Study App Development

Sakura High School

Kuda Tomoya, Watanabe Masaya

Ⅰ.Research background and purpose

We thought that managing learning on your own device leads to greater efficiency, because Information devices became popular. Therefore, the application is aimed at students like us.

Ⅱ. Development environment

Android studio 2024.1.1

Main code: Kotlin

Target API: 31

Management: Git/GitHub

OS: Windows 11 pro/home

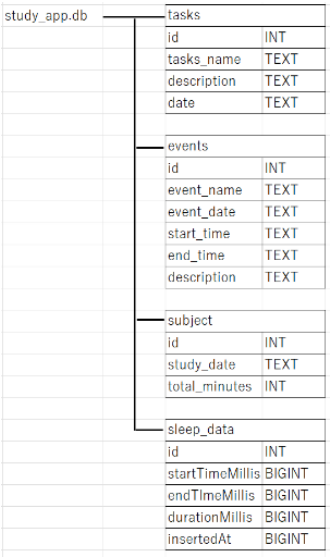
Ⅲ. App Components

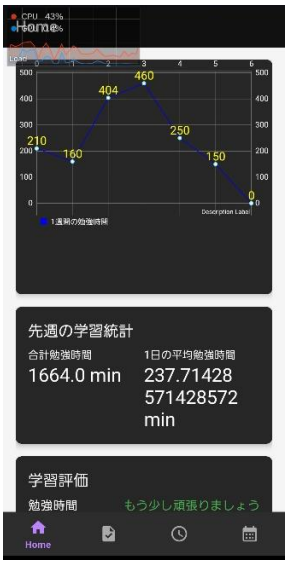
Components	explanation
MainActivity	Acts as the central hub controlling the app and enabling quick access to each fragment.
HomeFragment	Analyzes the user's study circumstances and displays results using charts and graphs.
ScheduleFragment	Allows users to manage schedules with features like a calendar and time slots.
StudyTimeFragment	Tracks study time and saves the data for later use.
ToDoListFragment	Helps users manage tasks through a checklist interface.

The application has reference values (constant numbers) to analyze users study circumstance. The application evaluates whether it is greater than or less than that value.

Ⅳ. Database

We use SQLite database. "study_app.db" has tables (tasks, events, study time, sleep data). They were designed for app Activity to operate CRUD easily.





Ⅴ. Utilize Sleep API

We can analyze user's sleep data by calling Sleep API. There are 3 steps. 1st, Permission request. We need agreement of users to use Sleep API. 2nd, API registration and display UI. Applications register API when it receives permission and design UI based on sleep data. 3rd,.

Ⅵ. Prospectus for the future

We plan to improve convenience from technologies. We will input our schedule by images authentication, and users can customize the template for the "To do list ".

Ⅶ. Improvement notifications and UI

We will develop a notification system for users not to miss the studying information.

We aim for good UI design for operating systems.

References

https://developer.android.com/courses?hl=ja

https://www.udacity.com/enrollment/ud9012,

https://www.javadrive.jp/android/#google_vignette

https://developer.android.com/codelabs/android-sleep-api?hl=ja