



SOFTWARE REQUIREMENT SPECIFICATIONS

Project Topic: Dzongkha Nursery Rhymes

Submitted by:

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Introduction

Nursery rhymes are part of a longstanding tradition in early childhood education. It might be surprising to many, but the concept of whether or not nursery rhymes continue to have a crucial role in children's learning has become a popular controversy in the field of child and adolescent development. A common form of literature for young children is nursery rhymes. Several of us grew up going to bed being read nursery rhymes. At the fundamental level, nursery rhymes help promote positive attitudes toward language learning and help children build an alertness of the sound patterns of language. Furthermore, this can also lead to helping them learn to pronounce words more easily by repeating them and practicing them without the pressure of being criticized. From the time of birth to the earliest years of life the child's brain is constantly going through enormous changes, hence these rhymes help support the development of language, cognitive, social, emotional, fine and gross motor skills. In its most basic form, the ease of memorizing and reciting these verses helps support the development of memorization and verbal skills.

Nursery rhymes provide a unique learning context for preschoolers in regard to their emergent literacy and musical development. According to Vygotsky's social constructivist theory (1978), in order for learning to occur, children must face challenges, and adults must provide support to guide them toward mastery of new skills.

By looking into above effectiveness of Nursery Rhymes Bhutan is in need of such app, till date there is no Dzongkha nursery rhyme app in Bhutan for kids. Therefore, Dzongkha nursery rhymes App project will be developed to solve general.

Purpose

Purpose of this project is :

- To promote and enhance Dzongkha via mobile technology.
- Promote positive attitudes toward language learning
- To develop free and offline Android application.
- To launch application in Google Play Stores.

Scope

User Scope

Scope of the project is limited within Bhutan and it is mainly for kids.

System scope

To develop a mobile application that deals with Dzongkha Nursery Rhymes for kids with following features :

1. Offline based

One can access to this application with internet connection.

2. Accessibility

Anyone can access to this app without logging into or registering it.

3. Videos

User can watch the videos of there choice.

4. Favorite icon

The user will be able to mark his/her favorite rhyme videos and he/she can access those marked phrases easily by just clicking the favorite button.

5. Play again

If user want to play the video again he/she can just click on the play again button.

6. Rhyme selection

User can select rhyme videos that they want to watch

Requirements

Functional Requirement

Videos

User can watch the videos of there choice.

Favorite icon

The user will be able to mark his/her favorite rhyme videos and he/she can access those marked phrases easily by just clicking the favorite button.

Play again

If user want to play the video again he/she can just click on the play again button.

Rhyme selection

User can select rhyme videos that they want to watch

Non-Functional requirements

Offline based

It is offline application, it can be used anywhere without Internet connection.

Accessibility

It is accessible to everyone without getting others details.

Usability

This applications interface is user- friendly and easy to use.

Reliability

Applicants can access their resume 98% of the time without failure.

Performance

It is interactive application. It will response to user without taking much time.

Software Requirement

For developers

Items	Specification
Java version	Java Standard Edition Development Kit (JDK) 8
Operating System	Microsoft Windows 10/8 (32- or 64-bit) or ubuntu 20
Android SDK	Android SDK version 16
Android Studio	Version 3.0 and above
DB Browser with SQLite	Version 3.12.1

Java Standard Edition Development Kit (JDK) 8

The Java Development Kit (JDK) is a software development environment used for developing Java applications and applets.

It includes the Java Runtime Environment (JRE), an interpreter/loader (java), a compiler (javac), an archiver (jar), a documentation generator (javadoc) and other tools needed in Java development.

To run Java applications and applets, simply download the JRE. However, to develop Java applications and applets as well as run them, the JDK is needed.

Android SDK version 16

Features:

- ✓ Smoother user interface
- ✓ Enhanced accessibility
- ✓ Expandable notifications
- ✓ Improved camera application
- ✓ Multichannel audio
- ✓ Lock/home screen rotation support
- ✓ Bug fixes and performance enhancements

Description of android SDK:

The Android SDK (Software Development Kit) is a set of development tools that are used to develop applications for the Android platform.

This SDK provides a selection of tools that are required to build Android applications and ensures the process goes as smoothly as possible. Whether you create an application using Java, Kotlin or C#, you need the SDK to get it to run on any Android device. You can also use an emulator in order to test the applications that you have built.

Android Studio version 3 and above:

Environment where you can build apps for Android phones, tablets, Android Wear, Android TV, and Android Auto.

