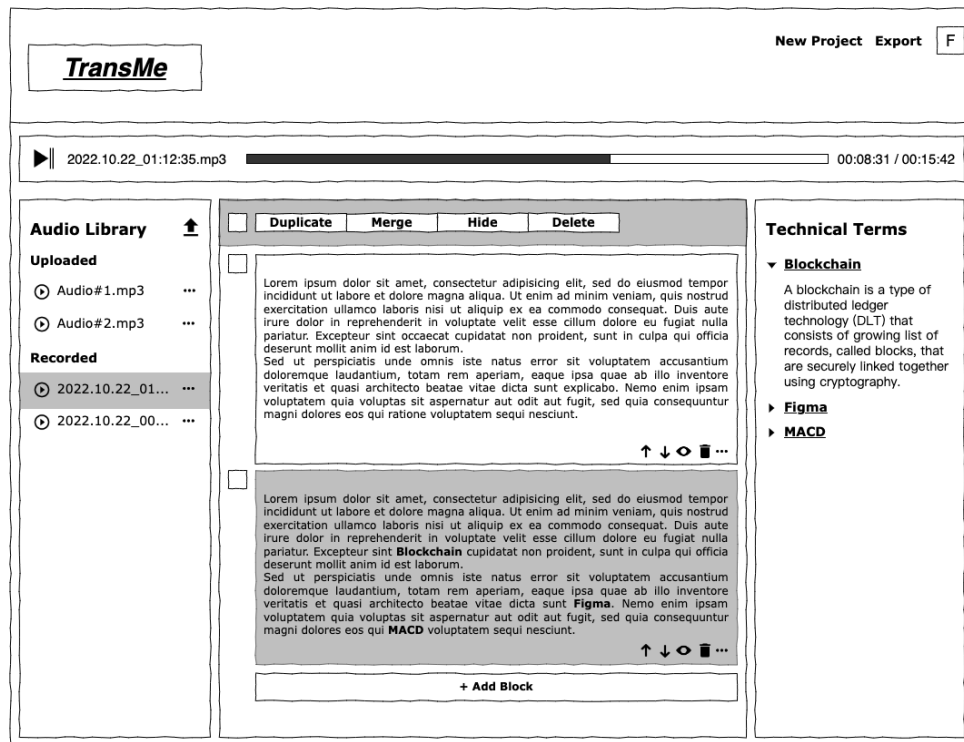


Figure 5. UI Design for Main Page

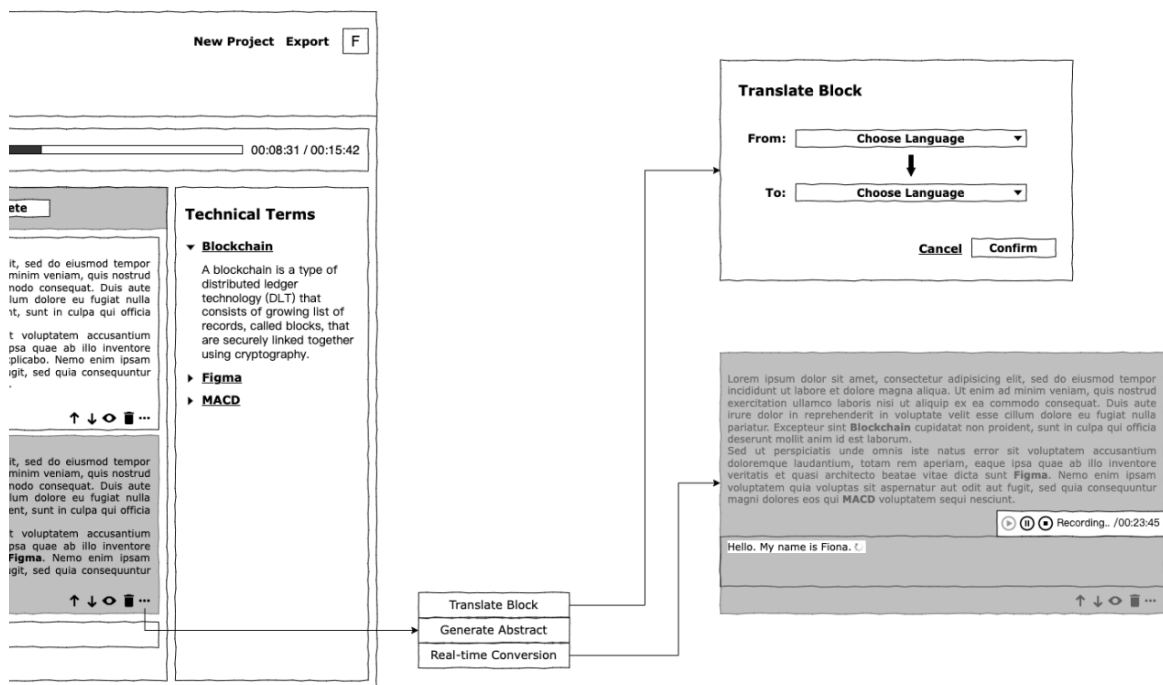


Figure 6. Interactions for