Software Requirements Specification Document

1. Introduction
a. Purpose
To develop an interactive and useful platform to learn Dzongkha typing through application for those who wants to improved.
1. To enable humans to end up greater in a position in Dzongkha typing.
2. To make Dzongkha typing fun and delightful.
3. To make people easily type in Dzongkha like English.
4. To improve their typing skill.

b. Scope
System Scope
To develop a mobile application with following features:
1. Online based
2. Category selection
3. Words display

This App with the following categories:
i. Colors
ii. Electronics

User Scope
The scope of this project is mainly for the people who wants to improve their Dzongkha typing.

2. Requirements
a. Functional Requirements
i. Describe each feature of your application

The Dzongkha Typing Game consists of two categories
1. Colors.
2. Technologies Term.

At the point when the clients get in the application, there are two classifications and clients have advantages to choose the category. When clients are select the classifications that they pick, the words are show in a box and clients need to begin typing. When clients begin typing words the time will begin, inside one minutes the number of words that clients can type, according to this the high score will show.

b. Non-functional requirements
- The app can be easily portable to different versions of android and is independent of the size of any android phone and tablets.
- The app will online.
- The orientation of the app will be in both portrait and landscape.
- The application will be user friendly.
- The application will include developers information and can be shared. It will also consist of features such as rating the application, giving feedback section and exit option.

c. Software Requirements
i. The technology used and version
For Developer
1. Java version : Java SE jdk 8 and above.
2. Android Studio version 4 and above.
3. Android SDK-25 and above.

4. Operating System : Ubuntu.
5. SQLite
    - SQLite is a database engine. It is software that allows users to interact with a relational database. In SQLite, a database is stored in a single file a trait that distinguishes it from other database engines. This fact allows for a great deal of accessibility: copying a database is no more complicated than copying the file that stores the data, sharing a database can mean sending an email attachment.

- SQLite version : 3.25.3

6. DB Browser(Version 3.12.1)

    - DB Browser for SQLite(DB4S) is a high quality, visual, open source tool to create, design, and edit database files compatible with SQLite.DB4S is for users and developers who want to create, search, and edit databases. DB4S uses a familiar spreadsheet-like interface, and complicated SQL commands do not have to be learned.

