

Slate

Software Requirement Specification

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Version 1.0**

1. Introduction

1.1 Purpose

This SRS will cover a language learning companion that allows users to save key vocabulary and learning resources for later reference.

1.2 Intended Audience and Reading Suggestions

This SRS is targeted at developers. It will begin with an overview of what will be covered in the project, followed by a breakdown requirements and development practices.

1.3 Project Scope

This software is aimed at individuals who are learning a foreign language. It allows them to keep track of all their language resources in a clear and succinct fashion. This application will employ a database to store user data. The application will also feature user authentication. The design will employ abstraction and avoid closely coupled code. This will allow for minimal frictions in a future expansion of the application.

1.4 References

N/A

2. Overall Description

2.1 User Needs

- A user needs to quickly record new vocabulary in order to be able to review at a later time.
- The user needs to organise vocabulary based upon their source in order to efficiently find it.
- The user needs to be able to see if they have encountered a word previously in order to prioritise their learning.
- The user needs to be able to edit content to correct mistakes.
- The user needs to be able to save written articles for later reading

2.2 Assumptions and Dependencies

- A1 : The project database will not grow past 1 GiB in storage
- A2 : Daily Document Reads will not exceed 50,000
- A3 : Daily Document Writes will not exceed 20,000
- A4 : Daily Document Deletes will not exceed 20,000
- A5 : Monthly Network Egress will not exceed 10GiB
- D1 : Google Firebase Service
- D2 : NextAuth Service

3. System Features

3.1 Functional Requirements

- FR1 : The application must feature user authentication
- FR2 : The user must be able to change their display name and profile picture.
- FR3 : A user must be able to create a source with a specified Language and Title. All CRUD Operations must be available at the source level.
- FR4 : A user must be able to create an article within a selected source. The article must have a title, date added and text content. All CRUD Operations must be available for articles.
- FR5 : A user must be able to create a vocabulary list within a selected source. The vocabulary list must have a title, date created and last edited. All CRUD Operations must be available for vocabulary lists.
- FR6 : A user must be able to create a vocabulary item within a selected vocabulary list. All CRUD Operations must be available for vocabulary items
- FR7 : A user must be able to create a vocabulary item not belonging to an existing vocabulary list or source. This item must be stored in the global “No List” Vocabulary list under the “No Source” Source.
- FR8 : A user must be able to create an article item not belonging to an existing source. This item must be stored in the global “No Source” Source.
- FR9 : A user must be able to add words from an article directly to a vocabulary list. This vocabulary list must be either an existing list within the current source or a new list that follows the convention “ARTICLE_TITLE : Vocabulary”.

4. Interfaces

- Front-End : NextJS
- Back-End : Express
- Database : Firebase
- Authentication : NextAuth

5. Non-Functional Requirements

5.1 Performance

- The application should load within 3 seconds of requesting the page

5.2 Safety

- All sensitive information should be stored in a .env file and saved locally. Not ever being pushed to source control

5.3 Quality

- Git Flow will be employed during development
- CI/CD will be employed using Vercel to host and build both the frontend and backend components on each push to the repository.

6. Glossary

Term	Definition
Source	Container for articles and vocabulary lists corresponding to a particular source. A source must have a title, date added, date modified and language property. Example : “Baidu XinWen” : Container for all vocabulary lists and articles found from the Baidu News website.
Article	Long-form text stored within a source. Contains a title, content, date added and date modified.
Vocabulary List	A container for storing words. Created within a source container. Contains a title, date added and date modified.
Vocabulary Item	A word or phrase saved under a vocabulary list. Containing a title, definition, pronunciation, date added and date modified.