Features:

- ✓ New Database inspector
- ✓ Dagger navigation support
- ✓ Native memory profile
- ✓ Run the Android emulator directly in Android studio

Hardware Requirements

For developer

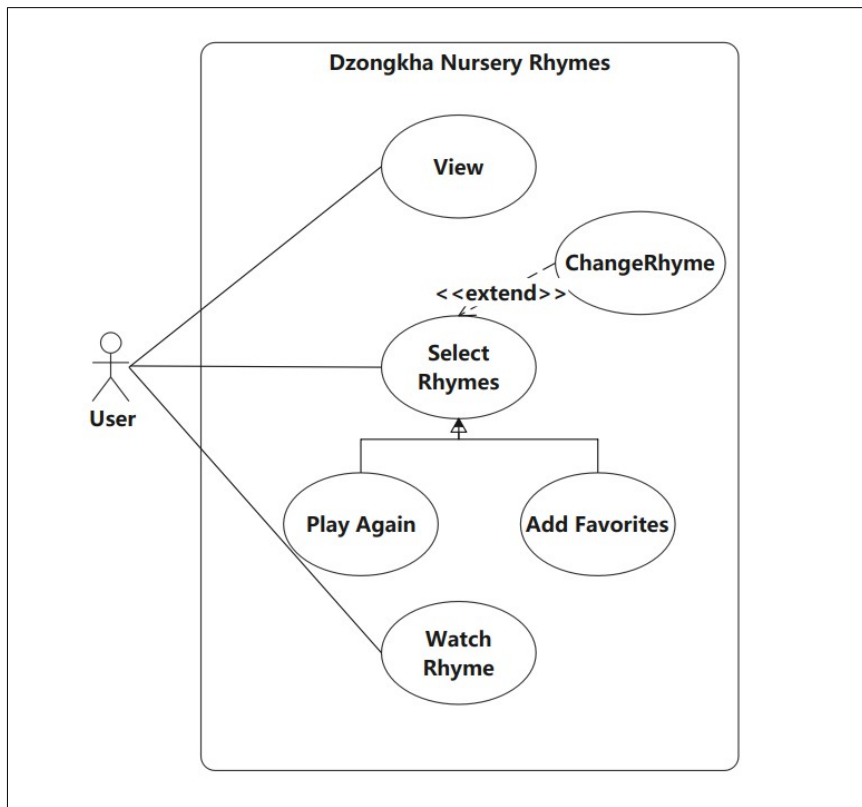
Item	Specification
Disk Space	2GB
Screen resolution	1280x800
RAM	4-16 GB RAM
Processor	2.X86-64 processor

