How to Use this Template

1. Create a new document, and copy and paste the text from this template into your new document [Select All → Copy → Paste into new document]
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GitHub Username: **SnoutUp**

Grocery Review App

Description

With an ever growing supply of various food items available in stores, it’s hard to remember products you liked or hated. Grocery Review application aims to solve this by providing an easy way to track things you eat, rate them and recommend the tastiest treats to others.

Intended User

Grocery Review application can be used by anyone, who already started shopping for food. It could be kids spending their pocket money on crisps and candy, students trying to discover cheapest, yet still tasty, ramen or hotdogs or any adult who gets overwhelmed by options during grocery shopping.

Features

- Saves product information including rating, picture and location of purchase
- Allows user to browse and search grocery item ratings of other application users
- Built-in shopping list functionality
- Shopping list widget

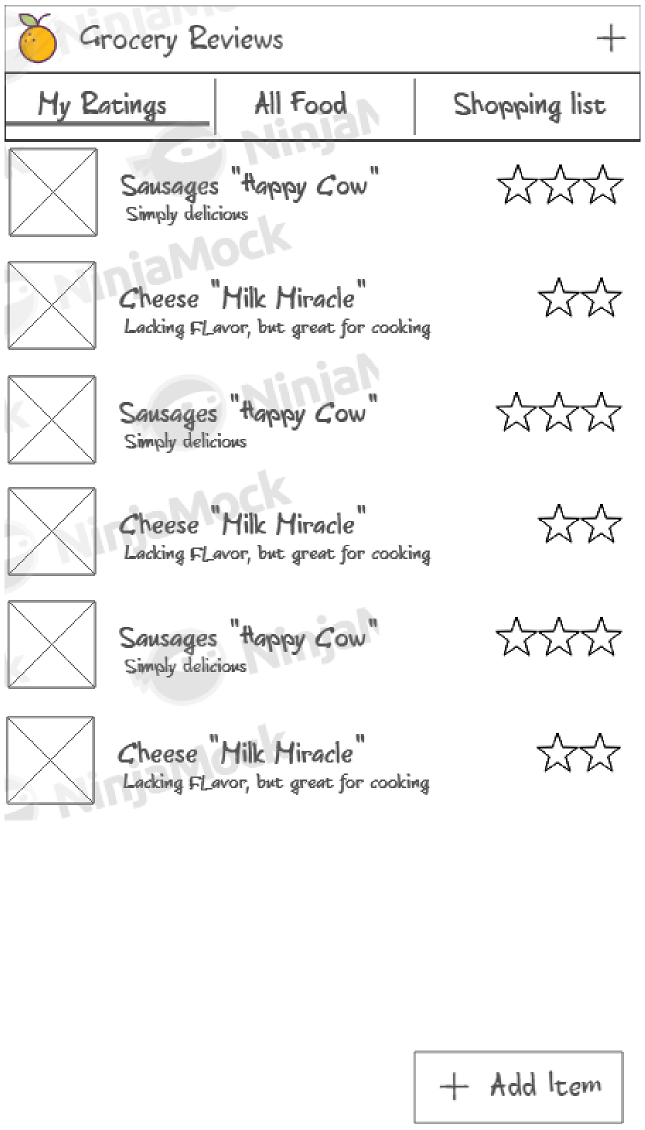
Technology

- Application will be written solely in the Java Programming Language
- Application will use stable release versions of all libraries, Gradle, and Android Studio

Technology	Version
Android Studio	3.1.4
Gradle	4.4
Gradle Tools	3.1.4
Android Support Library	27.1.1
Google Services	4.0.1
Firebase	16.0.1
Picasso	2.71828

