Android Diary Application

Location, Mapping, and Web Services

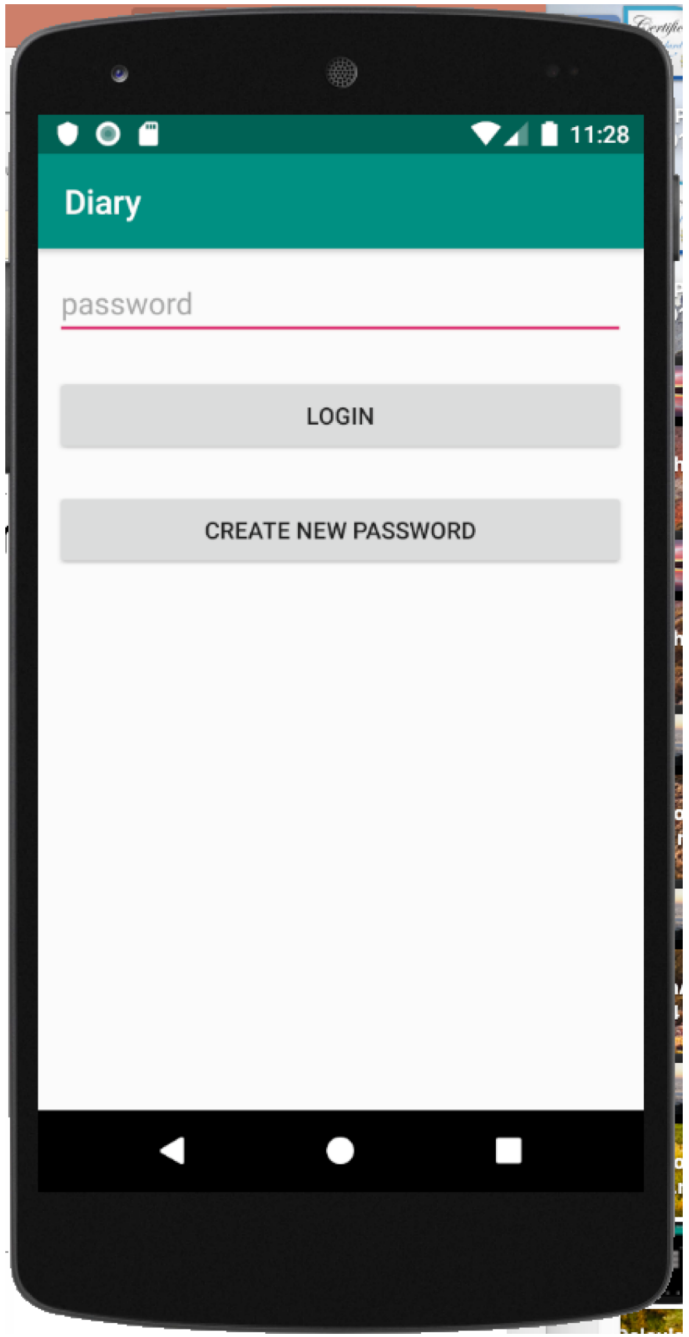
“how it works”

