

## How to Use this Template

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# Mood Tracker

## Description

This app logs a user's mood, from depressed to manic, for each day, using a UI that is as unobtrusive as possible. The app will graph moods on a biweekly, monthly, 3 month, 6 month, and year frame to allow patterns to be found. There is a corresponding widget that will make it easy to add/update the mood for the current day. A daily reminder around bedtime will be sent if there hasn't been a mood update that day.

## Intended User

People with mood disorders, such as Bipolar Disorder, Anxiety, and Depression. Eventually treatment providers can use the reported information for insights on how to treat the user's mood disorder.

## Features

List the main features of your app. For example:

Saves mood of user: from depressed, neutral, manic, using a UI that will be natural and easy-to-use/

View/edit mood of a given day up to 30 days previous.

Displays a graph of mood over time from two weeks to 1 year.

Stores the information using Firebase Realtime database, to sync multiple Android devices to the same data.

Offers a reminder at the morning and evening to enter your mood if not already entered.

## User Interface Mocks

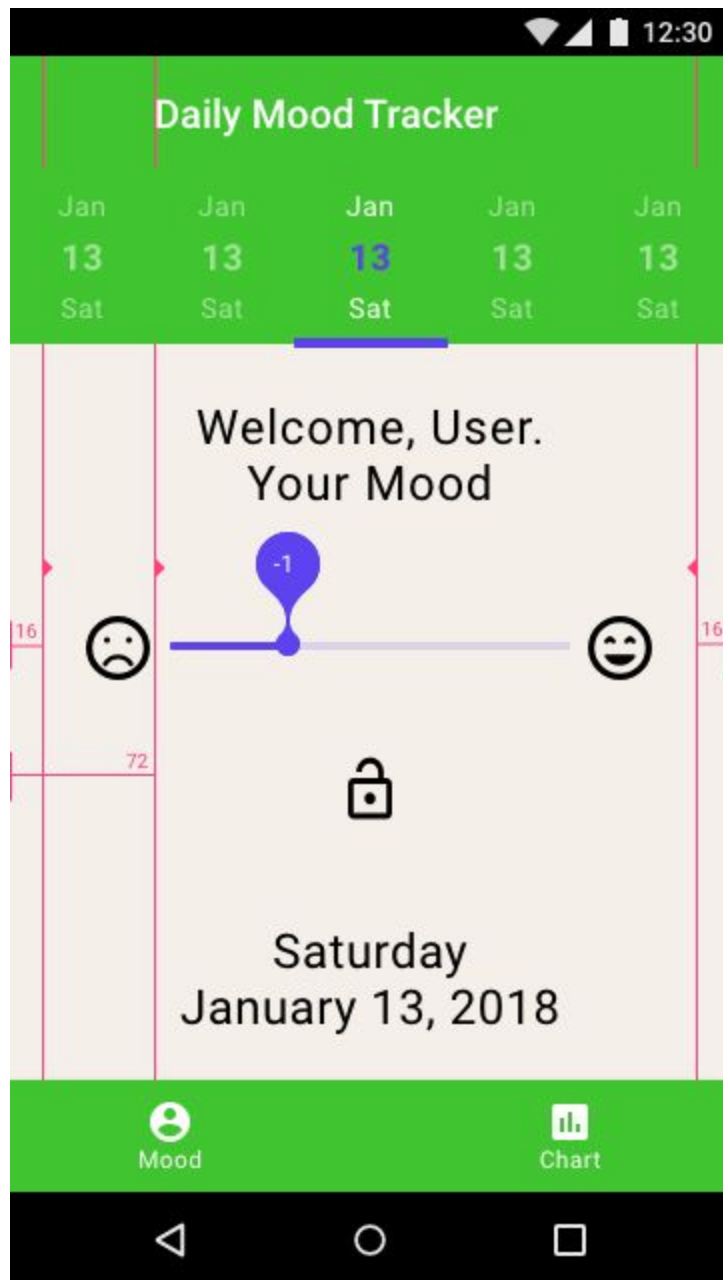


Figure 1: Enter your mood. After signing in, the user will end up at a screen that will allow entering/modifying the mood score for the given day. A horizontal sliding calendar will allow for selecting a day up to 30 days previous. When the user has logged in a mood score, they can click on the lock icon so that it won't be inadvertently changed by an unintentional swipe. In addition, if a mood has been swiped, moving away from the screen will save and automatically lock the score. The user may unlock the score to change it at any time.



Figure 2: Home Screen, Graph. By clicking on the chart tab, The user will be presented with a line graph that will show the moods over the specified time frame.



Figure 3: Widget View. If a mood has not been logged in the current day, the widget will display the view on the left, with prompts to add a mood. Once the mood is logged, the widget will display descriptive information as to what the level of mood logged is, and prompt with the option to edit the mood.

## Key Considerations

The app will keep all strings in a strings.xml file, and enable RTL layout switching for all layouts, for internationalization/localization. The app will have features for accessibility, including content descriptions and navigation using a D-pad. The app will handle error conditions, including lack of network connectivity, gracefully and without crashing.

### How will your app handle data persistence?

The app will use a Firebase Realtime Database to hold/sync up data. Will use google sign-in to access mood data across devices per user.

### Describe any edge or corner cases in the UX.

How to describe if the user has not added a mood score for a particular day. Prompt with yesterday's? But don't save it.

How about changing it after committing it?

The graph may have difficulty showing correctly on a narrow screen.

On a tablet, would a master-detail layout with the other panel showing the graph work?

### Describe any libraries you'll be using and share your reasoning for including them.

Butterknife will be used to make setting up views more easy.

GraphView ([www.android-graphview.org](http://www.android-graphview.org)) will be used to show the graph display of mood data.

Horizontal Calendar (<https://github.com/Mulham-Rae/Horizontal-Calendar>) will be used to scroll through last 30 days of mood results for view/edit.

**Describe how you will implement Google Play Services or other external services.**

Describe which Services you will use and how.

Firebase Realtime Database: <https://firebase.google.com/docs/database/>

<https://firebase.google.com/docs/auth/android/google-signin>

<https://firebase.google.com/docs/auth/users>

-- this will handle using the user's google account to sign in as a Firebase User

## Next Steps: Required Tasks

This is the section where you can take the main features of your app (declared above) and break them down into tangible technical tasks that you can complete one at a time until you have a finished app.

### Task 1: Project Setup

Write out the steps you will take to setup and/or configure this project. See previous implementation guides for an example.

You may want to list the subtasks. For example:

- Configure 3rd party libraries
- Butterknife, graphview, horizontal calendar

If it helps, imagine you are describing these tasks to a friend who wants to follow along and build this app with you.

The project will be entirely done in Java, with the following libraries and software:

Android Studio 3.2.1

Gradle 4.6

Butterknife <https://github.com/JakeWharton/butterknife> - 9.0.0-rc1

GraphView <http://www.android-graphview.org/> - 4.2.2

Horizontal Calendar <https://github.com/Mulham-Raee/Horizontal-Calendar> - 1.3.4

### Task 2: Implement UI for Each Activity and Fragment

List the subtasks. For example:

- Build UI for MainActivity
- Build Fragment for entering in the mood
- Build Fragment for handling the graph
- Build Widget

### Task 3: Implement Google Play Services

- Link up Firebase and Signin from dev account, and get working on the main app.
- Handle data persistence with Firebase Realtime Database. Be sure that
- Data can be accessed on multiple devices with a single login.
- Create a gradle install for debug, and release builds.

### Task 4: Widget, Firebase JobDispatcher, and Notifications

- Create Widget, link it to go to the main app's "Enter Mood" screen.
- Widget must be able to access the persistent data and know if there's a new mood entered, or if the day has changed, thus requiring a new mood for that day. Likely this will be done with JobDispatcher.
- Notifications will be controlled by JobDispatcher, checking if it is at a certain time the user wants to be notified, and that there has been no mood entered in already.

### Task 5: Clean up unused resources!

<https://stackoverflow.com/questions/39931519/how-to-clean-up-unused-resource-files-in-android-studio>

1. `Analyze > Inspect Code` and find **Unused Declarations and Methods**.
2. Android Studio -> **Menu** -> **Refactor** -> **Remove Unused Resources**.

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- After you've completed all the sections, download this document as a PDF [ File → Download as PDF ]
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- Submit the PDF as a zip or in a GitHub project repo using the project submission portal

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