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1. After you've completed all the sections, download this document as a PDF [File → Download as PDF]
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GitHub Username: heddyparkphoto

Name of The App

Wannareddit

Description

Reddit viewing app which solves the following problem. The user loves reddit. The user subscribes to a large number of subreddits, finds it hard to keep up with them, and has long stretches where some are neglected. He/she wants a way to get news/posts/thread from all of them equally.

This app solves the problem by letting the user to keep a list of subreddits that they would like to follow. User can search and add new subreddits and configure the first subreddit to be displayed with its posts when the app launches. The preferred category such as 'top' or 'new' can be also set.

User can interact with a post to view its full content and its linked sites, play a video or read a subset of comments in the Detail view. These links will be opened in the system apps such as Web browser or Youtube.

Intended User

The app is intended for someone who is busy but wants to check or catch up interesting content of the reddit on mobile devices at his/her own pace without being swamped by it.

Features

The app has following features to support the main functions described above:

- User can search and add new subreddits through a separate view; these are stored in the Database on the device
- User can configure the first set of posts for the first screen and in the Widget by saving her/his Preferences
- User can download more posts manually by action such as swipe motion or with Refresh menu
- The app uses Play Service's Awareness API, specifically, TimeFence, to display a low-key reminder such as in a Snackbar at a set time if user wants the reminder to be shown. It can be set to 'Never'.

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User Interface Mocks

Screen 1: Main Activity

Description: First screen that user sees when the app starts on the Phone. Toolbar displays the name of the subreddit in a spinner that holds all stored subreddits user indicated. The plus sign action icon next to the spinner launches a new activity where user manages the list by adding and removing subreddits. The Tabs bar contains categories of reddit. Main area displays the list of thumbnails and posts. Posts are separated by thin horizontal lines.

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Screen 2: Master/Detail Fragments

Description: First screen that user sees when the app starts on Tablet. Toolbar displays the name of subreddit and the tabs with a selected category that user has configured in the Preferences. The detail fragment on the right side of the UI contains the post's title on the first line followed by a large image if present. A subset of comments follows the image. Comments follow the post's title directly if there's no image. Links to external site are also included.
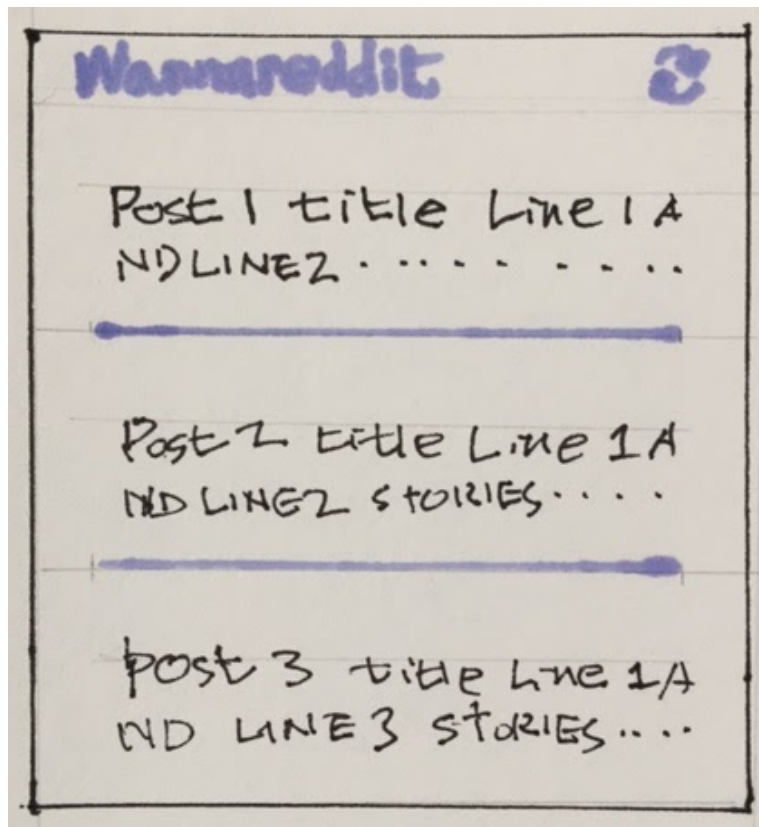
The bottom bar contains three read-only info reflecting the reddit.com: the timeline, "submitted by", and the total number of comments.

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Screen 3: Detail Activity

Description: Detail UI for Phone. Toolbar contains 'Up' arrow to the parent view on the left and a menu for Settings on the right. The UI displays an image if post has one, several comments, any video play buttons or links to external sites within the comments.
The timeline, "submitted by", and the number of comments are displayed at the bottom.

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Screen 4: Home Screen Widget

Description: Widget for Home screen. It displays first three posts of the subreddit that is the user's Preference. The 'Refresh' icon on the top right loads more posts on click. Credit: I got this idea from "Press": Widget on this site: https://beebom.com/best-android-widgets/

Key Considerations

How will your app handle data persistence?

Content Provider and android sqlite database will store subreddit names. Several user preferences will be stored using SharedPreferences.

Describe any corner cases in the UX.

Mainly three corner cases are considered: The application states during device rotation, data persistence and release of system resources when an activity can be destroyed.

From the Main Activity, user could rotate the device while screening posts in a certain category in a certain subreddit. We should keep the name of the subreddit and the category during onPause() callback to restore them after the rotation.

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Database transaction should be completed once the user made an update to the subreddit list. The app should use the background thread for database updates to ensure all changes are saved even after user leaves the app.

The app should unregister BroadcastReceivers during onPause(). The app should release any network connections during onStop().

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

I will use Butterknife in jakewharton repo because it reduces the code lines, and I know how to use its basic features such as view id and string resource binding.

I will also use the ContentProvider generating library in simonvt repo because it also reduces the amount of code I have to write and I have used them in the StockHawk project.

Describe how you will implement Google Play Services.

I will use 2 as required in the project:
1. Awareness API - TimeFence to let user set max time spent reading the posts by showing a non-intrusive reminder when time has been reached.
2. GcmTaskService to run REST services to reddit API

Next Steps: Required Tasks

Task 1: Project Setup
Create a new Android project for Phone and Tablet using the Android Studio.
- Configure classpaths and dependencies in the gradle
- Sign up for the Firebase developer account and add required meta data in the project; set the RTL true at the application level
- Pick a Color palette and Themes to use during initial development

Task 2: Implement UI for Main Activity and Fragment
Build layouts to be used in the main UI and the REST services and JSON parsing.

Some subtasks are:
- RecyclerView and its layout for each post
- Implement request that invoke reddit public (SFW) APIs using the GcmTaskSevice
- Code the JSON response parsing

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Task 3: Implement UI for Detail Activity and Fragment
Build the Detail screen layout and the REST services for getting data needed

Some subtasks are:
- Create the layout
- Implement request that invoke reddit public (SFW) APIs for the Details
- Code the JSON response parsing

Task 4: Implement Subreddits list, Database and ContentProvider
Create the spinner to hold the list. Build the Database to populate the list.

Some subtasks are:
- Create Subreddit list edit UI
- Code Floating Action Button to enable add new
- Update the spinner to implement Loader that populates the list from Database

Task 5: Implement User Preferences
Create Settings Activity

Some subtasks are:
- Create xml for PreferenceScreen
- Set keys and default values for each
- Create a utility class to access SharedPreferences

Task 6: Add TimeFence API

Update the Main Activity to connect the Awareness API with the GoogleApiCient

- Show a Snackbar when the set duration has lapsed

Task 7: Build Tablet UI and Refine Other Aspects of Layouts

Add Tablet UI of the app. Enhance the app with icons where appropriate.

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Some subtasks:
- Create tablet layouts

- Create portrait and landscape layouts
- Refine Color Palette
- Replace action texts with license-free icons if it improves the app

Task 8: Make the App Production Ready

Perform various tasks that will make the app production-ready

- Identify and handle error cases
- Add Accessibility, contentDescription to visible elements
- Implement Internationalization

Task 9: Build Widget for the Home screen

Code widget provider
- Update the manifest file
- Create layouts

Task 10: Configure Keystore and Sign the app

Complete the final step of being on the Google Store as required in the project.

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