Summer 2019

Jill Eliceiri

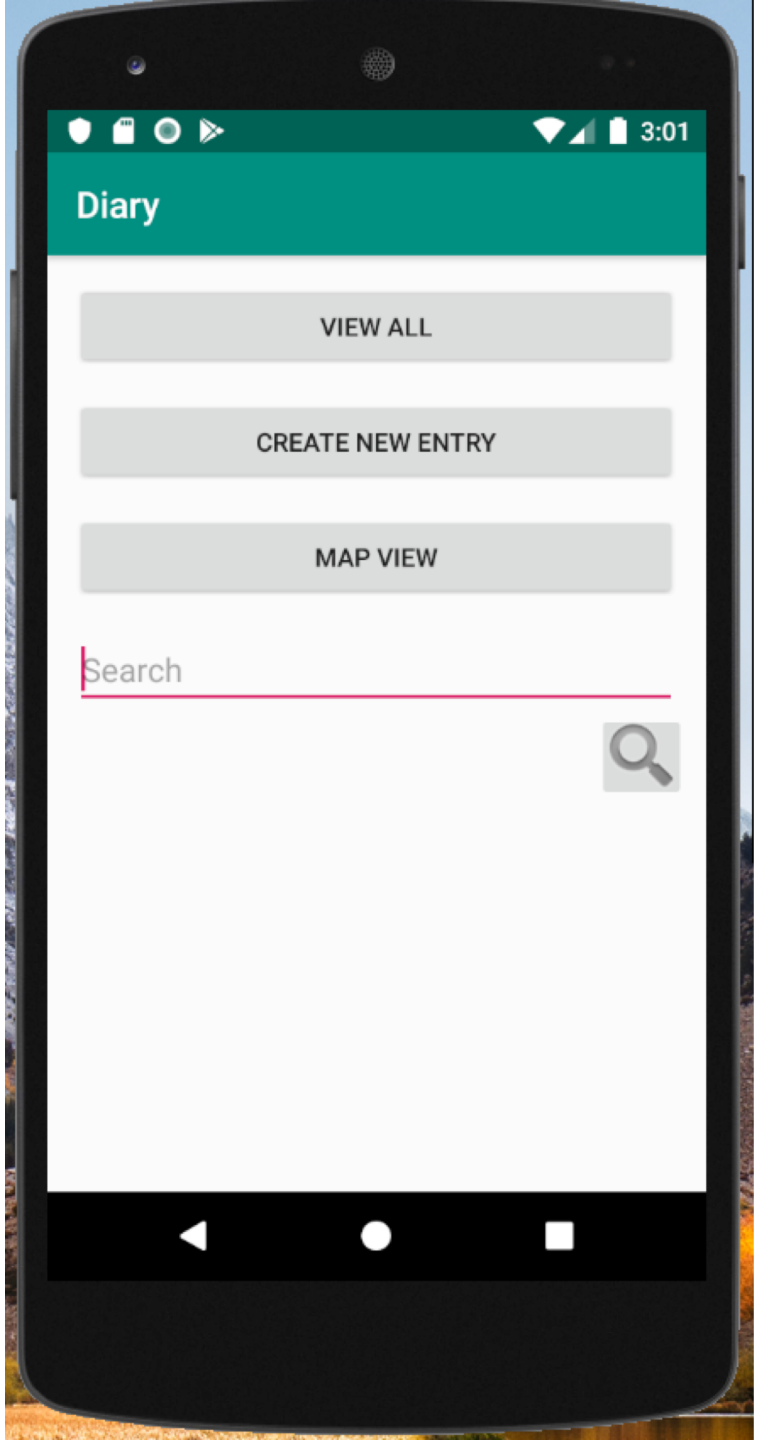
Password Access

- A password is stored using shared preferences for basic security protection.
- If the wrong password is entered, a toast message displays an error message.
- If a password has not been created, a toast message displays, asking the user to create a password
- After the user creates a new password, a toast message displays, asking the user to enter their password to login.
- After the password has been created, entered, and matches the key/value pair stored in shared preferences, then an intent is used to switch to the main activity.



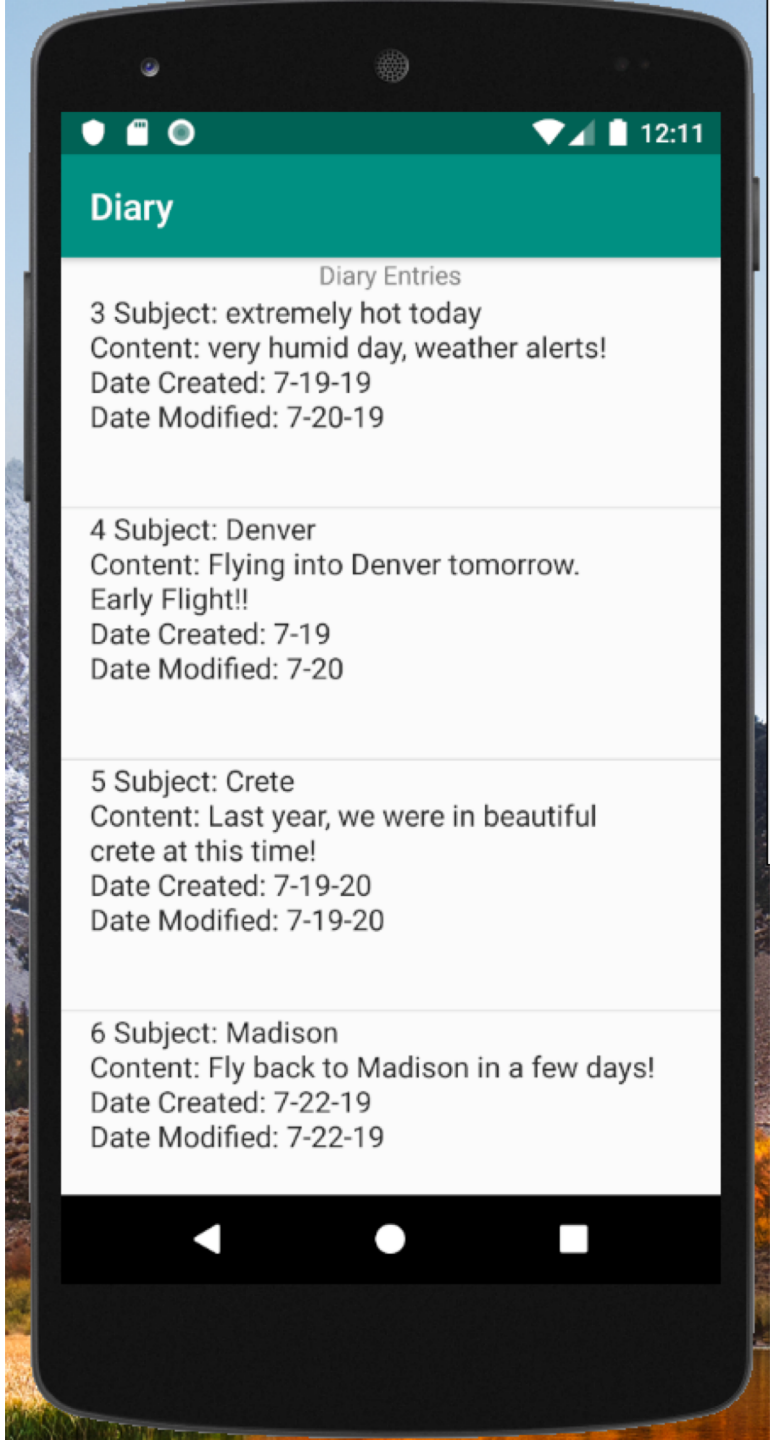
Main Activity

- View All Button: when pressed, this will display a list of all the diary entries.
- Create New Entry Button: this will allow the user to create a new diary entry.
- Map View Button: this will display a google map view with markers for all diary entries.
- Search field: the user can enter a search term, and then press the search icon button. The results are then displayed below the button.



