GitHub Username: soracel

OpenShops CH

Description

Did you ever have the problem that you didn't know which shop is opened in rail station of the SBB? Then this app will help you. It will show you many details of the shops at your rail station, like opening hours or the means of payment which you can use there, you can even see where the shops are and how far away they are.

Intended User

The app can be used by everyone, but it's specially made for people who go to their workplace by train and also want to shop at the train stations without losing time.

Features

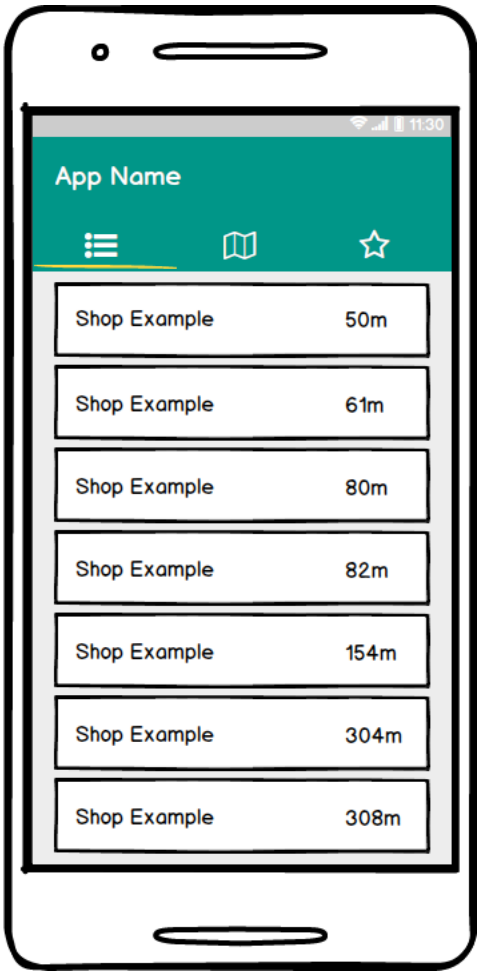
This are the main features of the app:

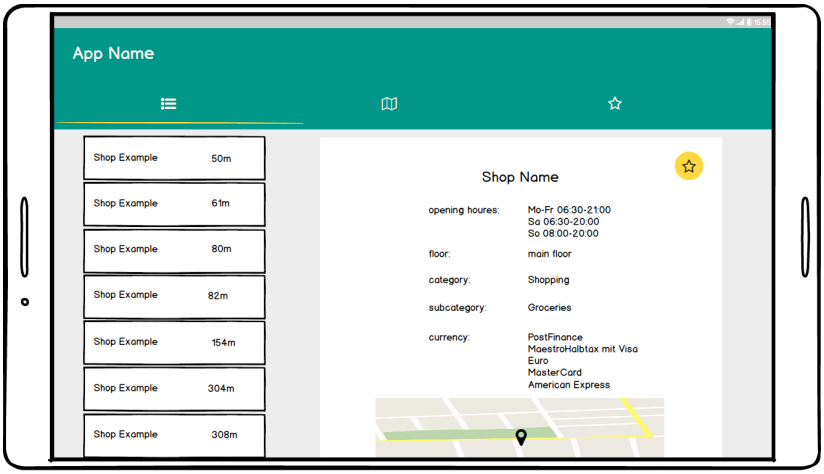
- A map which shows you the next shops at train stations.
- Choose your favorite shops and save them locally on your device.
- See details of the shops
- See distance from current position to shop

User Interface Mocks

All the Activities which will be implemented in the app.
Note: “App Name” will be replaced by “OpenShops CH”.