For User

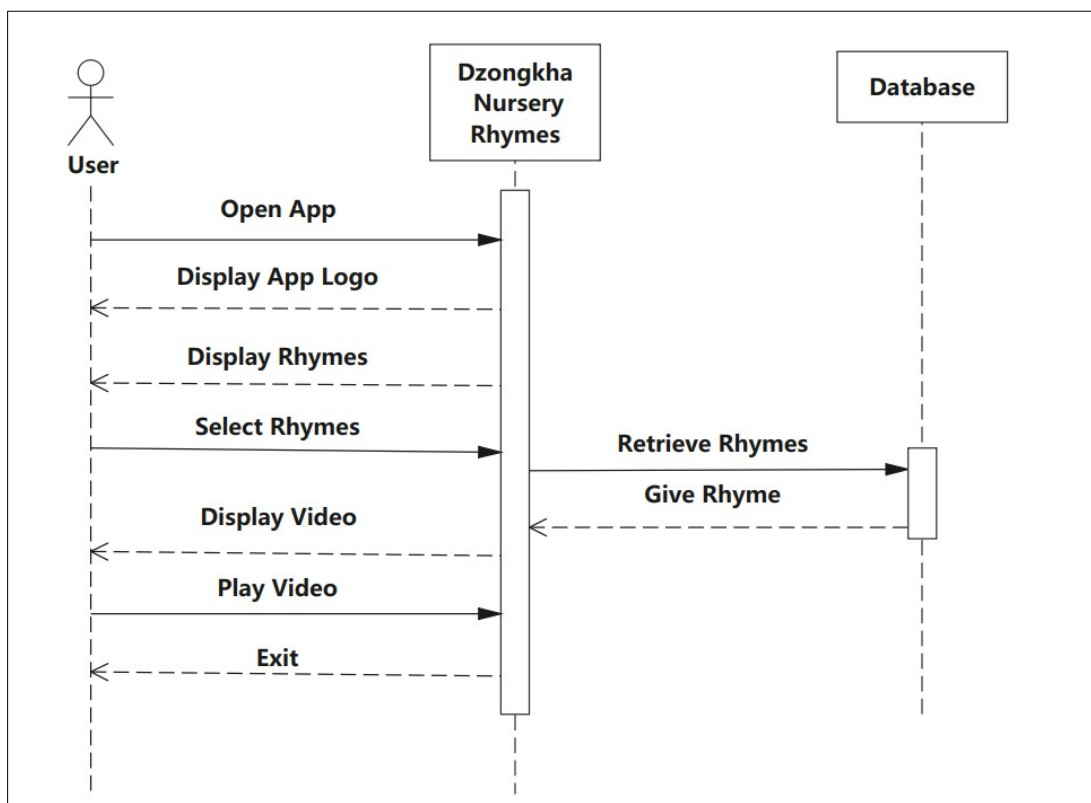
Item	Specification
Phone	Android OS

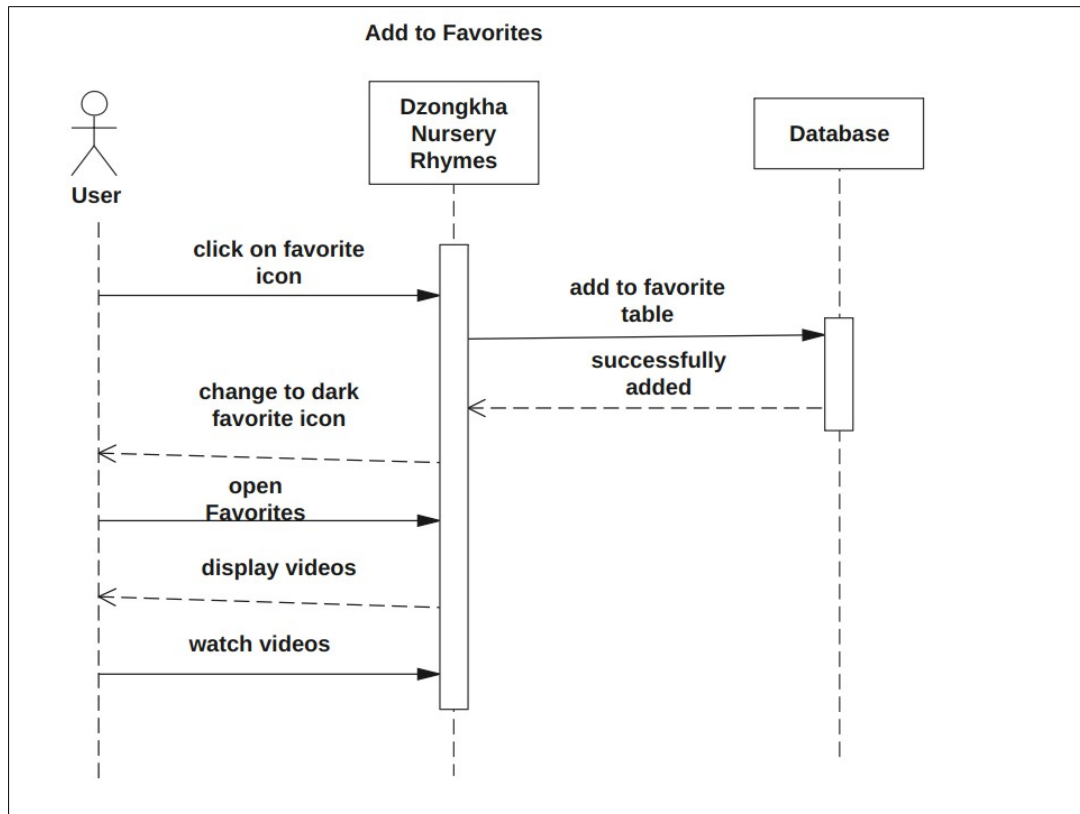
System Design

Use Case