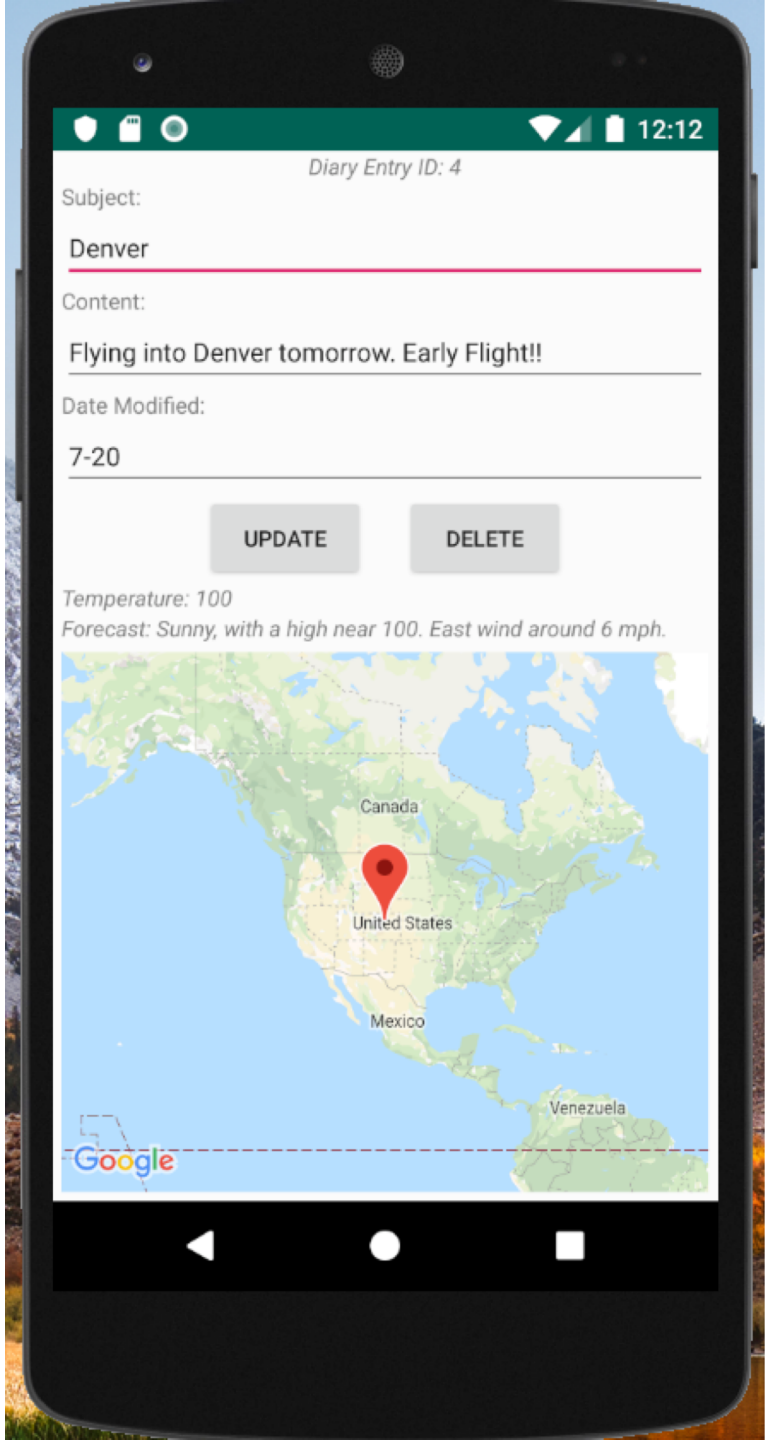
View All

- SQLite/Room database is used to insert, update, delete, and retrieve the information from the diary.
- The view all diary entries list is populated using a fragment.
- An array adapter is used to dynamically display the diary entries, and the list is scrollable.
- For each record, the following items are displayed: id, subject, content, date created, and date modified.
- There is an on-click listener attached to each list item.
- In this visual example, the list item with id 4 is selected.

