TCU Department of Modern Language Studies

Chinese Learning Platform
Software Requirements Specification

Version 1.0

Revision History

Date	Version	Description	Author
11/04/2022	1.0	Initial SRS	Bao Nguyen
04/11/2023	1.1	Updated SRS	Quynh Dong

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Software Requirements Specification

1.   Introduction

1.1   The Purpose of the Chinese Learning Platform

The Chinese Learning Platform(CPL) is a program to help students to learn the Chinese language. This platform will be used by both students of these ages attempting to learn Chinese as well as by the teachers who will use the platform as a teaching tool to help those students. As it is a teaching tool, the main motivation behind it is educational, with the hope to support students in learning the Chinese language, and in the future, this will be expanded to learning various other languages using the same CPL. The platform hopes to help these students utilize a textbook created by CPL, and will also include features that will help the students listen, read, write, and speak in the language they are learning.

1.2   The Purpose of this Document

The purpose of this document is to describe the functional and non-functional requirements for software release 1.0 of the Chinese Learning Platform (CLP). Its role is to describe the problem to be solved, not the solution: what the system must do, not how. This document is intended to be used by the members of the project team who will implement and verify the correct functioning of the system. Unless otherwise noted, all requirements specified here are committed for release 1.0.

1.3   Product Scope

The Chinese Learning Platform will permit students and teachers to access the textbooks and perform operations that are well-designed for the learning experience. Other features such as Discussion Forums and Homework/Exams will be included in the next releases. A detailed description is available in the Vision and Scope document.

1.4   Definitions, Acronyms, and Abbreviations

Chinese Learning Platform - CLP

Other Definitions are referenced in the Glossary Document

1.5   References
1. Vision2.0 Document of CLP
2. Glossary Document of CLP
3. Use Cases Document of CLP

2. Overall Description

2.1 Product Perspective

The system is an entirely new product and does not expect to be used along with any existing systems. Therefore, the product has no relationship with any other services.

2.2 User Classes and Characteristics

User class	Description
Publisher	The Publisher is the admin who establishes and maintains all the books. Publisher can access the textbook, create, add, edit, delete, and update the book materials if needed. There will only be one publisher for CLP.
Teacher	The Teacher is the one who creates sections/assignments/exams, creates and responds to discussion threads, and grades students' work..
Student	The Student will access the book materials, respond to discussion posts, complete assignments and exams, and check their performance. The initial estimate is about 30-50 Student users for the initial release.

2.3 Operating Environment

OE-1: The Chinese Learning Platform (CLP) shall operate correctly with the following web browsers; Google Chrome (all versions); Windows Internet Explorer version 7.8 or newer; Firefox version 12 or newer; and Apple Safari version 4.0 or newer.

OE-2: The Chinese Learning Platform (CLP) shall operate correctly with web browsers supported on Android and iOS devices.

2.4 Design and Implementation Constraints

CO-1: The system's developing language for the back-end should be limited to Java and the backend should be powered by Spring Boot.
CO-2: The system's developing language for the front end should be limited to HTML5, CSS3, and Javascript. The frontend's framework uses the current corporate Vue.js (Vue 3)
CO-3: The system shall use the current corporate standard MongoDB database engine.

2.5 Assumptions and Dependencies

AS-1: The book should be used mostly for homework purposes.
AS-2: The book materials will be fully provided and created by the clients.
DE-1: Deployment services (Azure) shall remain available and sustain the user track we expect.

3. Specific Requirements

All Use Cases are referenced in Use Cases Documentation

4. Data Requirements

4.1 Data Acquisition, Integrity, Retention, and Disposal

DI-1: The system will retain the individual login information for 24 hours until asked to re-login.

DI-2: The system will retain individual messages sent in discussion boards and will retain assignments/exams submitted forever.

5.   External Interface Requirements

5.1   User Interfaces

UI-1: The Chinese Learning Platform screen will display the home screen which includes the Chinese background and login form (username and password, a login button to enter, and clickable text to allow the user to sign up.

UI-2: The system shall provide a signup link from the navigation bar on the web page to be able to create an account.

UI-2: The signup page shows three textboxes to input username, email, and password, a checkbox to select if the account will be a teacher account, and a button to sign up.

UI-3: The student dashboard will show all the lessons from the book. Each lesson will show the passage content, discussion forum, exam, and homework. Each passage tab will have multiple buttons to access the vocabs, pinyin, Chinese, and grammars.

UI-4: The teacher dashboard will show the same as a student's but the teacher will have the authorization to assign the exam, assignment, create discussions and grade exam submission.

UI-5: The webpages shall permit complete navigation and book items by using the keyboard alone, in addition to using mouse and keyboard combinations.

5.2   Hardware Interfaces

No hardware interfaces have been identified.

5.3   Communications Interfaces

CI-1: The site will email the user when they want to reset their password with directions on how.

CI-2: The site will store messages sent on a forum board. These messages are visible to any user in one section. Messages can not be deleted.

6. Quality Attributes

6.1 Usability

USE-1: The textbook will be able to save the place of a student.

USE-2: The system will ask for confirmation before submitting an assignment.

USE-3: The vocab, pinyin, and grammar should immediately respond to the user's request.

USE-4: The system will store all messages sent on a forum board forever until the forum board or section is deleted.

USE-5: If a user forgets their password the system will provide a method to request a password reset.

6.2 Performance

PER-1: The system shall accommodate a total of approximately 50 users for the summer of 2023 and can be scaled in the future for an increase in traffic.

PER-2: The system shall load textbook content in under 3 seconds and can be improved with an upgrade in deployment services.

6.3 Security

SEC-1: The users must be logged on before accessing a textbook or section.

SEC-2: Only the publisher will be permitted to create textbook materials, edit, update, and delete the book materials.

SEC-2: Only the teacher will be able to create sections, and discussion posts.

SEC-3: Users may only view sections they have created or joined.

SEC-4: Teacher and Publisher can create assignment/exam but only teacher has the authority to assign to students.

6.4 Availability

AVL-1: The textbook will be available at all times since the students will mostly be using it at home, but the time it will be used the most will be between the hours of 5:00 P.M. and 10:00 P.M

6.5 Robustness

ROB-1: If the connection with the user disconnects when submitting homework the homework will still be available to be submitted after they reconnect.

ROB-2: If the connection with the teacher disconnects when creating or editing a textbook passage, the content will not be saved.

ROB-3: If the connection with the user disconnects when sending a message in a forum the message will not be sent until the connection is re-established.

6.6 Modifiability