Translation and Real-time Recording Conversion

4. Class Diagram

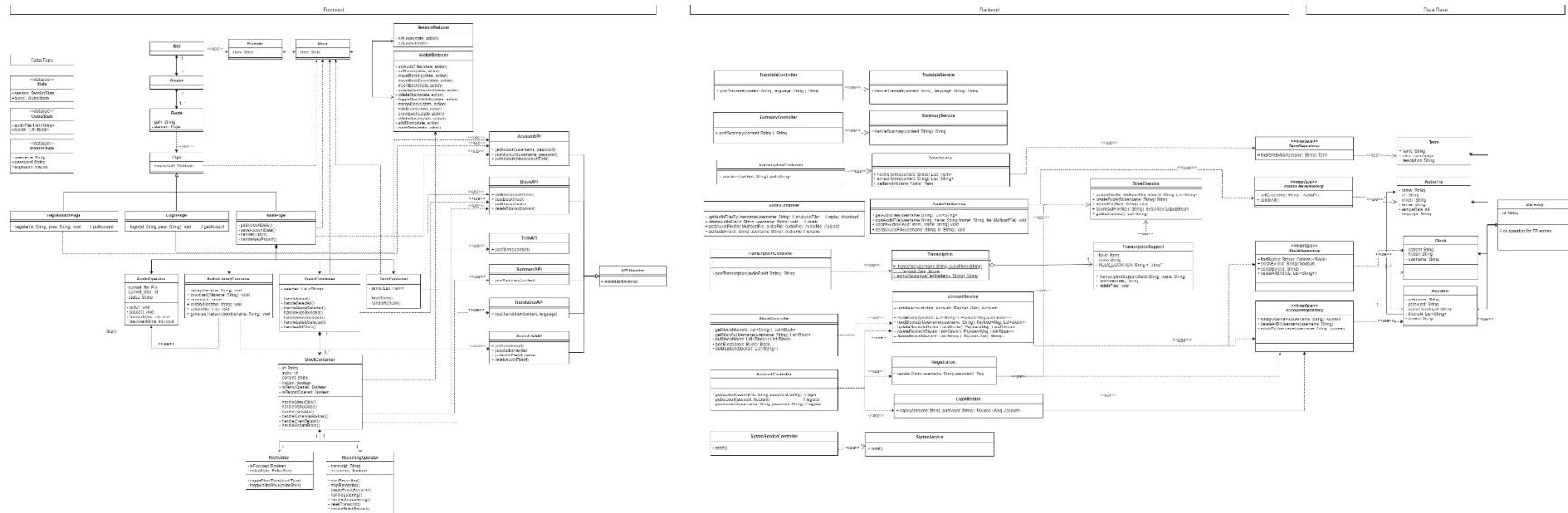


Figure 7. System Class Diagram Overview