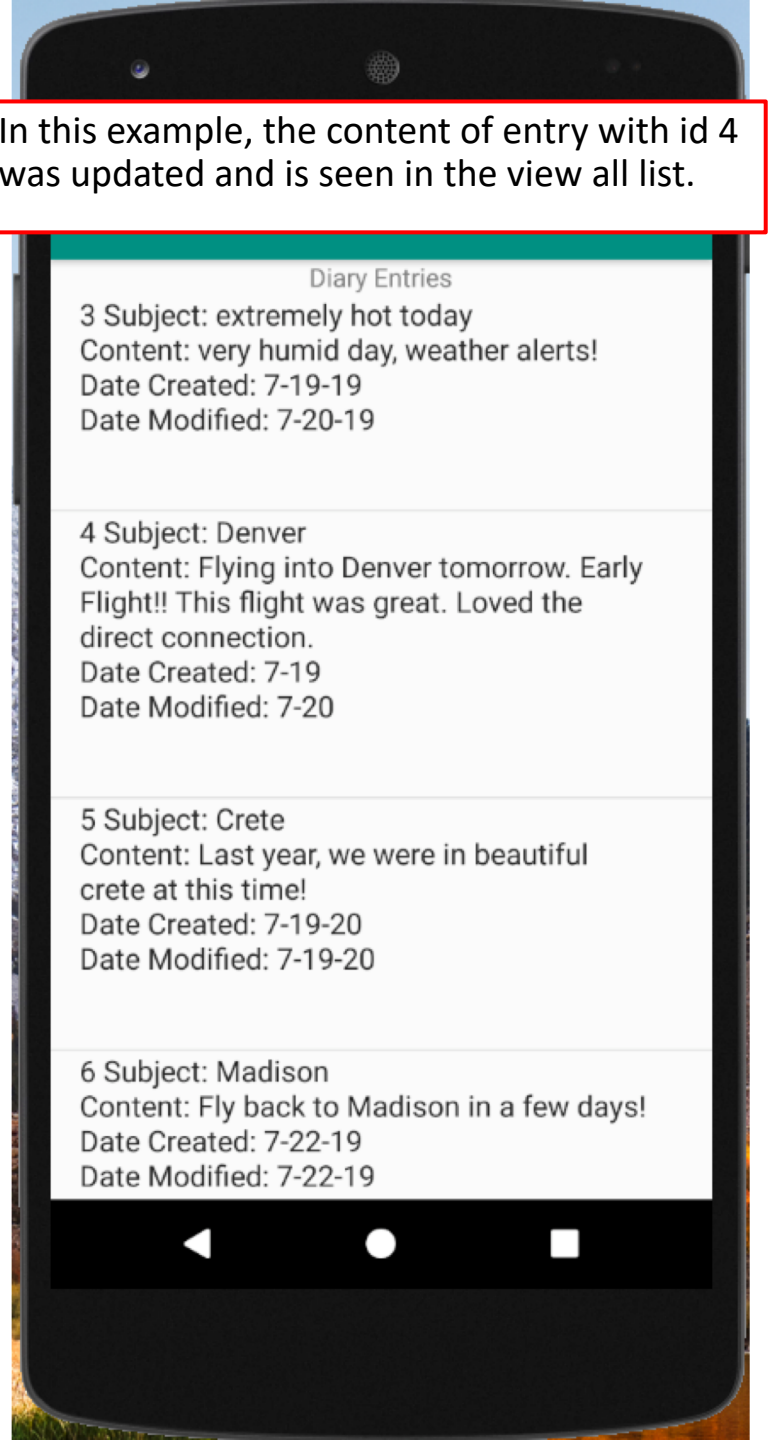


Edit or Delete Entry

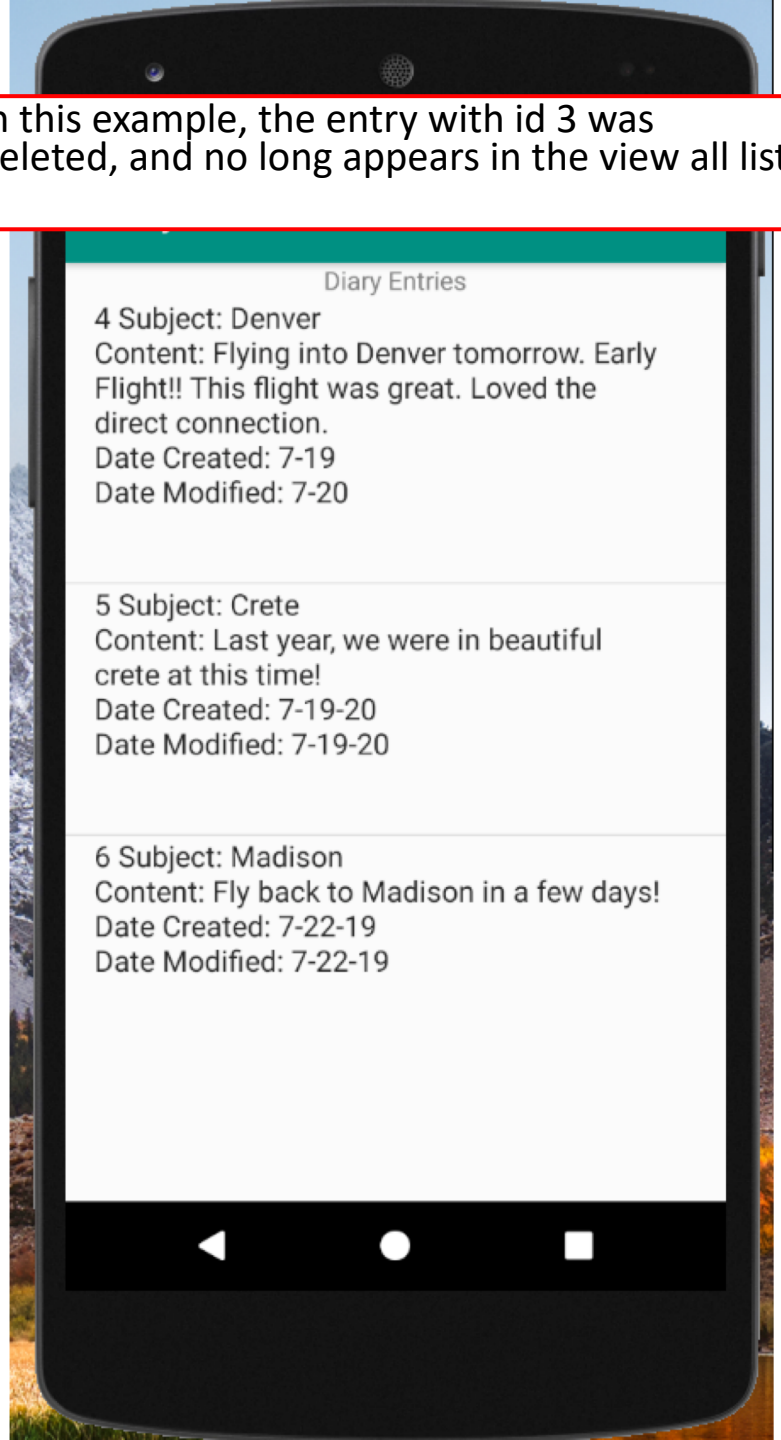
- Once an individual record is chosen, then the application displays information from this particular record: the id (in italics at the top), subject, content, and date modified, forecast, temperature, and google map location of the entry.
- The user has the option to edit or modify the subject, content, and the date modified fields, after which they can press the update button.
- If updated, a toast message displays “successfully updated” to the user, and the main activity screen then displays.
- The user can also choose to delete this individual record by pressing the delete button. A toast message displays “successfully deleted”. The main activity screen then displays.
- In this example showing entry id 4, the Content field has been edited and the update button selected.



In this example, the content of entry with id 4 was updated and is seen in the view all list.