3. Hardware requirements

For Developer

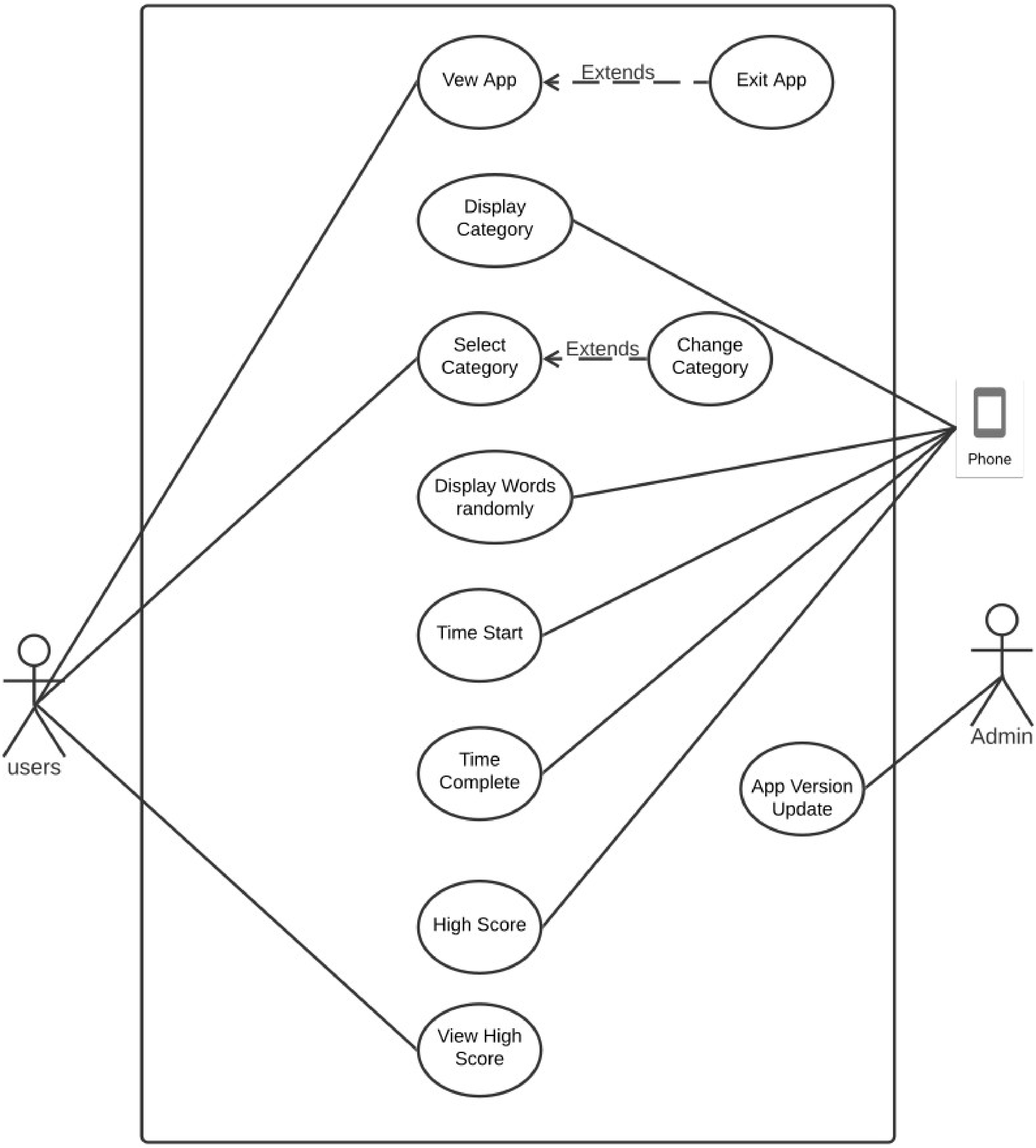
1. RAM : 4-8 GB
2. 2.00GHz*4 Processors
3. Disk Capacity : 1.0 TB and above.

For Users

1. Android Phone.

4. System designs

a. Use case Diagram



A use case models the usefulness of a framework as seen by outside specialists, considered entertainers that connect with the framework from a specific perspective. Its fundamental reason for existing is to help improvement group envision the practical necessities of a framework, including the relationship of entertainers to fundamental cycles and furthermore among various use cases. The entertainer distinguished for this venture is any client of the application. The collaborations of the entertainer and its functionalities are appeared below.

The app consists of three actors:

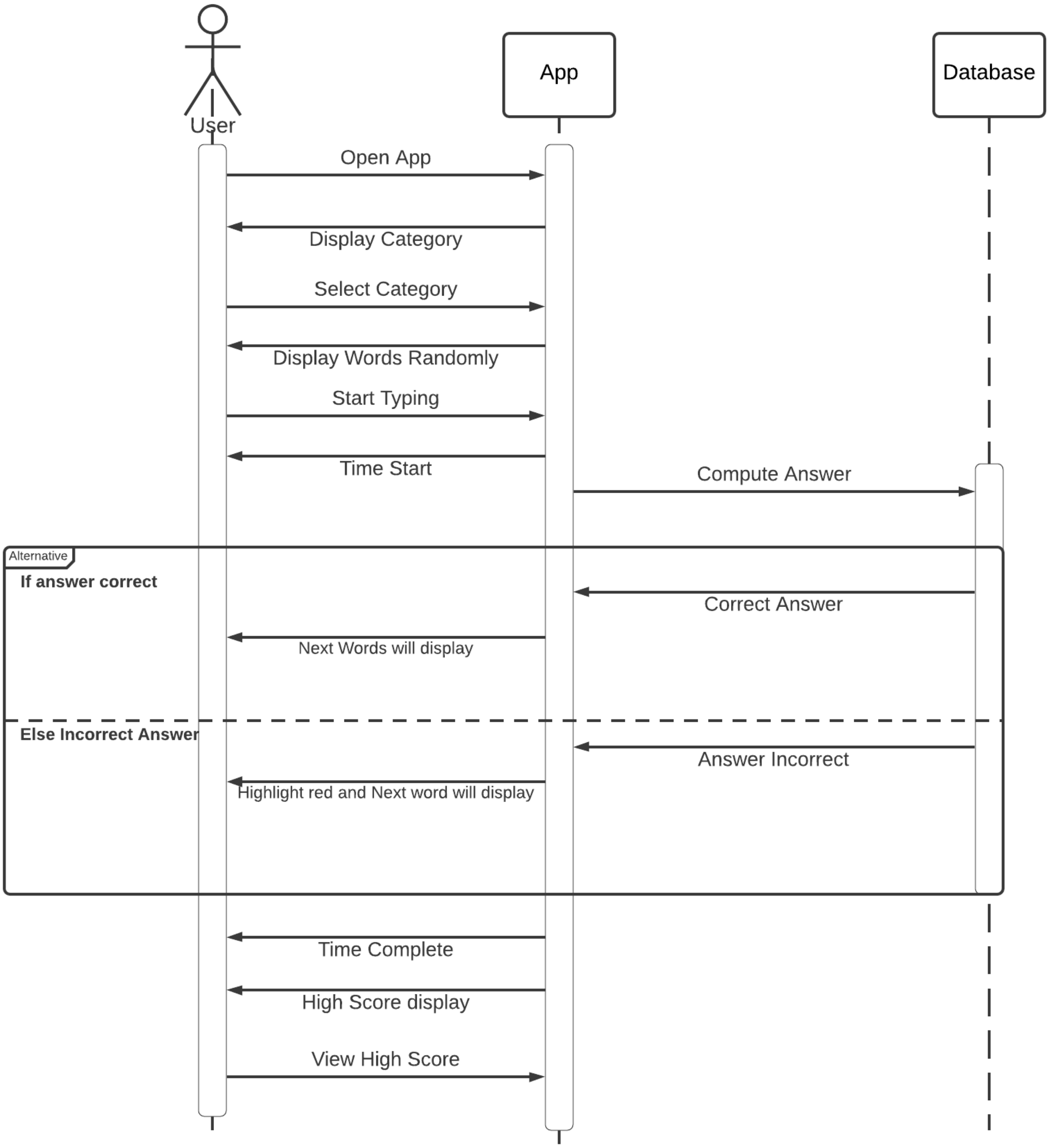
1 Mobile

2 User.

3 Admin.

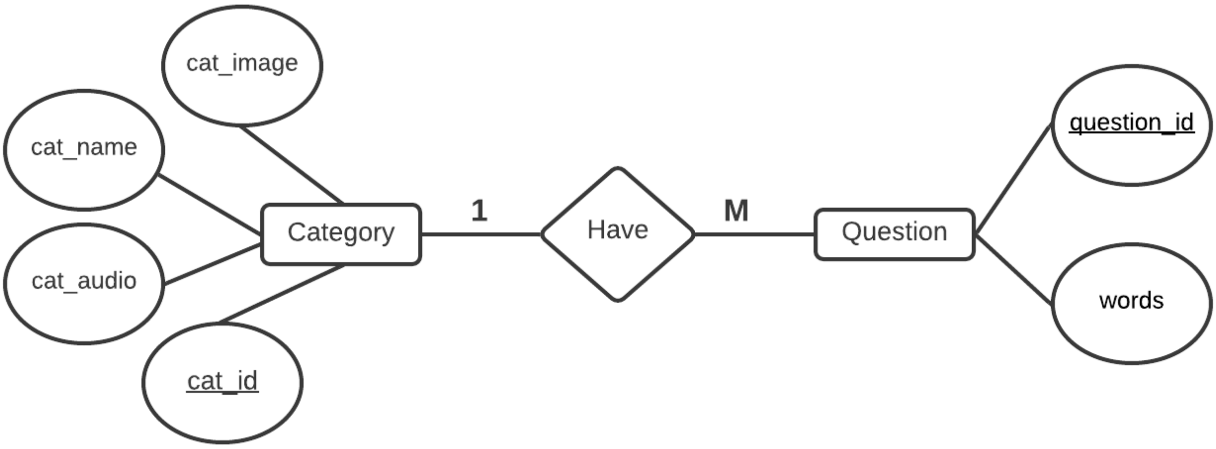
The functionality of the admin is:
1. Update the app.

