



LAWRENCE HOPE

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Github: <https://github.com/2120196013/IMD>

1.0 Introduction

This app (student information management system) is part a module of a complete system that deals with all kinds of student details, academic related reports, college details, course details, curriculum, batch details and other resource related details too.

It tracks all the details of a student from the day one to the end of his course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result; and all these will be available for future references too. The provided app (solution) has three fields that performs three particular functions; add (insertion) students' records, update students' records (edit), display students records and remove/delete students' records.

2.0 Solutions

Two tools were considered for the development for the development of this app; android studio and SQLite.

Android Studio

Android Studio is the official integrated development environment (IDE) for Android application development. It is based on the IntelliJ IDEA, a Java integrated development environment for software, and incorporates its code editing and developer tools.

To support application development within the Android operating system, Android Studio uses a Gradle-based build system, emulator, code templates, and Github integration. Every project in Android Studio has one or more modalities with source code and resource files. These modalities include Android app modules, Library modules, and Google App Engine modules.

Android Studio uses an Instant Push feature to push code and resource changes to a running application. A code editor assists the developer with writing code and offering code completion,

refraction, and analysis. Applications built in Android Studio are then compiled into the APK format for submission to the Google Play Store.

SQLite Server

SQLite is a software library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. SQLite is the most widely deployed SQL database engine in the world. The source code for SQLite is in the public domain. SQLite is equipped with built-in functions within the SQLite library. SQLite enabled the developer to build a simple database as a backbone for this solution.

3.0 Details

- **UI (User Interface) details**

The different components of the system in question are clearly identified and the model is given in terms of a composition of simpler models.

This app is aesthetically designed to enhance usability, accessibility and performance. The interface consist of four (4) text boxes and three (3) buttons that ensures a consistent look and feel feature for user experience. This in effect maximizes the responsiveness, efficiency and accessibility of the app.

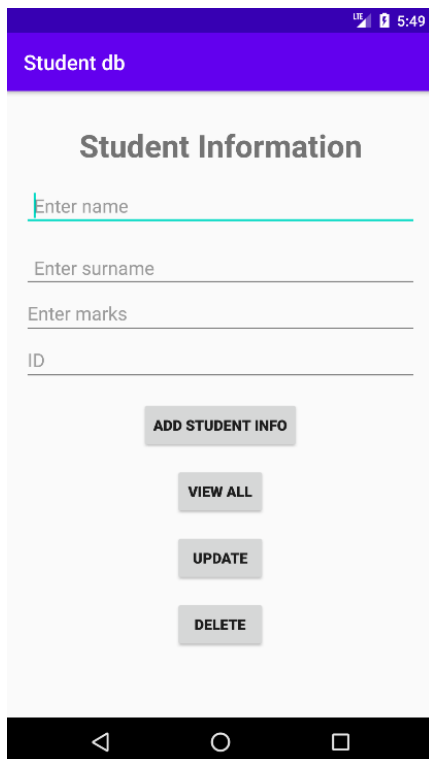
- **UE (User Experience) details**

This app has made a provision for users to easily make input and as well update of user data. There is a provision for users to easily delete and as well manage students' information easily. The interaction and mutual influence between the components is easily visible from the interconnection scheme of the component parts of the app.

- **Repository Interaction details**

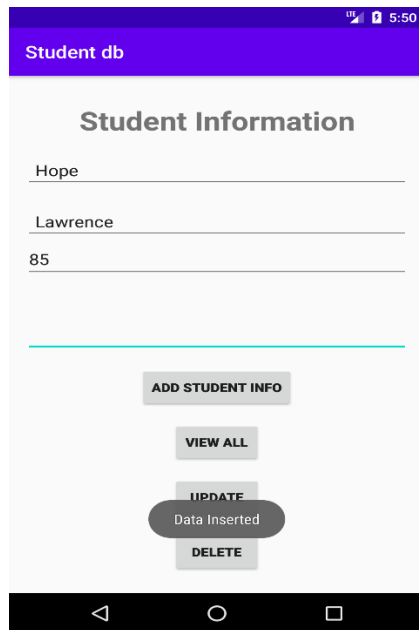
The Student information management system (SIM) app is modeled on a simple client-server management scheme. Users are provided with the option of making inputs which are instantly stored in a database. Data can be viewed and as well stored for data use and easy information delivery. This app has single table (Student) with three fields (Name, Surname and Marks) to hold students' academic scores.

4.0 Product Features and Description

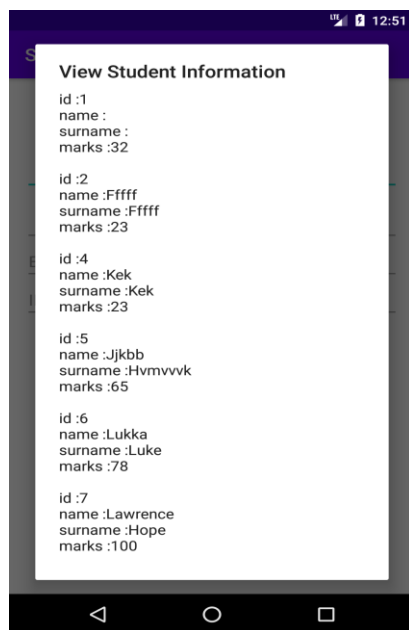


The screenshot displays the 'Student db' app interface. At the top, a purple header bar contains the text 'Student db'. Below this, the title 'Student Information' is centered. The interface features four input fields: 'Enter name', 'Enter surname', 'Enter marks', and 'ID'. Below these fields are four buttons: 'ADD STUDENT INFO', 'VIEW ALL', 'UPDATE', and 'DELETE'. The app is running on an Android device, as indicated by the navigation bar at the bottom.

The first user interface of the Student MIS app. This interface makes a provision for four (4) text boxes (name, surname, marks, id) and four (4) buttons (add student info, view all, update, delete) which enables the user to make inputs to the student database. Each button holds a function for performing input, view, update and deletion of records.



This interface enables the user to directly insert student records into the database. On insertion, a pop-up message/note appears on the screen to indicate insertion of records.



The view student information interface enables the user to view all records already inserted into the database. This shows student information in chronological order by ID as they were inserted.

StudentMIS

Student Information

Enter name

2

Enter surname

100

Enter ID

ADD STUDENT INFO

VIEW ALL

UPDATE

Data Updated

This interface enables the user to make edits by the use of students' ID. Records which to be updated must be existent in the students database before they are updated. On update, a pop-up message/note appears on the screen to indicate insertion of records.

StudentMIS

Student Information

Enter name

Enter surname

Enter marks

3

ADD STUDENT INFO

VIEW ALL

UPDATE

Data Deleted

This interface enables the user to delete by the use of students' ID. Records which to be updated must be existent in the students database before they are updated. On update, a pop-up message/note appears on the screen to indicate deletion of student records.

References

Android Studio User Interface and Project Structure - Android Hands

Denis E.E & Wixom B. (2000): Application Development

Harsh B.S (2009): Management Information Systems

[hub.com/walkman617/IMD](https://github.com/walkman617/IMD)

[Sqlite.org](https://www.sqlite.org)