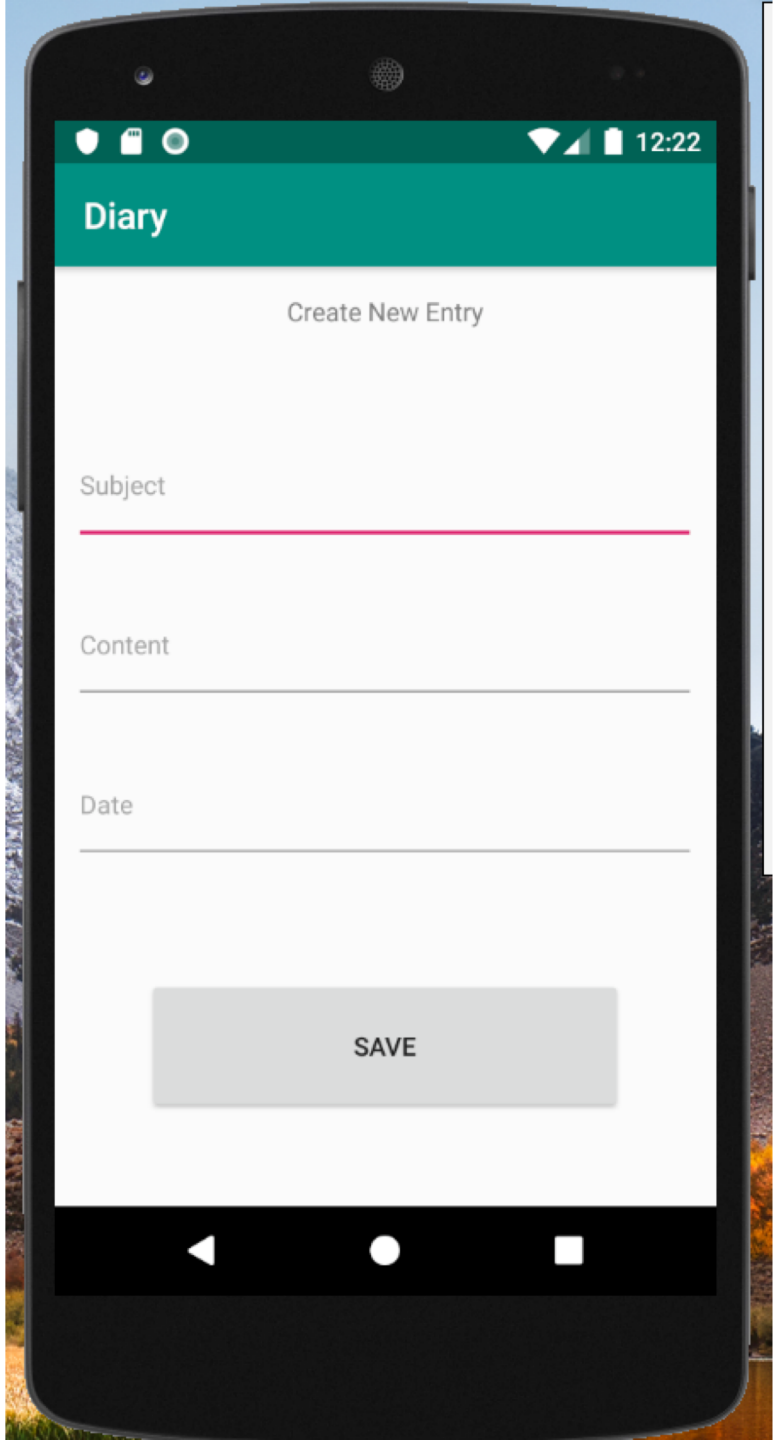


In this example, the entry with id 3 was deleted, and no long appears in the view all list.