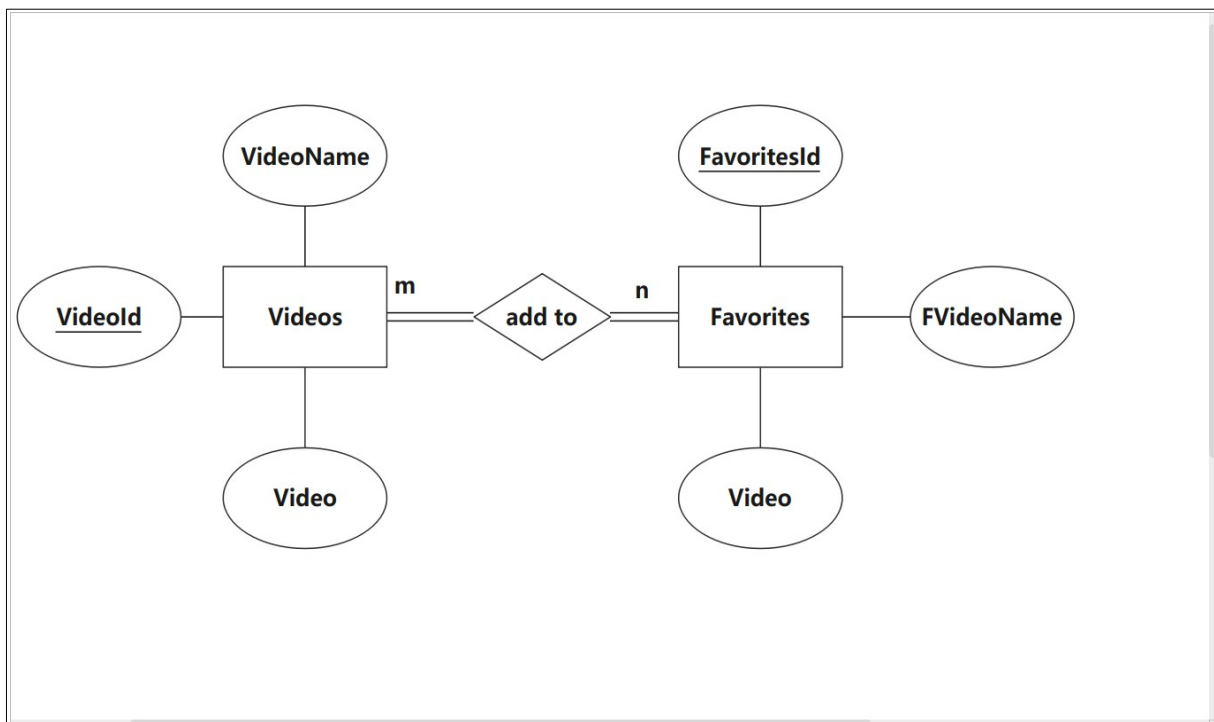


Sequence Diagram

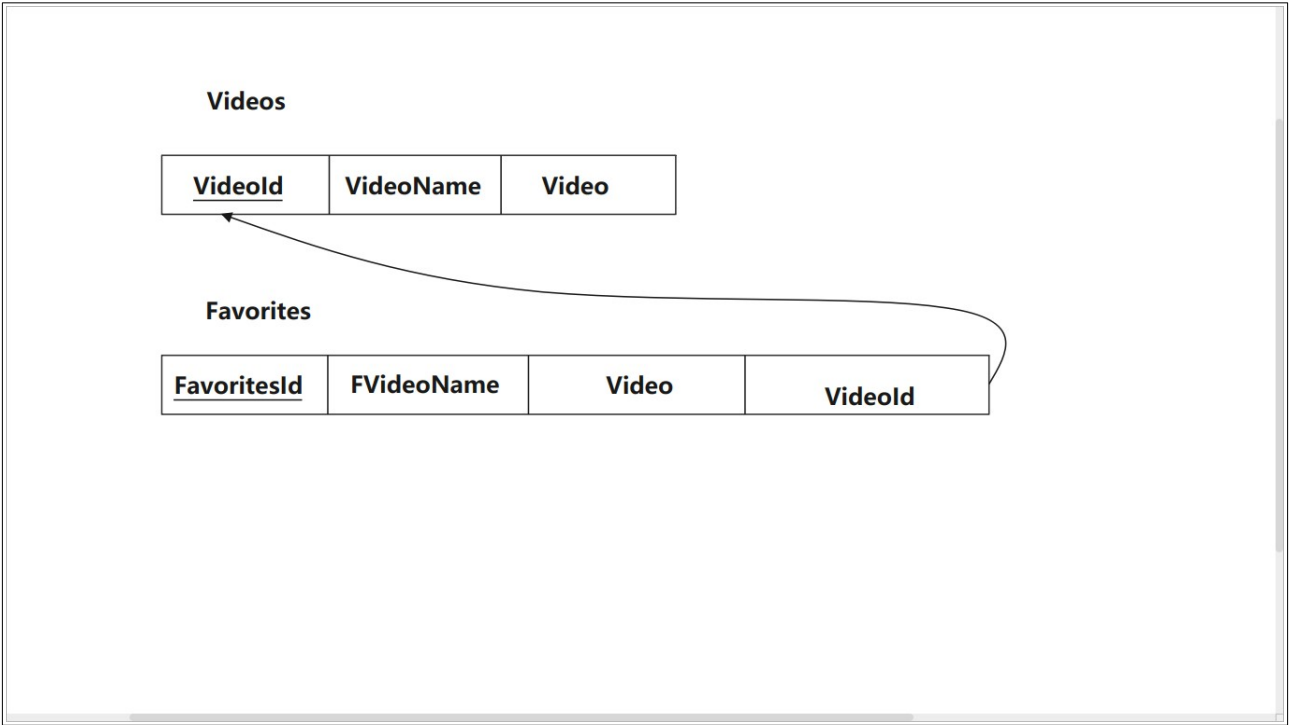




Entity Relationship Diagram



Relational Scheme



Prototype

