Software Requirements Specification For Age Calculator App

Submitted by

Ngawang Choden(12190066)

Gyalpozhing College of Information Technology

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Introduction

a. Purpose

Aim: To develop an application where the user can calculate their age correctly.

The main objectives of this development are:

1. To provide the users with an efficient platform to calculate their exact age.
2. To eradicate the manual way of calculating the age of the user.
3. To reduce the time of the people in calculating their age and provide them with computerized system.
4. To allow the users to turn their mobile phones into an effective tool where they can calculate their age.

The main purpose of this document (SRS) is to get complete requirement for the first version and vision of our application (Age Calculator App). The SRS document contains the following items:

- ✓ Product Description: Purpose, Goals Scope.
- ✓ Interface Requirements: Hardware and Software interface, user and communication interface.
- ✓ System Features

b. Scope

The proposed system will provide the users with the following features:

1. Birth Date
2. Current Date
3. Calculate Age
4. Share
5. Save
6. More App

The target of my project is for those people who want to calculate their exact age.

Requirements

a. Functional Requirements

System Features

The proposed system will provide the users with the following features:

1. Birth Date: Allow user to select the date of birth in date, month and year format.
2. Current Date: Allow users to enter the current date.
3. Calculate Age: Will generate the age based on year, month and date.
4. Share: Allow users to share their age details with others.
5. Save: The user can save their age details if they want to keep for future reference.
6. More App: The users will be able to see other random applications.

b. Non-functional requirements

Portability

- ✓ The app will be easily portable to different versions of android and it is independent of the size of any android phone and tablets.

Usability

- ✓ The application will be simple and easy for the users to use. It will be user friendly.

Reliability

- ✓ The application is offline based and it can work without internet connection. The application will be reliable

Accessibility

- ✓ Any user can use the app without having to register/login to my system.
- ✓ The orientation of the app will be in both portrait and landscape.

c. **Software Requirements**

The technology used and versions

For developer:

1. Java SE jdk 8 and above.
   While developing this application, we will be using java language using the java development kit version 8 and above.

2. Android Studio version 4 and above.
   Android Studio is the official Integrated Development Environment (IDE) for Android App Development.
   It has features such as:
   - ✓ A flexible Gradle-based build system.
   - ✓ Extensive testing tools and frameworks.
   - ✓ An Emulator.
   - ✓ Build in support for google cloud platform.

   Android SDK-25 and code editor will be also be used and these software are embedded in with Android Studio.

3. Operating System: Ubuntu and Windows.

4. SQLite version 3.25.3
   SQLite is an in-process library that implements a self contained, server-less, zero-configuration, transactional SQL database engine. The code for SQLite is in the public domain and is thus free for any purpose, commercial or private. SQLite is an embedded SQL database engine.

5. DB browser 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.

Hardware Requirements

For Developer

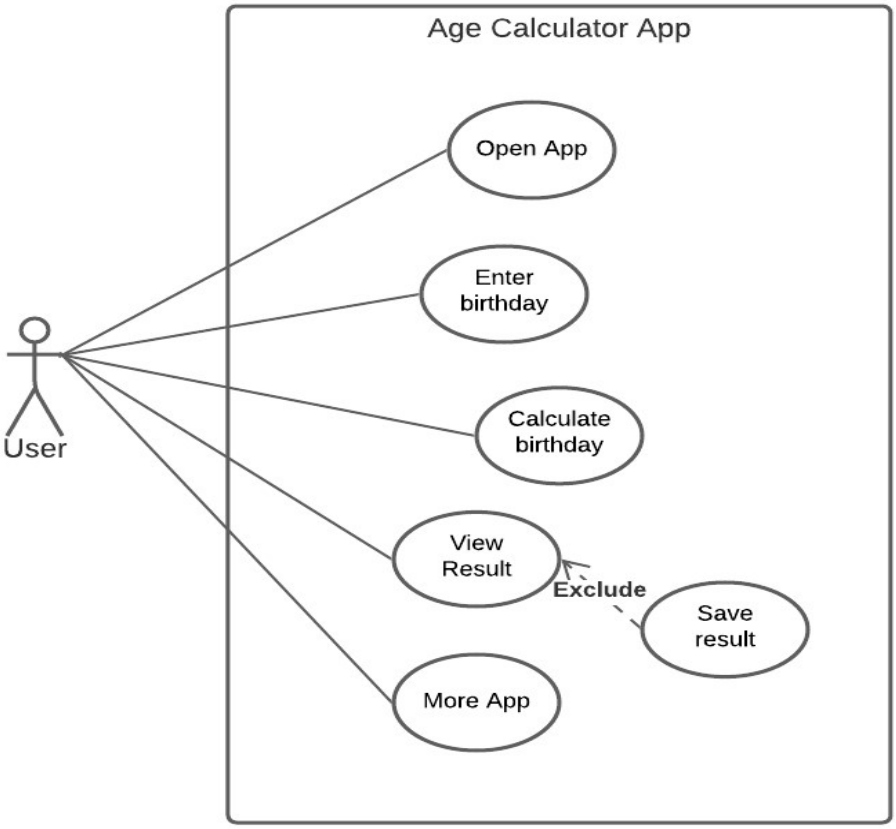
1. RAM : 4-8 GB
2. 2.00GHz*4 Processors
3. Disk Capacity: 1.0 TB and above.