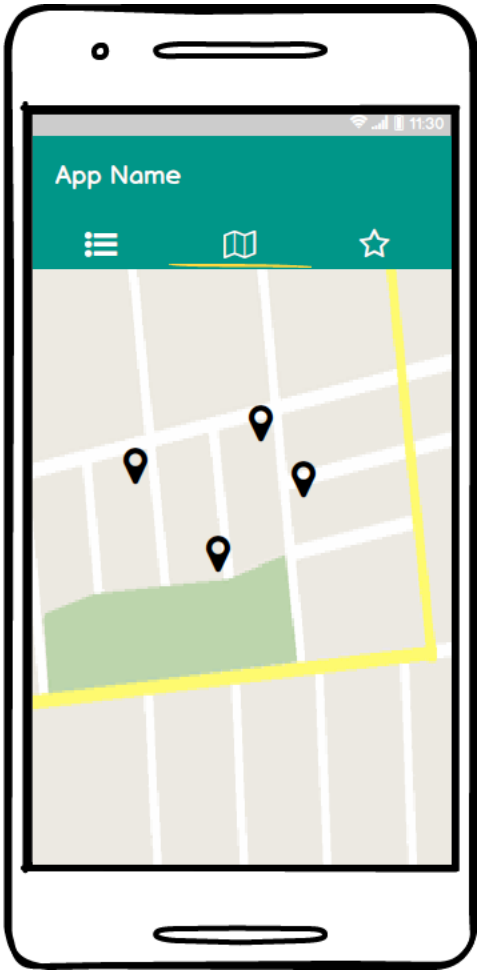
List Activty





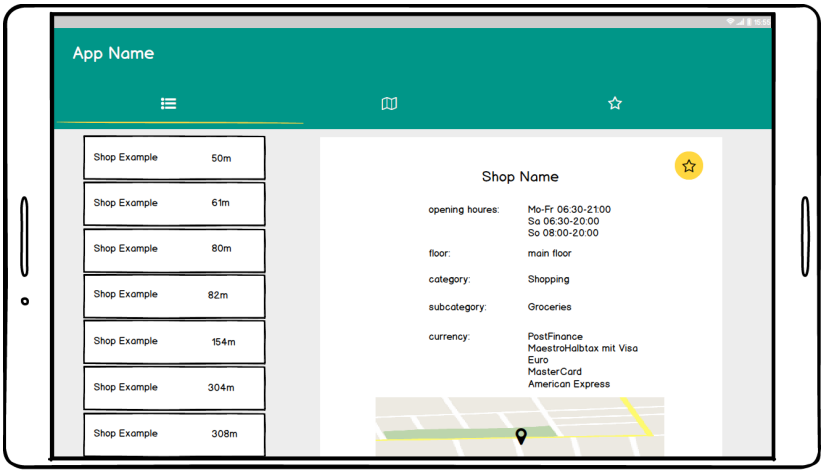
The user can see in this screen which shops exist at the train stations. The list is sorted by the distance the user has from the shops. By clicking on a list item, the app will open a new activity with the detail screen of the chosen shop.

Map Activity



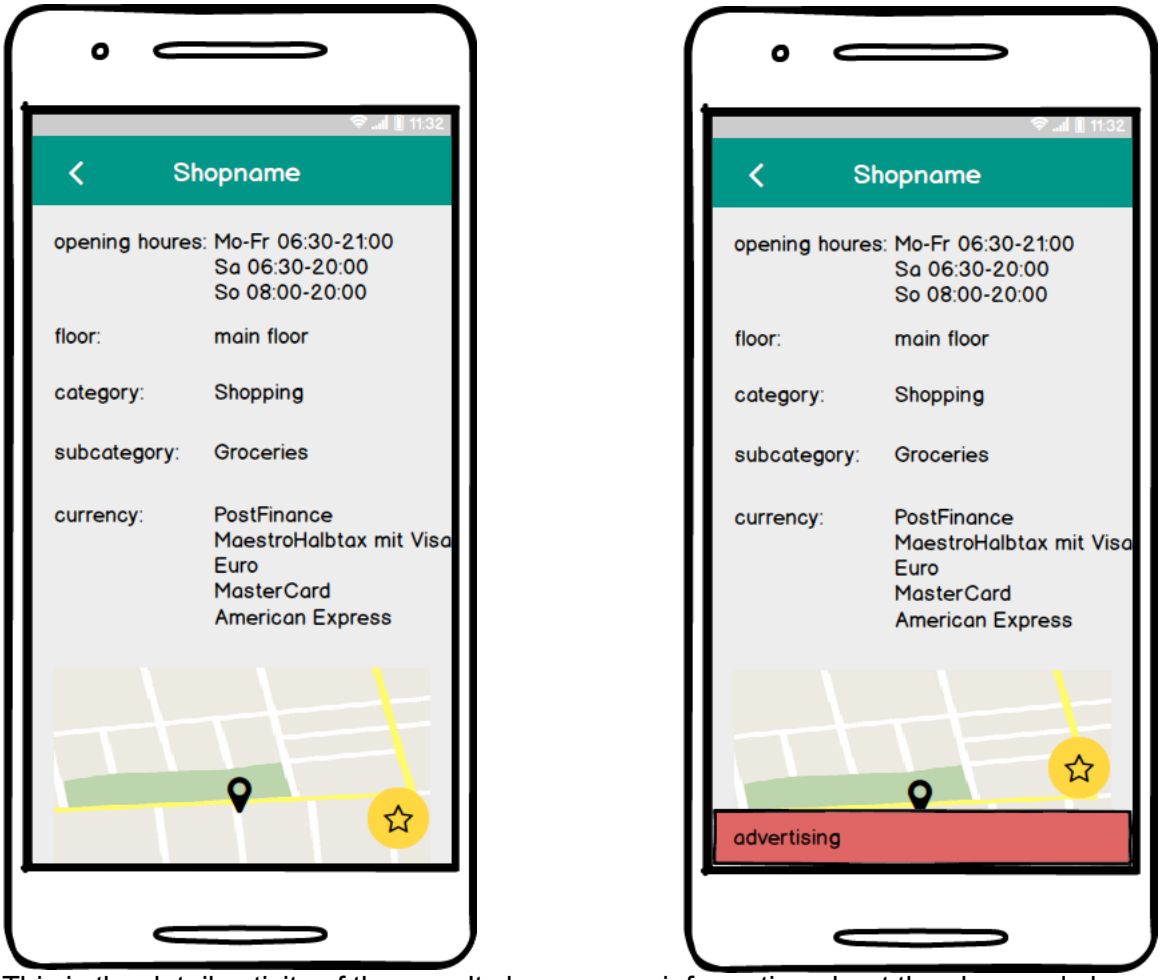
In this activity the user can see where it has shops near him and by clicking on a map marker, he can start the detail activity of the chosen shop.

