

GitHub Username: keystuck

SimpleHealthTracker

Description

SimpleHealthTracker helps seniors with poor vision or memory/cognition issues (and others) keep track of medications and communicate with health providers/caregivers about their health.

Although many seniors have smartphones, the complexity of app design combined with vision/cognition issues can make them difficult for them to navigate. They may learn the sequence of taps necessary to accomplish a task but forget it frequently, or have difficulty tapping the correct button because of tremor or poor fine motor control. The complexity of their medical issues can make it important for them to communicate clearly with healthcare providers and family members, but many seniors live alone and may have trouble remembering to keep records.

Intended User

The intended user is a senior living alone with medical issues and problems with vision, memory, or cognition. There are many non-seniors (and seniors not living alone) who might also have these problems, but the largest target audience is seniors.

Features

The app will have both simplified and detailed modes. The simplified mode will allow the user to set reminders for medications or activities, track when those things have been accomplished, record or type notes for providers/family members, and track medical issues (for instance, pain over time, nausea, etc.) on a customizable list. In the detailed mode, the user can edit notifications, edit medication lists, read and delete notes, and produce reports that can be emailed or printed.

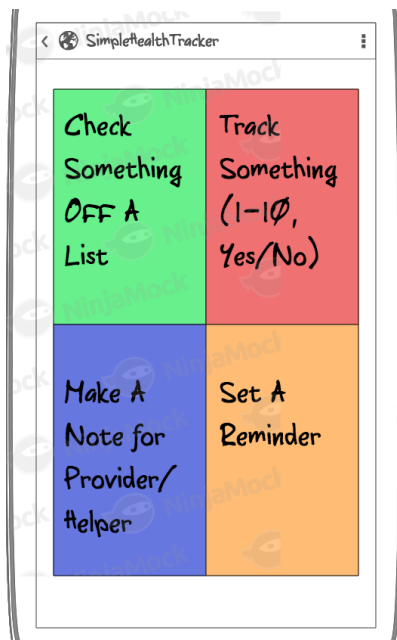
There will also be a widget which will allow the user to record notes to their provider/caretaker directly from the home screen.

User Interface Mocks



Main Menu

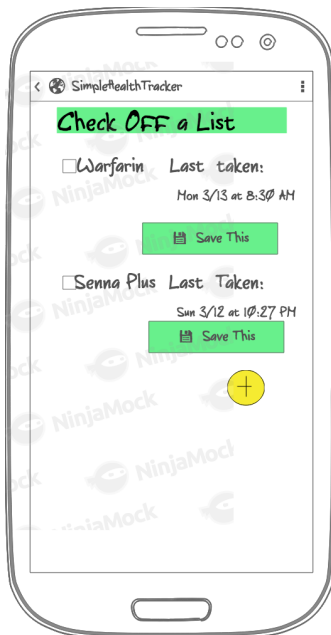
Allows user to pick simple or detailed view depending on task and need.



Simple Tasks Menu

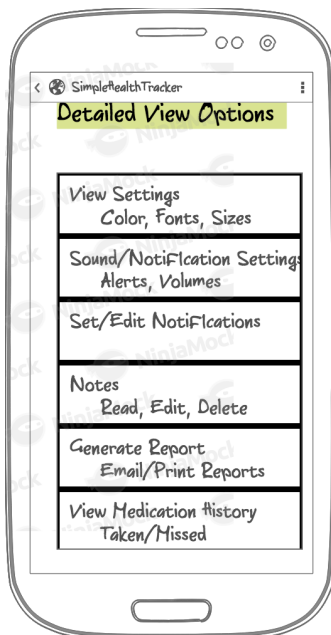
Allows user to select one of the four actions:

- Check Something Off a List: the user has taken a medication or done some other activity for which a reminder had been set.
- Track Something: enter a pain or nausea measurement or record an event that was not on the reminder list (bowel movement, fall, etc.).
- Make a Note for Provider/Helper: the user wants to ask a question or remember to mention something for the provider or caretaker to respond to.
- Set a Reminder: add a reminder (medication or other) and a time for it to occur. This will also add an entry to the Check Something Off a List screen.



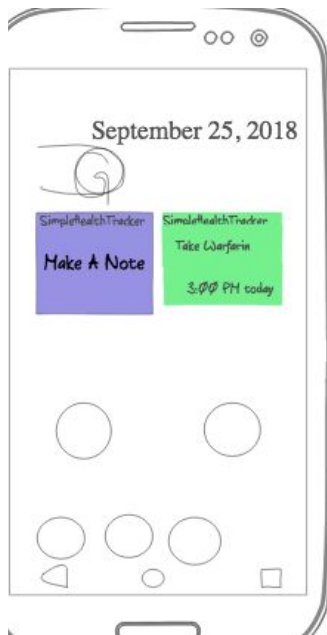
Check-Off Task Screen

Allows user to indicate that a medication has been taken or other event has occurred. The time and date will be recorded to a database to track medication compliance, frequency of bowel movements, or other events as required in the particular case (list can be adjusted in Detailed Options).



Detailed Tasks Menu

This path will allow users or family members/providers to adjust settings, add or delete events to check off or track, view and delete notes the user made, and view summaries of data.



Widget

These widgets allow the user to

- make a note for their provider/caretaker directly from the home screen
- see the next medication reminder at a glance and click to access the "Check Something Off a List" screen

Key Considerations

How will your app handle data persistence?

The app will use Room to handle data. The fewer the steps necessary to access the app, the better, so I wish to avoid forcing the user to log on and depend on an internet connection. The database will store events (meds taken or missed, other entries) and tracking (pain, nausea, etc.) with the time each occurred or was recorded in one table, and notes to a provider in another. It will also store details of upcoming med notifications so it can record missed meds.

LiveData and ViewModel will be used to track changes and avoid unnecessary calls to the database.

Describe any edge or corner cases in the UX.

Once a user has added something using the Set a Reminder screen they should be taken to the Check Something Off a List screen so they can see that it has been added.

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

The app will use Butter Knife for binding views to simplify coding.

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

The app will use AdMob to show banner ads and Analytics to track usage for further improvement.

The app will be written solely in Java.

Tool Used	Version Number
Android Studio	3.1.4
Gradle	4.9
Butter Knife	8.8.1

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 skeleton XML and code for the main activity screen and the Simple activity and fragments:

- MainActivity

- SimpleActivity

- CheckOffFragment involving query and edit database

- TrackFragment involving query and edit/insert into database

- NoteFragment involving insert into database

- ReminderFragment involving insert into database and possible updating of widget

This will also require implementing the database using Room.

Next, write skeleton XML and code for the Detailed activity and fragments.

- DetailedActivity

- Preferences for visual and auditory elements

NotificationsFragment involving query/edit/delete
NotesFragment involving query/delete
ReportsFragment involving query
MedsHistoryFragment involving query

Task 2: Implement UI for Each Activity and Fragment

Build the UI for the Simple activity view and its fragments.

Build the UI for the Detailed activity view and its fragments.

Task 3: Implement Google Play Services

Include ads and analytics.

Review app with particular attention to accessibility and RTL switching ability.

Ensure all strings are in strings.xml file.

Implement widget to allow user to record note directly from home screen.

- Will insert into database

Implement widget showing next reminder using IntentService to fetch data.

- Will query database and allow access directly to CheckFragment to edit/insert into database.