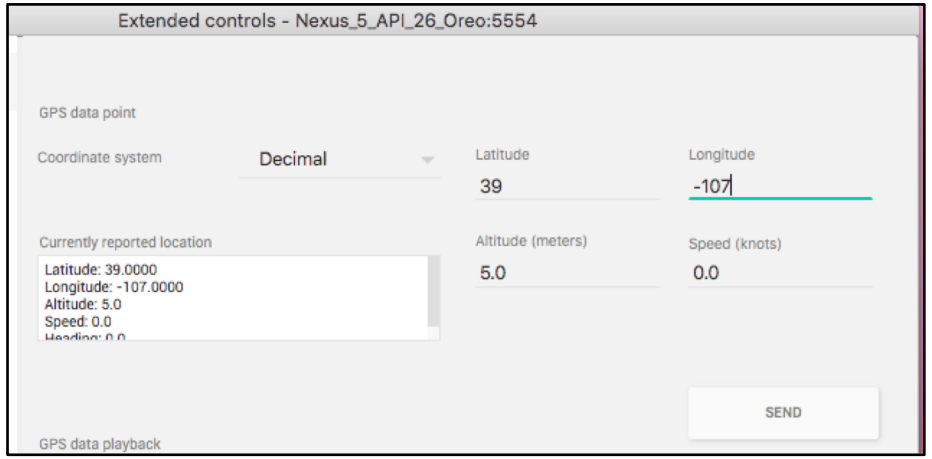
Create New Entry

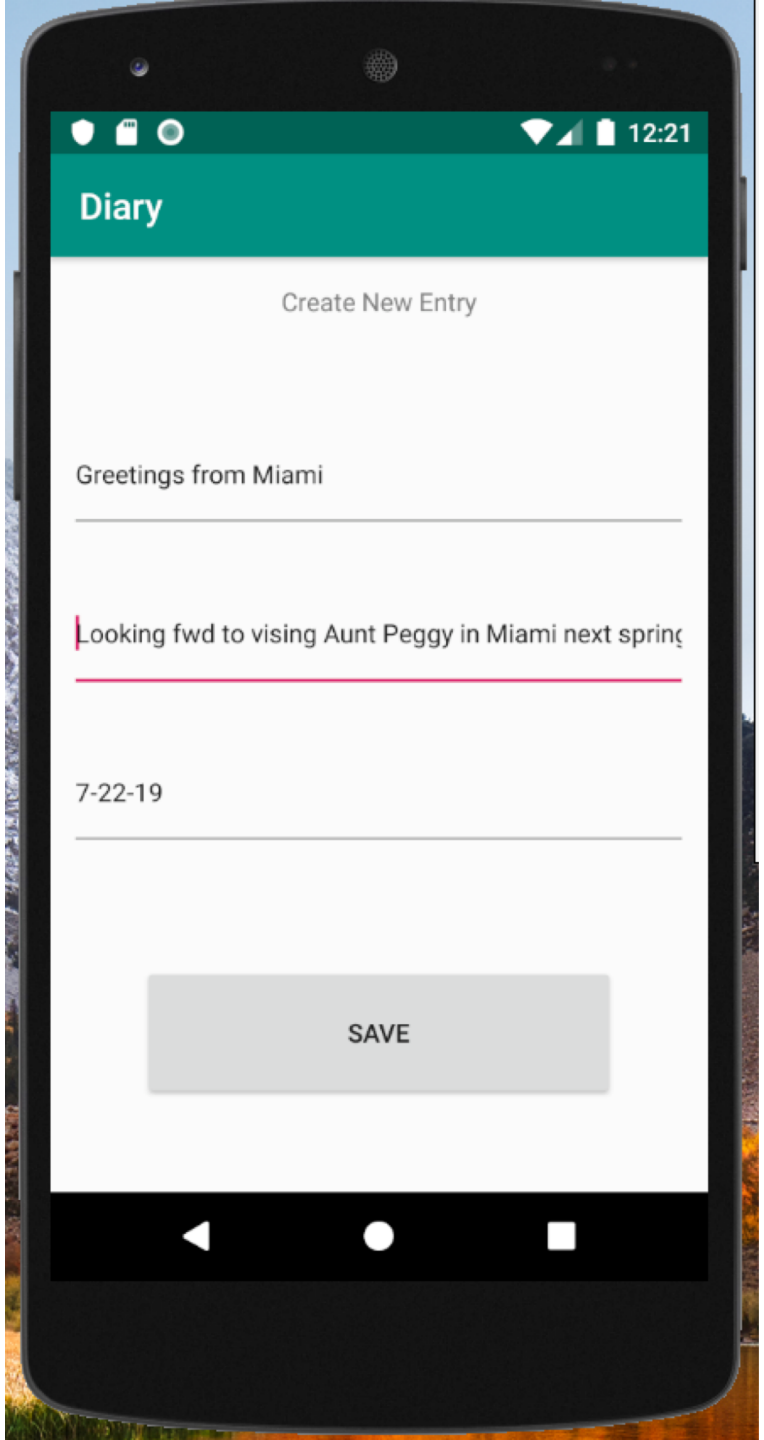
- To create a new diary entry, the user enters a subject, content, and date.
- The entered date of a newly created diary entry will populate both the date created field and the date modified field.
- The id field is unique and generated automatically.
- The users location is used to populate the latitude and longitude fields.
- NOAA web services is used to obtain information to populate the temperature and forecast fields of where the diary entry was made.



Create New Entry

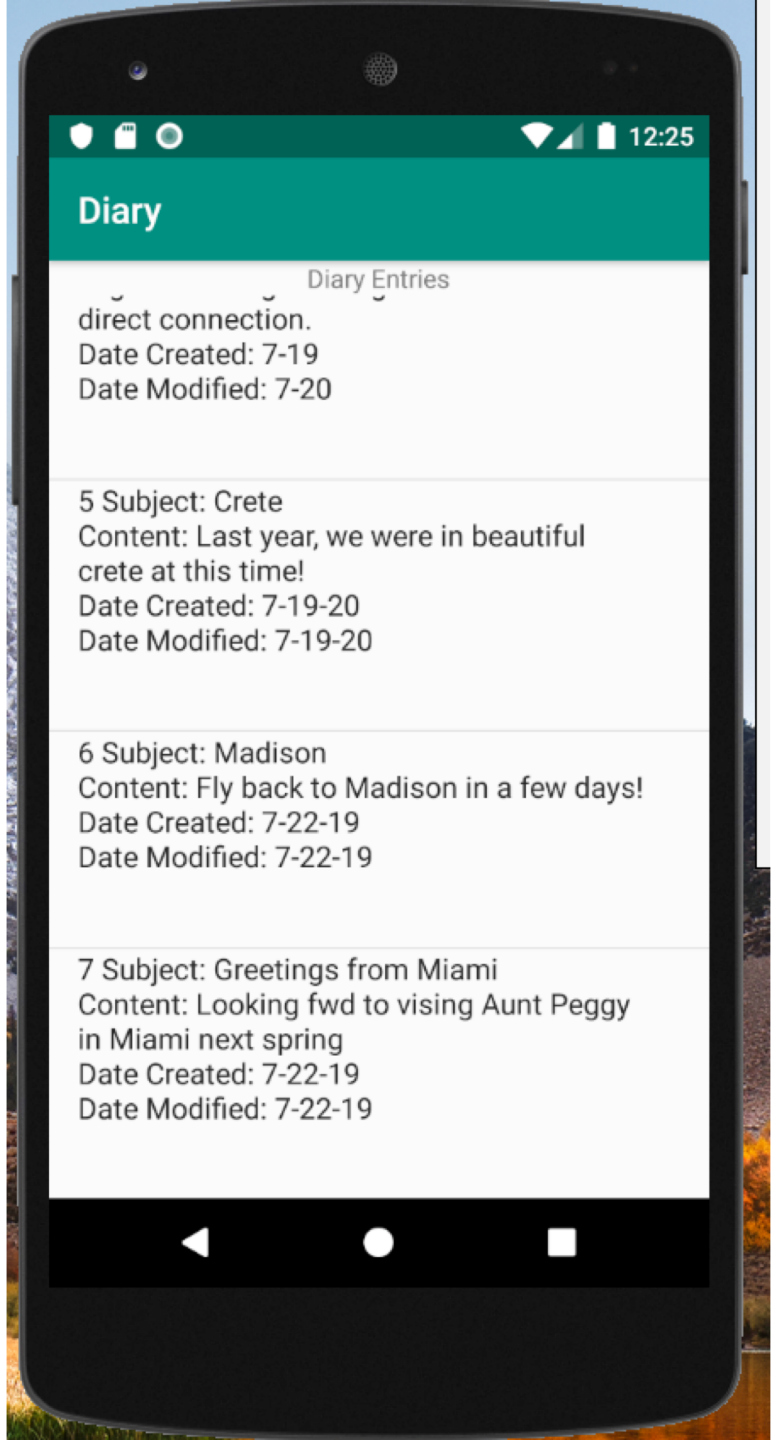
- Here is an example new entry. The emulators extended controls (image below) are used to change the coordinates to mimic changing location.
- After the information has been entered, the user can select the save button, after which a toast message displays that it was successfully created.
- Per the project specifications, after a newly created diary entry is saved, the application opens a new activity where the user can type a new entry in the system. This is accomplished through starting a new intent (to itself).