For Users

1. Android Phone.

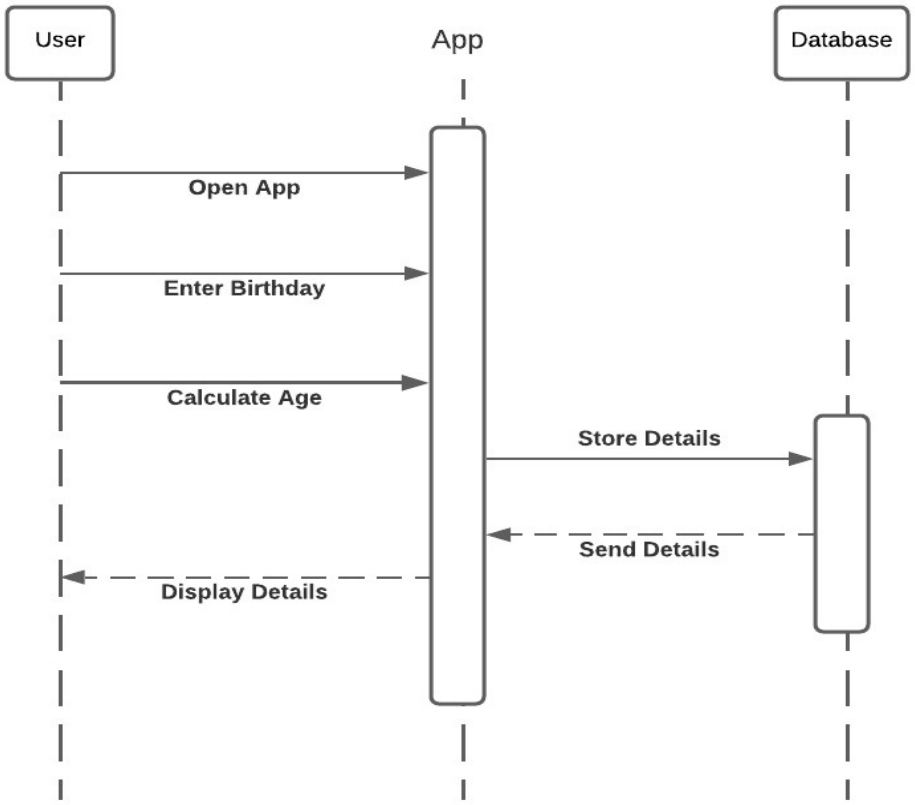
System Designs

a) **Use Case Diagram**



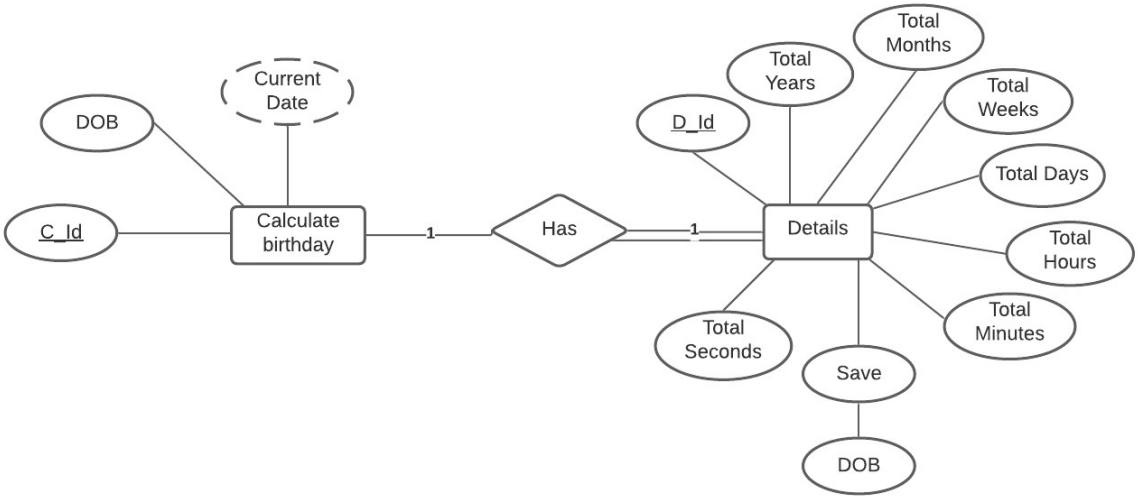
The above figure shows the use case diagram of the Age Calculator Application. There is only one actor, namely User. The functionalities of the actors are: Open App, Enter Birthday, Calculate Birthday, View Result and to save result.

b) Sequence Diagram



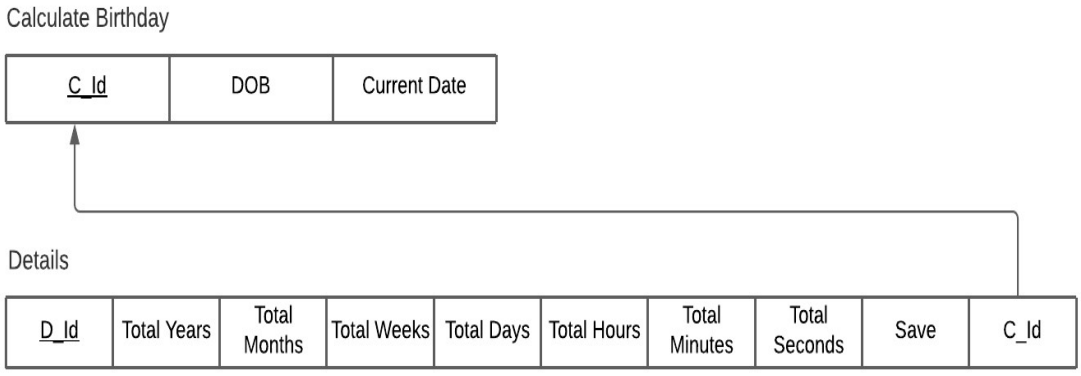
The above figure shows the flow of the interaction on how operations are carried out. It explains the logic behind age calculator application. Here, the user can open the app, enter the birthday to be calculated and the details of birthday will be stored in database. The database can send details to the app and the app will display details to the user.

c) ERD



The above figure shows the entity relationship diagram of the Age Calculator application. There are two identified entities, Calculate Birthday and Details. The attributes of Calculate birthday entity include C_Id, DOB and Current Date. The attributes of Details entity include D_Id, Total Years, Total Months, Total Weeks, Total Days, Total Hours, Total Minutes, Total Seconds and Save. The relationship between the two entities is "Has" and it has one-to-one cardinality ratio since every calculate birthday entity can have only a detail.

d) Relation Schema



The above figure shows the relational schema of Age Calculator Application. Calculate Birthday and Details are the two tables present in the relational schema. Calculate Birthday table has C_Id as primary key and Details table has D_Id as primary key. The primary key of the Calculate Birthday table is taken as the foreign key of Details table.