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CS443 Mobile Applications

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**Final Project Report - My Journal**

**1. Project Statement**

The purpose of our project was to give a user an experience into journal entries using their mobile device. The majority of the people have a physical hard copy and may not be able to carry them everywhere with them. Someone may have an idea and not have a place to write them down or have an addition to a previous idea and would like to revise that entry, or they may just want to scrap that particular entry altogether. What we offer is a way to keep track of all of those entries in one place, and that is the *My Journal* mobile application. We give the user a log that keeps track of all their entry locations, as well as keeping all of their entries readily available to them.

We wanted to develop such an application because we felt that in order for someone to keep a journal, or diary, does not have to adhere to the notion of having it lying around in a drawer at home. The journal app is a dedicated place to have a place for your ideas, memories, and stories all in one place, kept separate from your other notes such as grocery, errand, chores, and to-do lists. The application can give you a list that shows all your entries. It also provides a map which will place a marker in the location where you first started the entry.

The users that would benefit from this application are creative individuals that want to keep a record for memorable times, told in their point of view, and people that just love to tell stories. There is a various amount of similar applications on the market, one of them being *Day One*, which is a much highly developed application similar to our idea. At the moment there is no special requirements to be able to use the application, except for giving permission to the application for current location data used in the map.

**2. Application Design**

The design of the application at this point is rather simple. The app was designed to be used with smartphone devices. There are four different screens in the app. The Home screen simply shows all the entries in the database table in the form of scrollable listView. Only the title of each item is being shown for simplicity. The new\_Entry screen contains two buttons and two EditText fields. One button is to add new entry to the database table, another is to clear the EditText fields. The EditText fields are the title and the content of the item. Each field has it own hint, so the user can enter the title and content in the correct field. The next view is the calendar view, which shows the current date. The final screens contain the Maps Fragment. It does not do much right now, other than displaying the Google Maps, and uses a button to focus on the user’s current location.

**3. Application Implementation and Evaluation**

We have implemented 7 classes. Four of which are for the four different screens of the app, and the other fours are helper classes. All the four screens contain a BottomNavigationView to switch between different screens. The main activity class will populate populate the listView of the items from the database table. We used SQLite as our database. The second class is the new\_entry class. Here, you can add new entry by entering the title and content to be stored in the database table. We did so by creating a query and adding an auto-generated and auto-incrementing ID number, the title and content, all into their appropriate columns. The addEntry method was implemented to do just that, to store the data into the table. The third class is the calendar. We used the integrated CalendarView contained inside the ScrollView for this task. You can add new entry on the specific date that you picked. The last class in the app is the Maps. It was implemented using the maps fragment. The fifth class is DBHelper. Here is where the database table will be created along with other support methods like addData(), getData(), ect. The sixth class is item\_Content. This class specifies how each item is being display in the list, which only display the title for each item. The final class is PermissionUtils. This class sends out the request for the permission of the user’s location when the user first use the Maps feature of the app.

The app works as intended with the features we implemented. The database table was created and stored data correctly. The data can be queried and shown in the ListView as expected. The Calendar and Maps views seem to work fine and display correct contents. Though, we did not implement all the features we originally had plan for these two views. Other than that, the app seems to run smoothly and did not have any noticeable error.

**4. References**

<https://www.cs.umb.edu/~shengbo/teaching/cs443.html>

<https://abhiandroid.com/ui/calendarview>

<https://www.tutorialspoint.com/android/android_list_view.htm>

<https://developer.android.com/reference/android/support/design/widget/BottomNavigationView>

<https://developer.android.com/training/data-storage/sqlite>

<https://developers.google.com/maps/documentation/android-sdk/map-with-marker>

<https://github.com/toby0224/My_Journal>

**5. Experiences and Thoughts**

You may also comment how the class can be further improved.  
The project description document should be typeset nicely (Word document or PDF format).

It was fun working on this project. Although, we did not fully finish implementing all the features we originally had planned. We have learned quite a bit through this class and this project as well. Before taking the class, we had minimal amount of experience with the development of android mobile application, but it is another option which we may pursue in our careers.