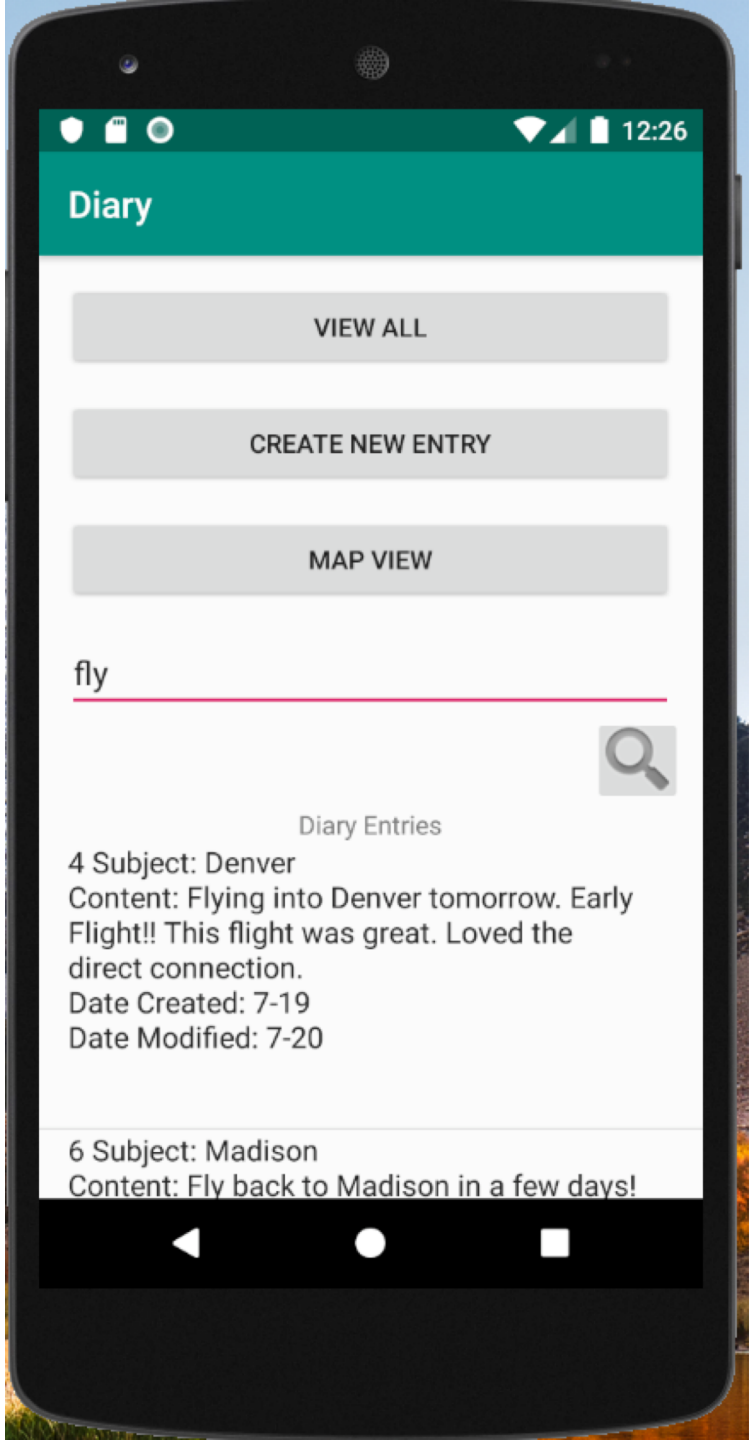
Example

- The newly created diary entry from the previous screen is displayed here in the view all entries list with id 7.



Search

- In this example, the user entered “fly” into the search text field and pressed the search icon button.
- The application returns a list of entries, via a fragment, that contain the search item found either in the subject field or in the content field.
- This list is scrollable.
- There is an on-click listener attached to each list entry.
- If a user selects a diary entry, an intent is used to switch screens to the Edit or Delete Entry screen (as seen in a previous slide), where the user can edit, modify, or delete the entry.