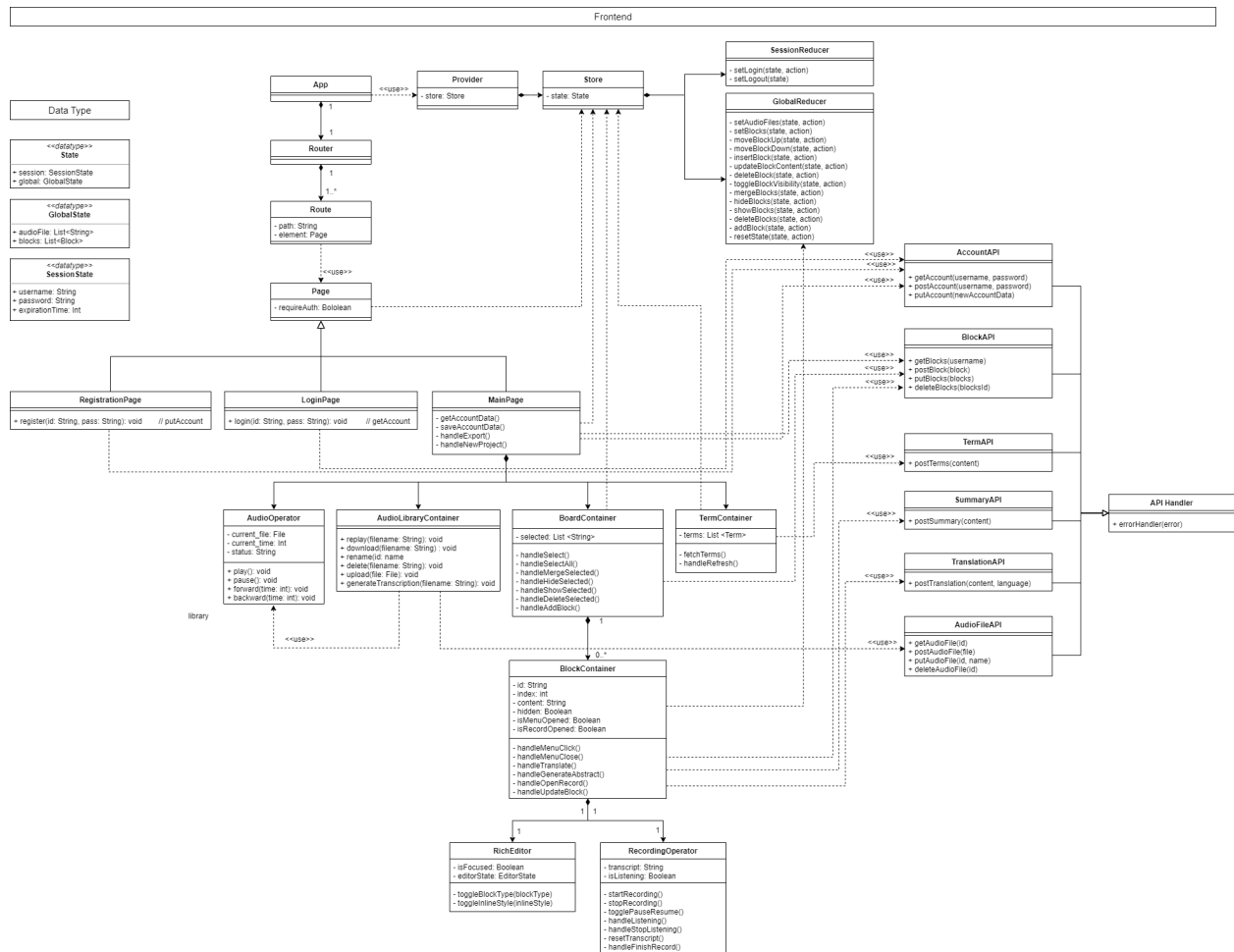


Figure 8. Frontend Class Diagram

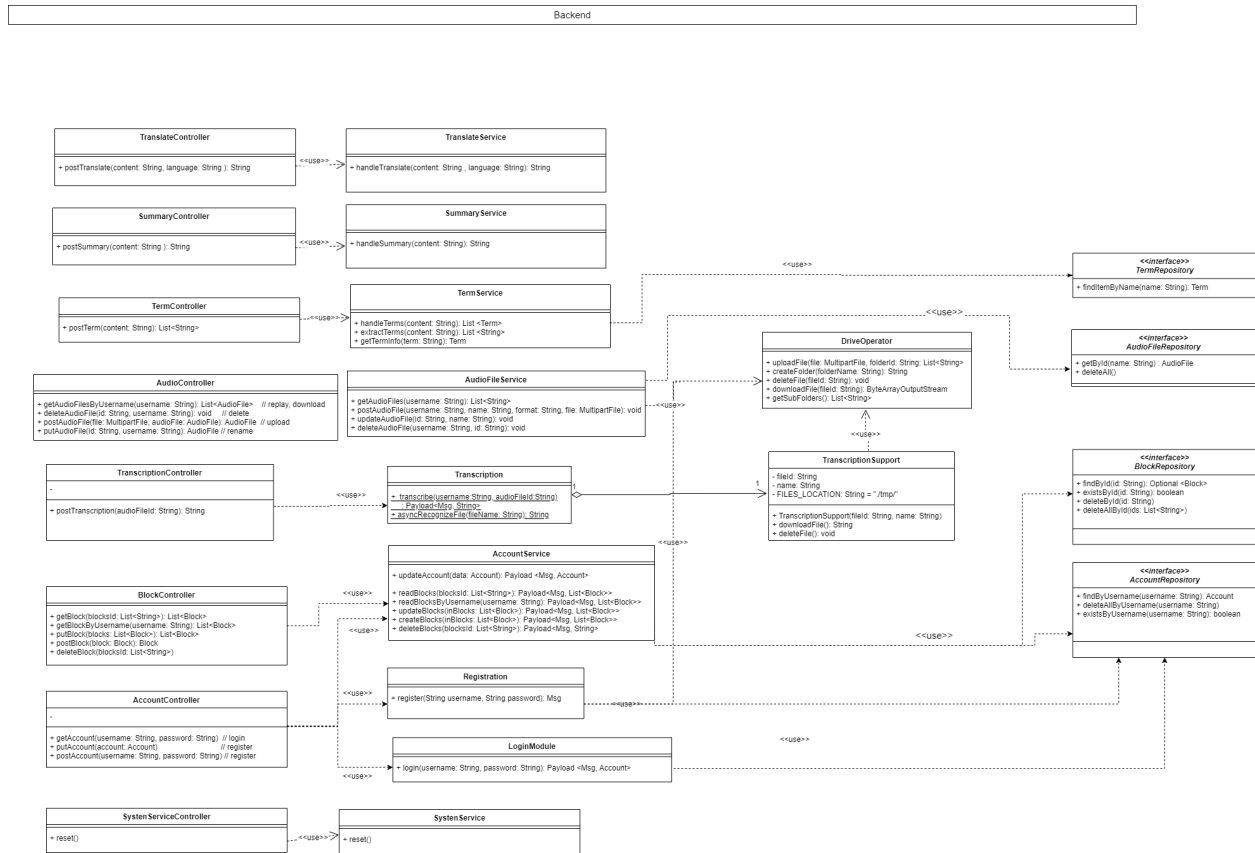


Figure 9-1. Backend Class Diagram

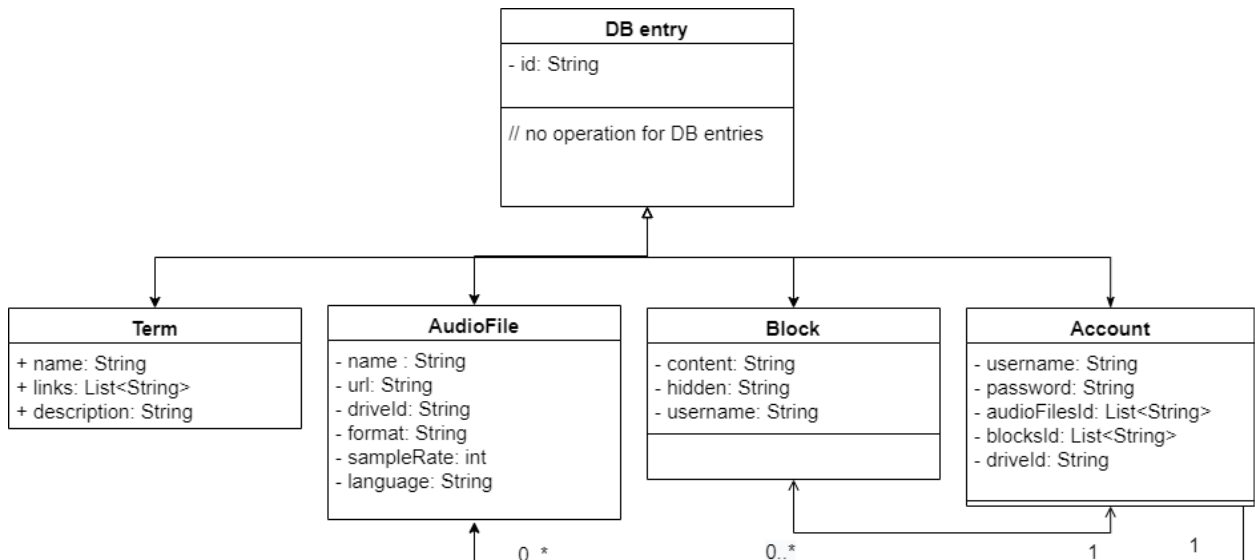


Figure 9-2. Database Class Diagram

5. Sequence Diagram

(no updated due to time budget & lower priority)

1. Registration

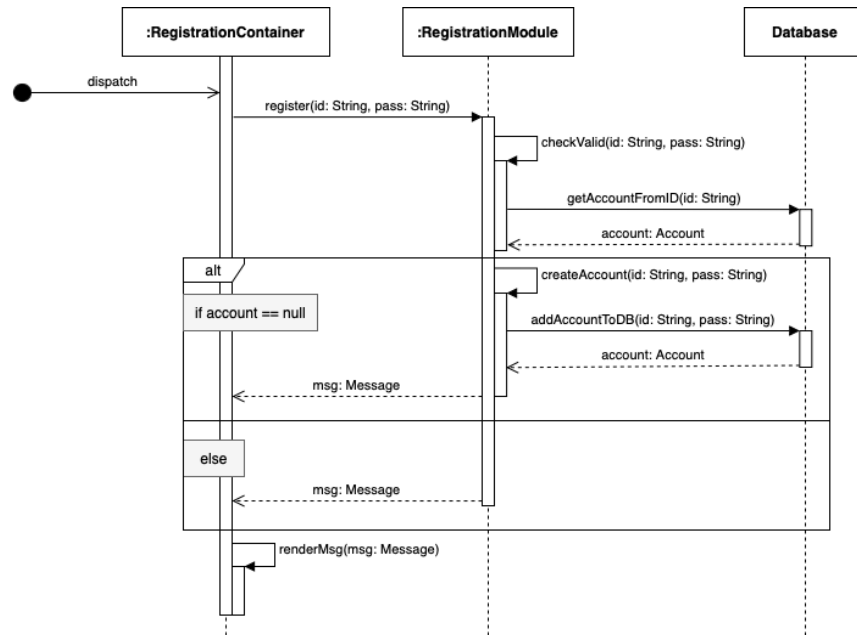


Figure 10. Sequence Diagram for Registration

2. Login

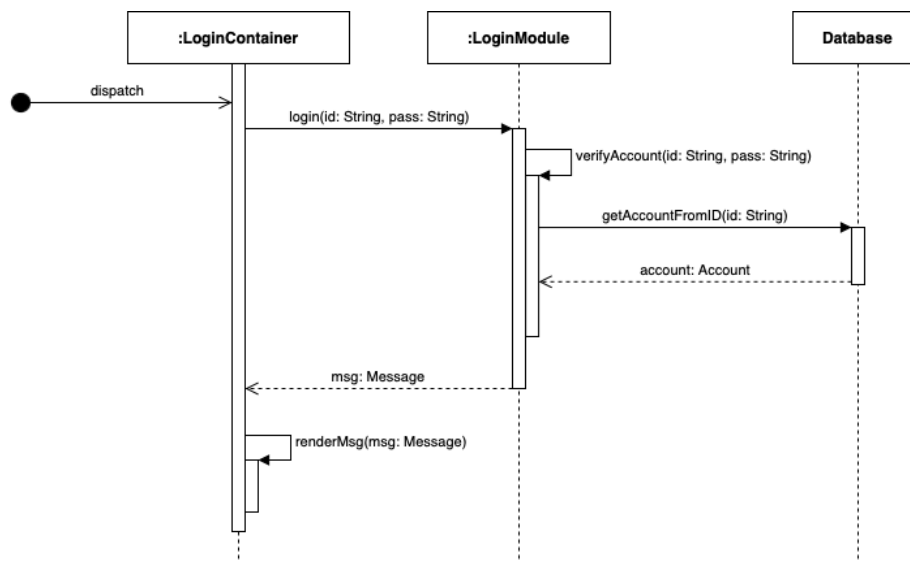


Figure 11. Sequence Diagram for Login

3. New Project

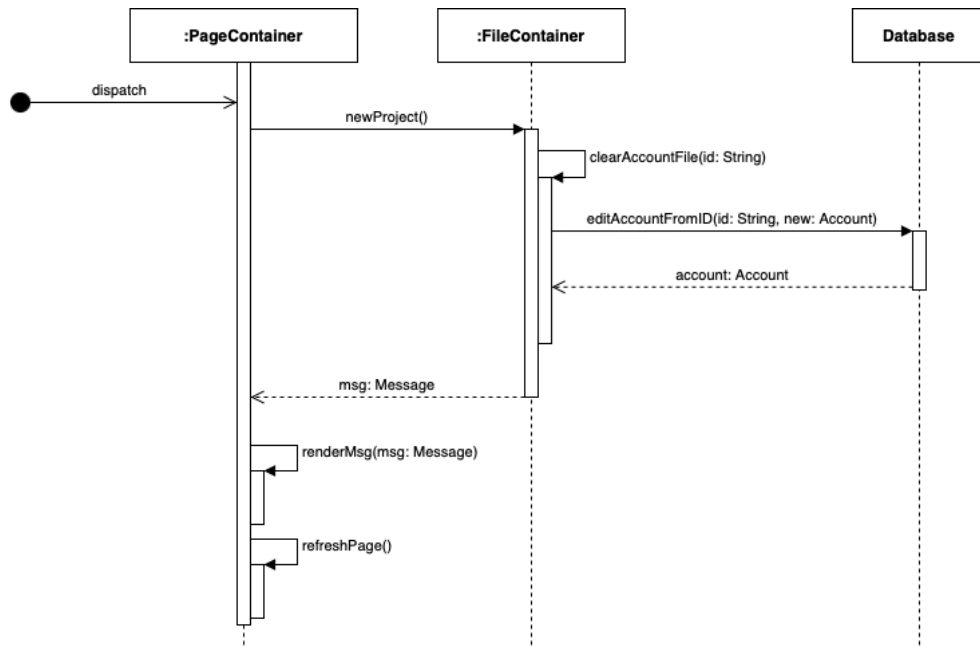


Figure 12. Sequence Diagram for New Project

4. Transcription

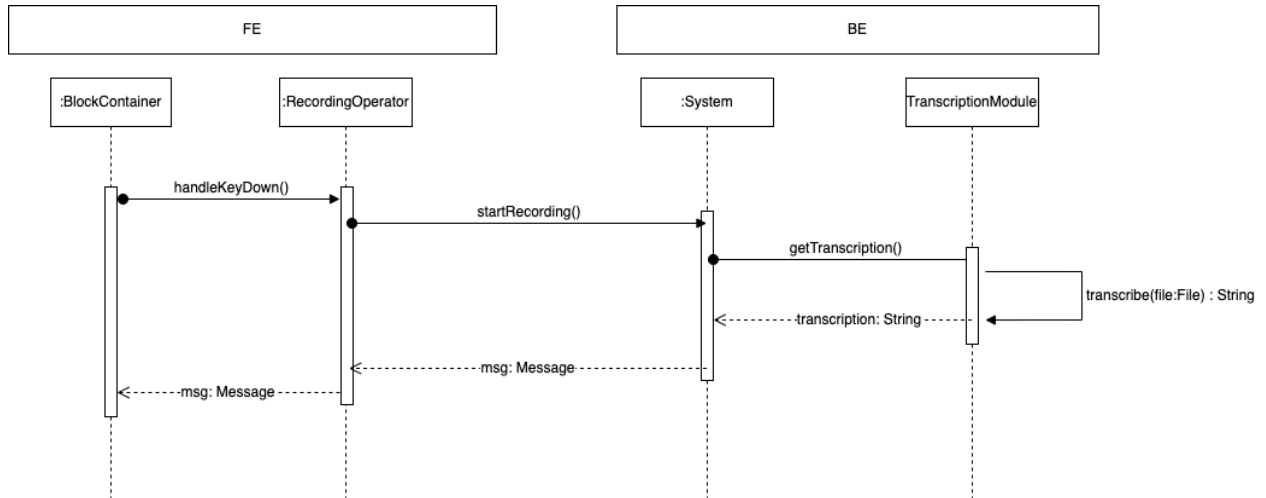


Figure 13. Sequence Diagram for Transcription

5. Summary Retrieval

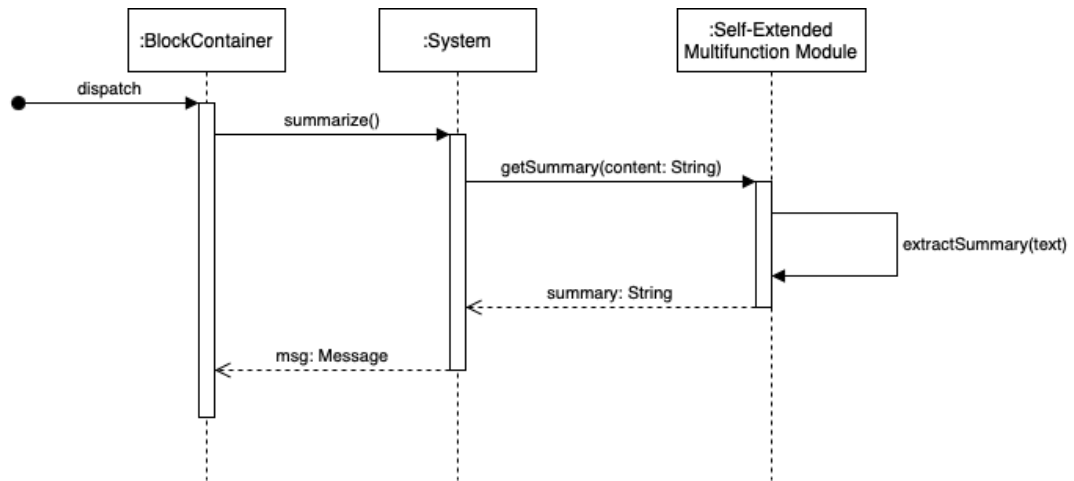


Figure 14. Sequence Diagram for Summary Retrieval

6. Exportation

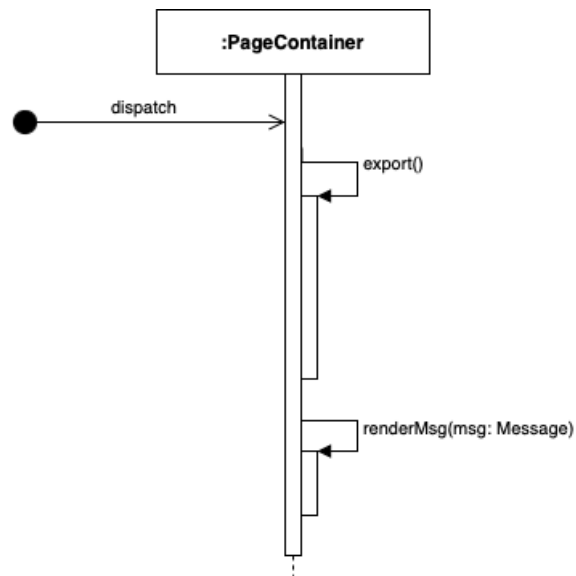


Figure 15. Sequence Diagram for Exportation

6. Data Design

Account		
VARIABLE NAME	TYPE	NOTE
id	String	Key
username	String	NonNull, unique
password	String	NonNull
audioFilesId	List<String>	
blocksId	List<String>	
driveId	String	NonNull

AudioFile		
VARIABLE NAME	TYPE	NOTE
id	String	Key
name	String	NonNull
url	String	NonNull
driveId	String	NonNull
format	String	NonNull
language	String	NonNull
sampleRate	int	NonNull

Block		
VARIABLE NAME	TYPE	NOTE
id	String	Key
content	String	NonNull
hidden	Boolean	NonNull
username	String	NonNull

Term		
VARIABLE NAME	TYPE	NOTE
name	String	NonNull
link	String	
description	String	

Message		
VARIABLE NAME	TYPE	NOTE
status	String	
msg	String	