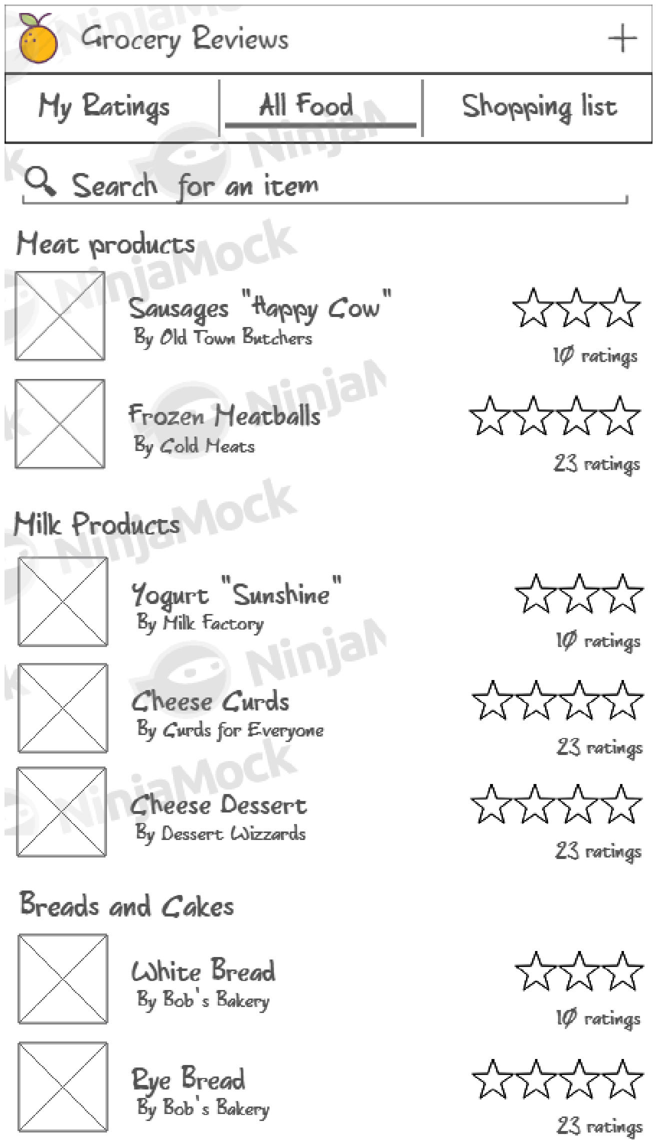
User Interface Mocks

Screen 1 - My Ratings List



My ratings screen displays all the food items current user added themselves with star rating as well as short note describing the taste, value for the price or other properties. This is the screen where FloatingActionBar will be visible for quick access to most common action - adding new item. Tab-based navigation will help to quickly move around different lists described in more detail in other interface mocks.

Screen 2 - All Food List



Meat products

Sausages "Happy Cow"
By Old Town Butchers
10 ratings

Frozen Meatballs
By Cold Meats
23 ratings

Milk Products

Yogurt "Sunshine"
By Milk Factory
10 ratings

Cheese Curds
By Curds for Everyone
23 ratings

Cheese Dessert
By Dessert Wizzards
23 ratings

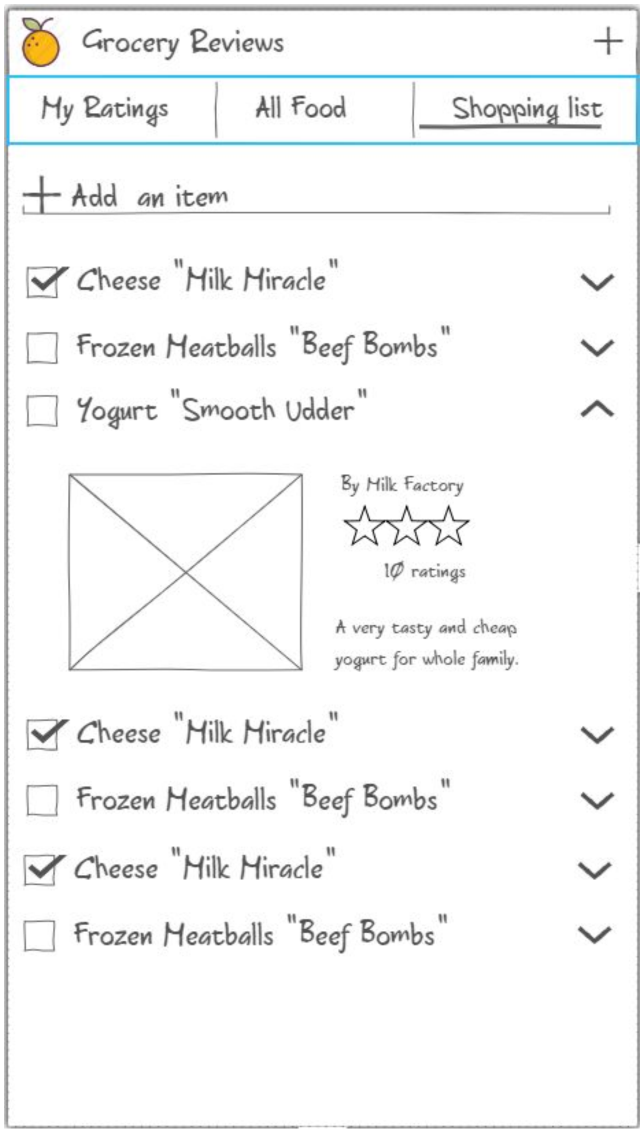
Breads and Cakes

White Bread
By Bob's Bakery
10 ratings

Rye Bread
By Bob's Bakery
23 ratings

"All Food" section of the application contains all the products submitted by other users of this application, together with overall rating and amount of the votes. The list can be easily searched through to quickly find and use a certain item to create a new rating or add to shopping list.

.Screen 3 - Shopping List



“Shopping list” displays a certain temporary grocery list which can be created before going to the story. List item expands to show more details.

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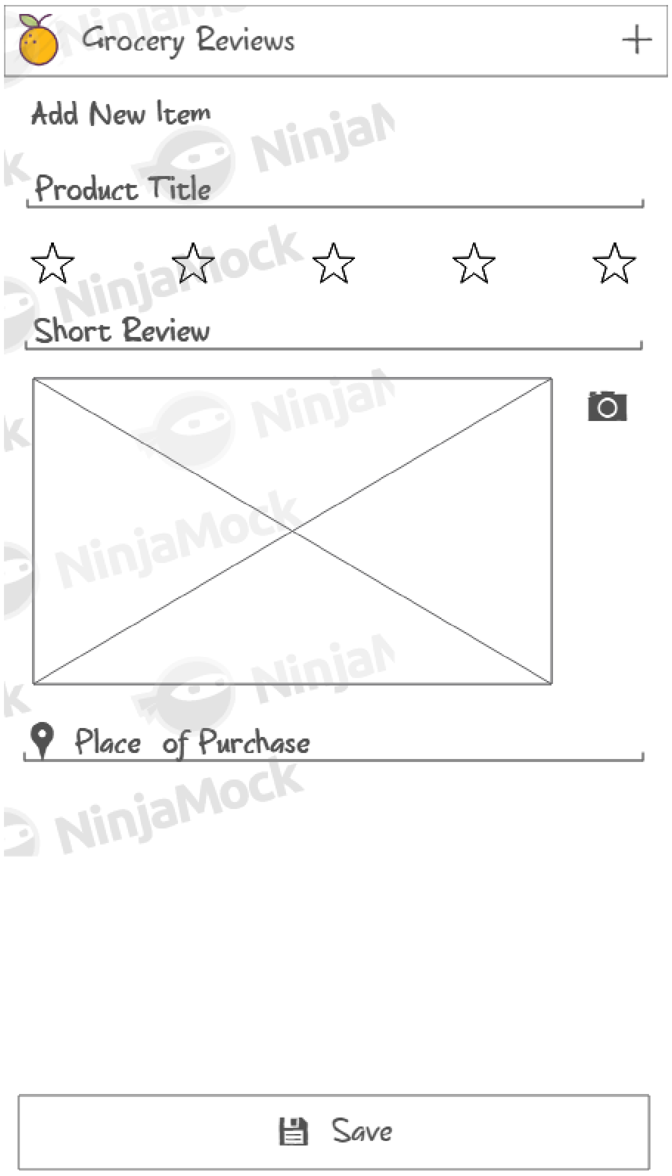
Screen 4 - New Item Form



New item form used to create a new entry to grocery rating system. Includes title, short review, star rating, picture and an option to add location where item was bought.

Screen 5 - Widget

Shopping List
Rye Bread "Black Night"
Yogurt
Sausages "Baconing"

Simple widget with checkbox items from current “Shopping list” from the application.

Key Considerations

How will your app handle data persistence?

All user data will be saved to Firebase Realtime Database.

Describe any edge or corner cases in the UX.

- Application should keep working offline and sync newly added data when connection becomes available
- Shopping list section of the application will contain auto-completing search list to quickly add rated items to the grocery list. Pressing “back” while search is active will hide the result list.
- Keeping proper fragment back stack will allow correctly navigate through the tab history using device’s back button.

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

- Firebase Database library for used for data persistence.
- Firebase Authentication library to ease user creation and authentication
- Picasso to load and process images if needed
- Google Places to search through surrounding stores
- Admob library for ads

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

- Google Places service will be used in “New Item” form to search and assign grocery store to an item
- Admob will be used to monetize the application and show ads in certain sections
- Firebase Database service will be used to store data
- Firebase Crash Reporting to track application stability and crashes

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

- Create new Firebase project
- Configure Firebase Realtime Database
- Setup Gradle dependencies for required libraries

Task 2: Data Model

Creating data classes to match Firebase Realtime Database structure.

- User
- FoodItem
- FoodCompany
- ItemRating
- ShoppingListItem

Task 3: Implement UI for Each Activity and Fragment

- MainActivity User Interface
    - CollapsingActionbar layout
    - TabLayout
    - FloatingActionButton to navigate to “New Item” activity
    - “My Ratings” fragment (RecyclerView with custom list items)
    - “All Items” fragment (grouped RecyclerView with custom items and search with autocomplete)
    - “Shopping List” fragment (RecyclerView with checkbox items and expandable details)
- NewItemActivity

    - Text inputs
    - An option to start camera intent or browse for the picture in the gallery
    - Image preview
    - Place search

Task 4: Connecting data to UI

- Implementing Firebase Realtime Database
- Querying and displaying items for different lists (My Ratings, All Items, search results, shopping list)
- AsyncTask will be used for short duration on-demand requests like product search and place look up

Task 5: Implementing other services

- Adding Admob ads to the user interface
- Connecting Google Place to “New Item” grocery store search field
- Implementing Firebase Crash Reporting to track any issues which may arise

Task 6: Application Widget

Creating a widget to show current shopping list on the home screen of the device.

Task 7: Tidying Up

- Ensuring all image resources are in proper dpi-targeted drawable folders
- Ensuring all strings are in the strings.xml file and not in layout files
- All layout dimensions and other values must be kept in dimens.xml files and be adjusted for different screen orientations and sizes
- Ensuring all colors are kept in colors.xml file
- Custom theme is created and inherits from Theme.AppCompat
- Layout elements get their styles from styles.xml

Task 8: Polish

- Smooth transitions between fragments and activities
- Shared element transitions
- Parallax scrolling
- Animations

Task 9: Accessibility

- Providing RTL-layout support
- Providing accessibility support (content descriptions, D-pad navigation)
- Localization support

Task 10: Testing

- Trying out the application on different Android devices and emulator setups
- Trying out all activities and fragments in different orientations
- Testing offline functionality
- Espresso automated UI tests

Task 11: Preparing application for release

- Creating required application icons
- Setting up paid and free flavors
- Cleaning up the code