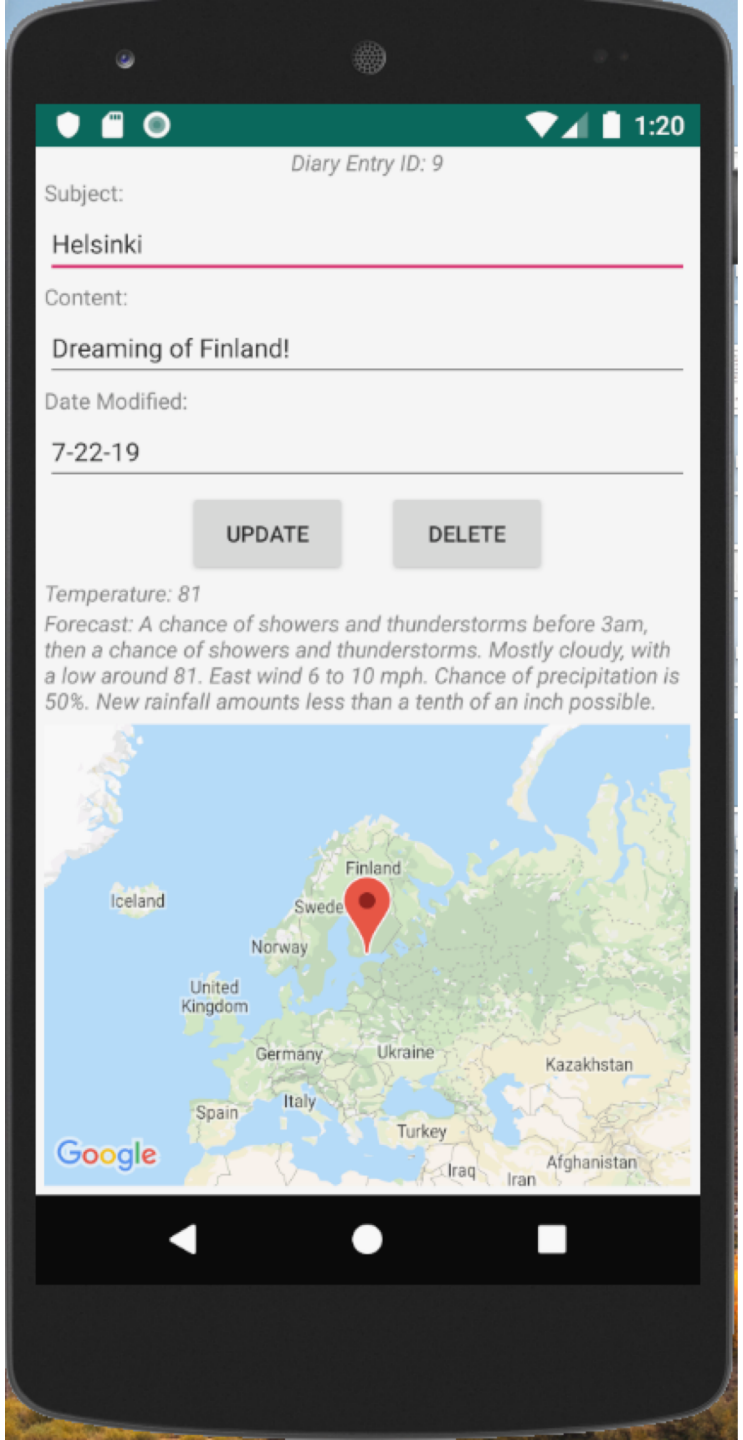


Map View

- When the Map View Button is selected a google map is presented.
- The map displays the locations of all the diary entries.
- A click listener is attached to each location.
- In this example, the Helsinki location is selected.
- A toast message displays to the user the id of the selected location before the edit diary entry activity displays.

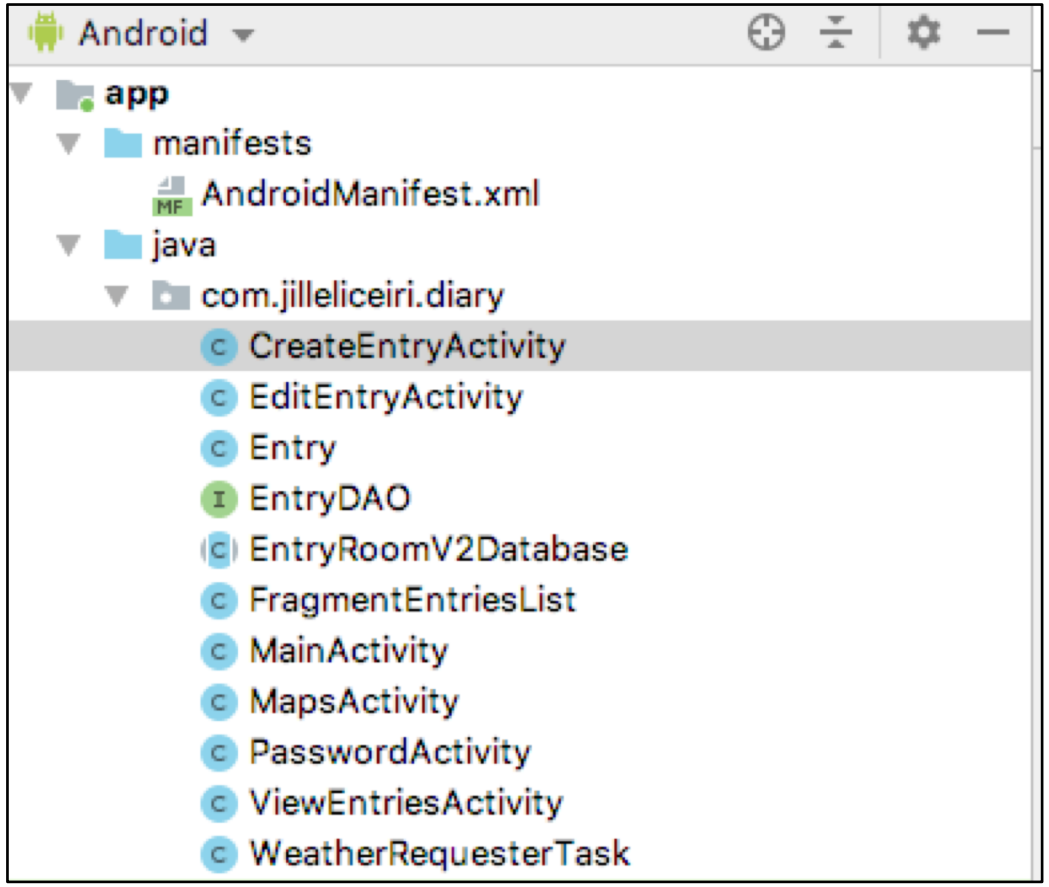
Example

- In the previous slide, the location of Helsinki was selected from the map.
- This is the corresponding diary note. The following is displayed: id, subject, content, date modified, temperature, forecast, and a map where the diary entry was created.
- The user has the option to update or delete this entry, as seen in a previous slide.



Android Files

- Java activity, fragment, and database files:



- Xml layout and values files: