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Final Project

ISTE 456.01 - Mobile Application Development II

11/30/20

Product Definition Statement of 'MegaLog'

Features implemented:

- Calendar selector to select a date and scroll through the calendar.
- Ability to add 'records' to the selected day and edit any existing records.
- Ability to add and edit the wake up time and in bed time for the selected day.
- Ability to view each record for the selected day.
- Ability to rate a day on how well it went using a 5 star rating bar.
- Data is automatically saved and persisted locally.
- Delete all data for a selected day.
- Info dialog popup from a menu.

Features wanted for a future version:

- Color coding the calendar day based on the overall mood for that day (ex. green for 5 stars, red for 0 stars, etc.).
- Individually manage journal entries, instead of having plain text.
- Creating a 'Quick Add' button as a fob for easy and quick access to adding a new record.
- Order the records for a day around automatically by time (assuming there would be individual records), such as a log could be made at 10AM and would automatically go on top of a log from 4PM.
- Unsure of efficiency based on the fact that an infinite number of records could be added.

- Not much data validation checking for dirty data being entered into the database (assuming the app would actually be released).

Self evaluation:

Grade:

- The best work was connecting an entire front end with MVVM and backend together, allowing non-hardcoded, dynamic data to provide real data for users.
- The one thing the project definitely does well is as a logger for what you have done throughout a day, keeping track of each day. The main purpose was to log eating habits, sickness, wake up / bed time tracking, and day rating which is all handled well.
- With that being said, there were a bit more elements that could have been added such as deleting individual records instead of the entire day.
- Using the rubric guidelines, we believe we have met most of the “what does an A project look like” except for the UI could be more polished. Low A or high B.

Describe what each class does:

- The **MainActivity** just holds the view that will be replaced by either the first fragment or thes second fragment.
- Reading the data in is done from the backend database and computation is done in the respective fragments or ViewModel.
- **FirstFragment** is for displaying the calendar to select a date and displaying the reported entries for the selected day.
- **SecondFragment** is for editing the selected date once the user clicks the “Edit entry for selected date” button on First Fragment.
- Data for the selected day is stored in and pulled from the **DayViewModel** class under the **‘database’** package. Based on the day that is selected

from the First Fragment, the view model will populate itself with that day's respective data.

- **Day.kt** is the model file which specifies the entity for the 'room' database, this is where the table that holds the records in the database and its columns is defined.
- **DayDatabase** sets up the 'room' database by specifying what tables to setup and tells Android what database to use.
- **DayDatabaseDao** is the database access object which defines the methods that will be used to query the database (right now, just includes Get, Insert, and Delete).
- **DayRepository** is an abstraction class which could be used if we decided to switch to an API - it will decide whether to call local storage or an API.
- **InfoDialog** shows our information about the app.

Above and beyond:

- Saving and loading all information from a database using Room with coroutines.
- Learning how to use MVVM to display and store the data using a ViewModel with LiveData.
- Learning how to use the 'navigation' part of Android which was different than the usual fragment manager we had learned in class.

Third party frameworks / code snippets:

- We used a default project activity ('Basic Activity') which included the 2 fragments used and navigation between the two.
- https://www.youtube.com/watch?v=CcaCpRCACzU
- https://www.youtube.com/watch?v=ZTDXo0-SKuU
- https://medium.com/androiddevelopers/room-coroutines-422b786dc4c5