b. Sequence Diagram



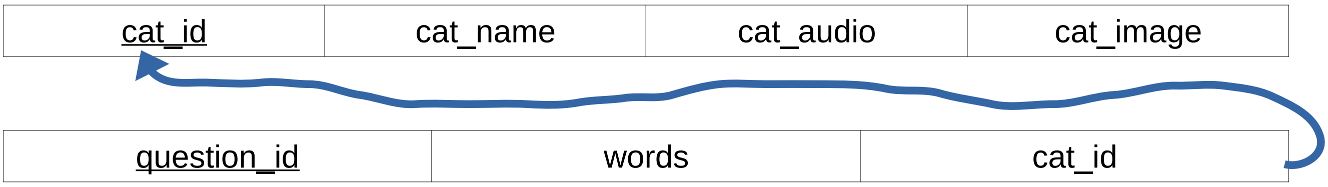
Sequence Diagrams are interaction diagrams that details how the operations are carried out. They capture the interaction between the objects in context of a collaboration. The diagrams mainly explains the detail logic behind the application. My application is works according to the design that I made in above diagram.

c. ERD(Entity Relationship Diagram)



There are two entities i.e category and question. Different features were categorized into categories that has attribute such as cat_id which is the primary key that identifies the category uniquely, cat_title that stores the title of the category and cat_image, the image of the category. In questions entity, the words will store.

d. Relational Schema



cat_id	cat_name	cat_audio	cat_image

question_id	words	cat_id

1. Table Name :
- Category
- Questions

- Primary Key:

Cat_id is the primary key of Category.
Question_id is the primary key of Question.

- Foreign Key:

cat_id in the question entity is a foreign key.

Data Collections

Color

1. Red -དམརཔོ།
2. blue - སྔོནམོ།
3. green -ལྗང་ཁ།
4. yellow - སེརཔོ
5. brown- རྒྱ་སྨུག།
6. orange - ལི་ཝང་།
7. white - དཀརཔོ།
8. black - གནགཔོ
9. gray - སྐྱ་ཐལ
10. pink - ཤ་ཁ།
11. purple - སྨུགཔོ།
12. violet - ངོ་སྨུག།
13. indigo - སྔོ་ནག།

electronic gadgets

1. Camera - པར་ཆས།
2. Phone - བརྒྱུད་འཕྲིན།
3. Laptop - ལག་པར་འབག་ཉིའི་གློག་རིག་འཕྲུལ་ཆས།
4. Mouse - གློག་བྱི།
5. Keyboard - ལྡེ་སྒྲོམ།
6. Printer - པར་འཕྲུལ།
7. Mother board - མ་འཕྲུལ།
8. CPU- ལས་སྒྲིར་ལྟེ་བ།
9. Monitor - མཐོང་བྱང་
10. Television - རྒྱང་མཐོང་།
11. Calculator - རྩིས་འཕྲུལ།
12. earphone - ཉན་ཆས།