Favorite List Activity



In this activity the user can see his favorite shops which he has marked in the detail activity. By clicking on a list item, the app will open a new activity with the detail screen of the chosen shop.

Detail Activity (Free & Paid version)



This is the detail activity of the app. It shows every information about the shop and shows the location on a map. By clicking the FAB-button the user will save or delete the data in the database and add or remove the shops to his favorites. This activity will have two version: one is the paid version (left) which hasn't any advertising and one is the free version (right) which will have an advertising banner at the bottom.

Widget

This is the Widget of the app. It shows the favorite shops, which are selected in the app and by clicking on them it will open the app with the detail screen of the shop.

Key Considerations

How will your app handle data persistence?

The app will get the data of the shops by an API from sbb.ch. For more information visit: https://data.sbb.ch/explore/dataset/offnungszeiten-shops/information/
To calculate the Distance between the user and the shops the app will use an API called "Distance Matrix API". For more information visit: https://developers.google.com/maps/documentation/distance-matrix/intro
The shops which will be marked as favorites are saved in a SqliteDatabase, which will be directly on the device of the user. A ContentProvider will be on top of the SqliteDatabase.

Describe any edge or corner cases in the UX.

By clicking on a list item in the favorite list activity or list activity, the app will start the detail activity of the chosen shop. To go back to the main activities the user can click in the detail activity on the arrow on top left side of the activtiy.

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

Butter knife to handle a simple way of data binding.

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

The App will use the google maps service for showing the map and the markers on it and also to calculate the distance between the user and the shop.
The App will also use the AdMob service to show advertising on the detail activity.

Next Steps: Required Tasks

In this section are all tasks for this project described.

Task 1: Project Setup

In this task I have to create an Android project and add it to the Github Repository. I will create as first activity a tabbed activity. Later I have to implement the Butterknife library, so that it's ready to use when the activities are created.

Task 2: Implement UI for Each Activity and Fragment

In the second task I have to Build the four activities:

- ListActivity (tablet and smartphone)
- FavoriteListActivity (tablet and smartphone)
- MapActivity
- DetailActivity (tablet and smartphone)

After that I have to add the two flavors. One for the paid version and one for the free version.

Task 3: Implement the functionality of ListActivity

First, I have to create the RecyclerView which will show all the data which the API gives to it. After that I have to get the data from the API, calculate the distance with the Google API and show the data in the RecyclerView. The will be loaded in the RecyclerView with a AsyncTask

Task 4: Implement the functionality of MapActivity

In this Task I have to implement the Google map, get the data like in the step before and show it with the coordinates on the Google map.

Task 5: Implement the Database

In this task I have to create the database and its queries (select one row / all rows, insert and delete).

Task 6: Implement the functionality of FavoriteListActivtiy

Same as in Task 3, just get the data from the database. If there is no internet connection, remove the distance to the shops. To get the data from the database to the view I have to implement a Loader.

Task 7: Implement the functionality DetailActivity

Create the functionality to get the data from the API and if the data is available in the database get it from there. Add the functionality to add and delete a shop from the favorites. Add advertising to the free version. To get the data from the database to the view I have to implement a Loader.
