Technical Documentation for Mobile application: Nearby restaurants, food and drinks

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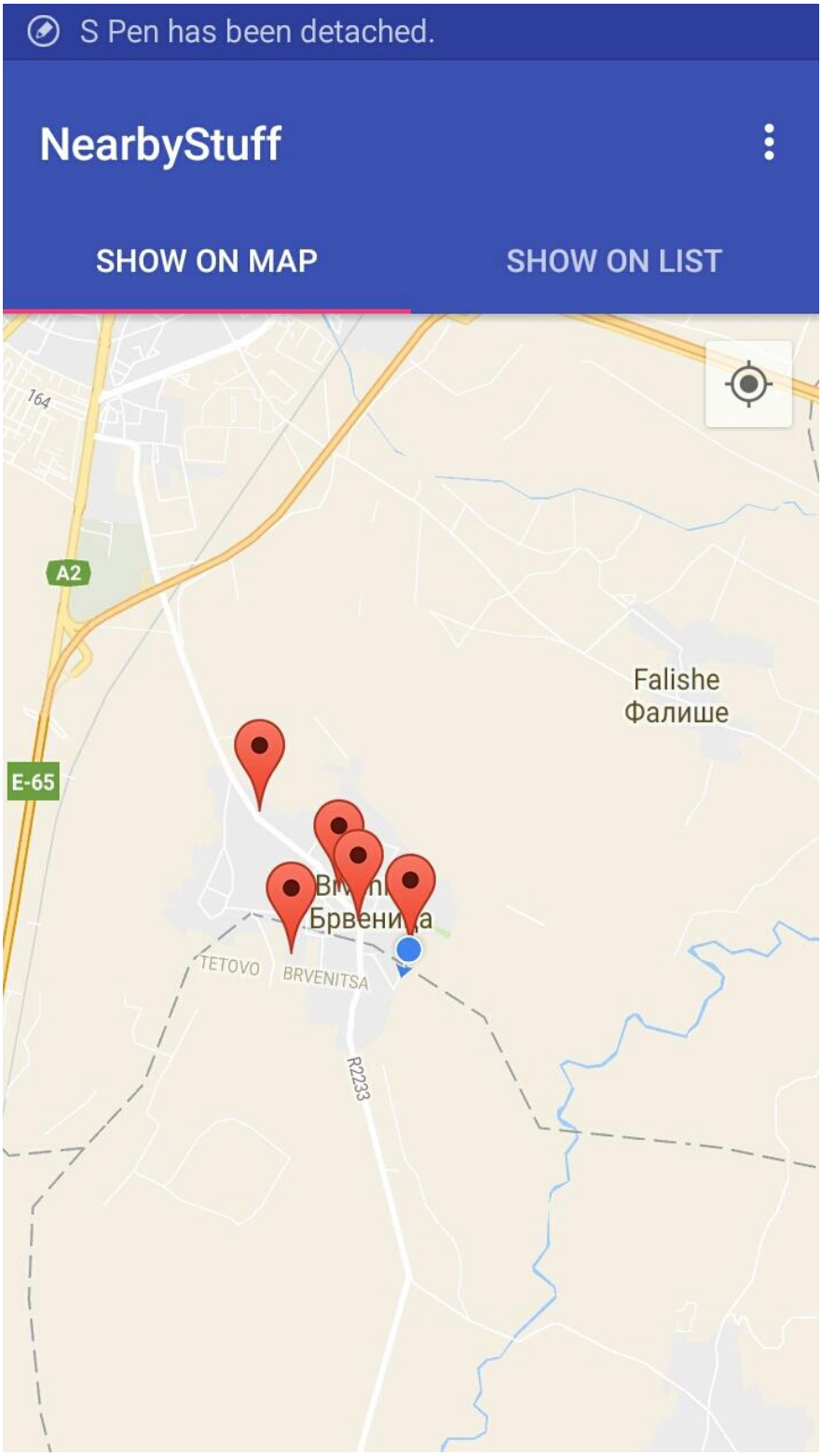
1. **Introduction.** The purpose of this application will be finding the nearest place where the user can consume food or drink. People often are residing in places they are not very familiar with, and the need for food or drink is one of the most basic needs. One easy way to find place to satisfy this need is using a mobile device. This will be possible with the application we are planning to develop. There are a lot of applications already on the market that are similar with our app. Example: NearMe Restaurants, Food and Drinks, Foursquare, Yelp, FieldTrip etc. The application will run on android platform. Android OS is present on largest portion of smartphone market.

   Android is an open and free mobile platform. This project uses a Google Android Mobile SDK and an android device to test app.In the Android emulator data is collected in the form of GPS coordinates and JSON response from google map service.

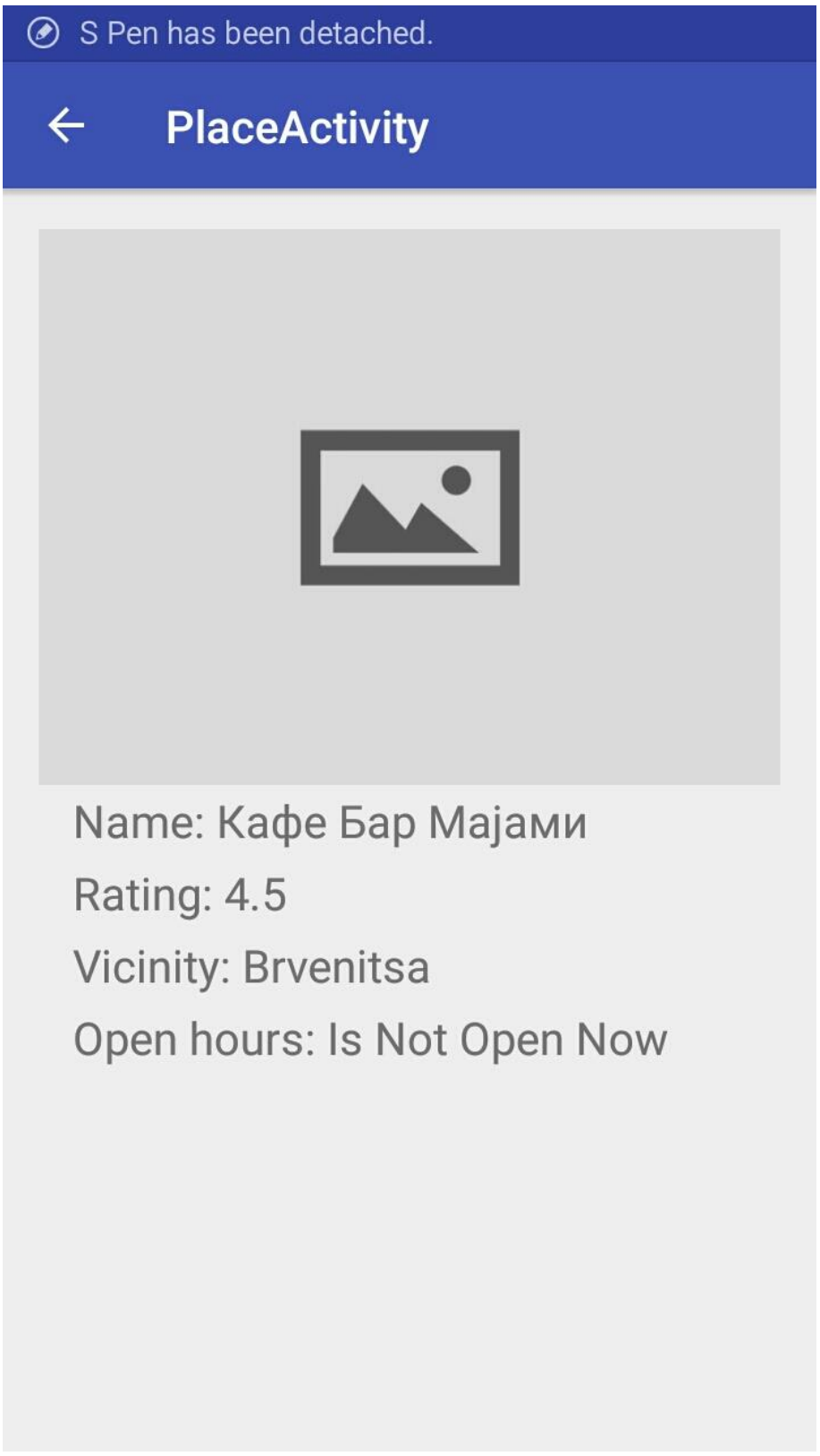
2. **Screens.** Upon opening of the application is screen with logo and button that leads to next activity.

After clicking “Search for places” a map screen is displayed. Each of found places is represented with pin on the map. Changing the settings about radius of search and types of places can be done with clicking menu and settings.

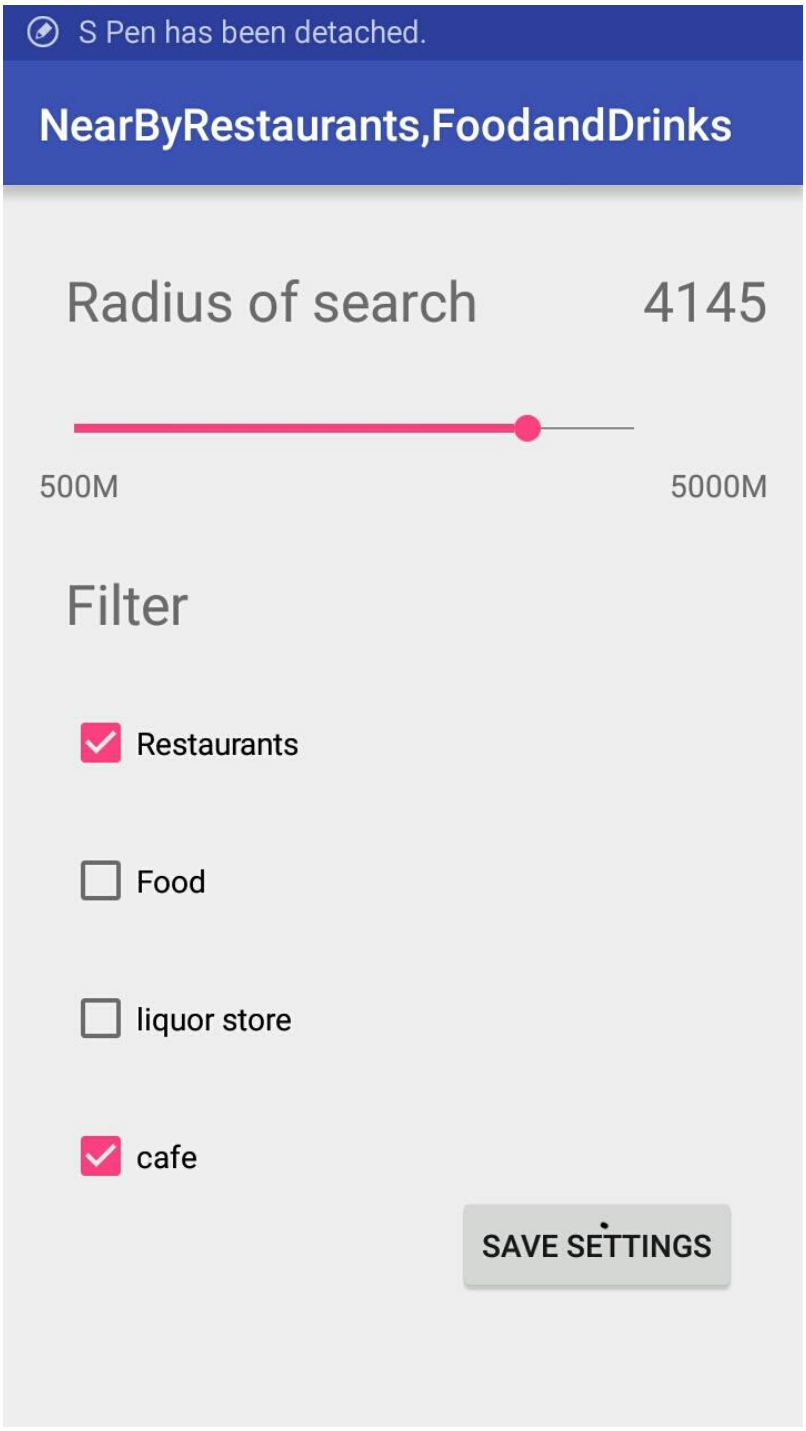


Clicking on show on list opens an activity with list of items. Each item represents place found with the search.

Clicking on each item of the list opens a new activity with Details about selected place.

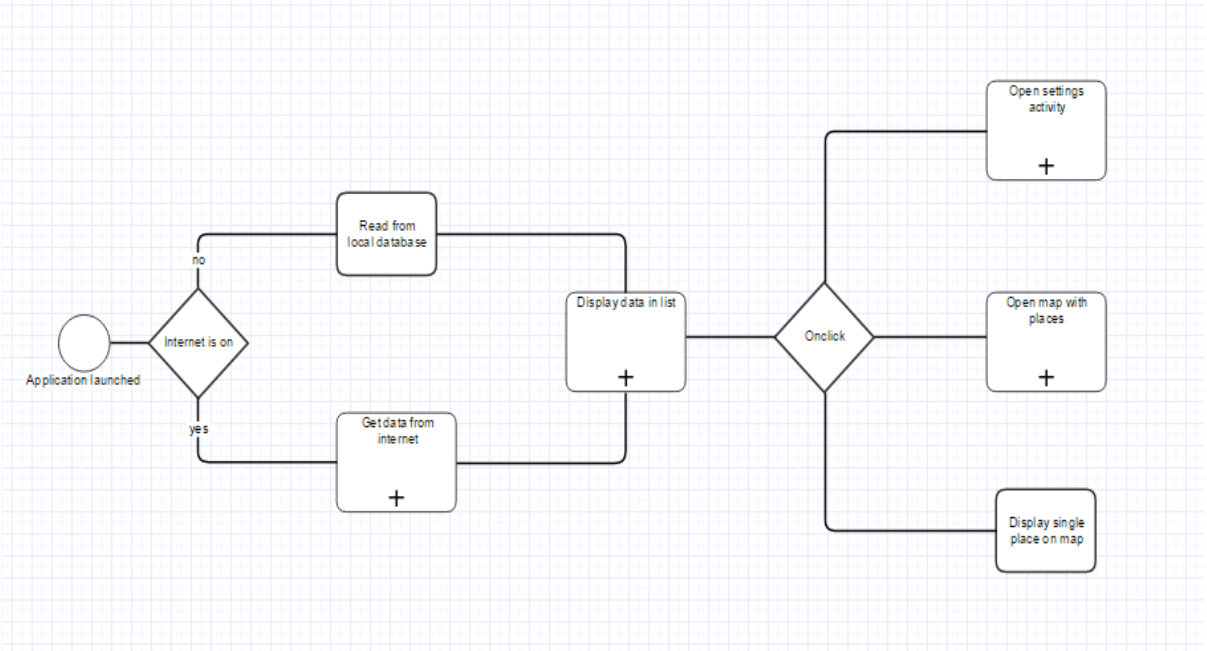


Clicking settings in the menu opens the following activity. On the slider user can adjust how far the application checks for places. In the filter the user can choose what kind of places are displayed on screen. “Save settings” button saves the settings and starts the map with new parameters chosen in the settings activity.



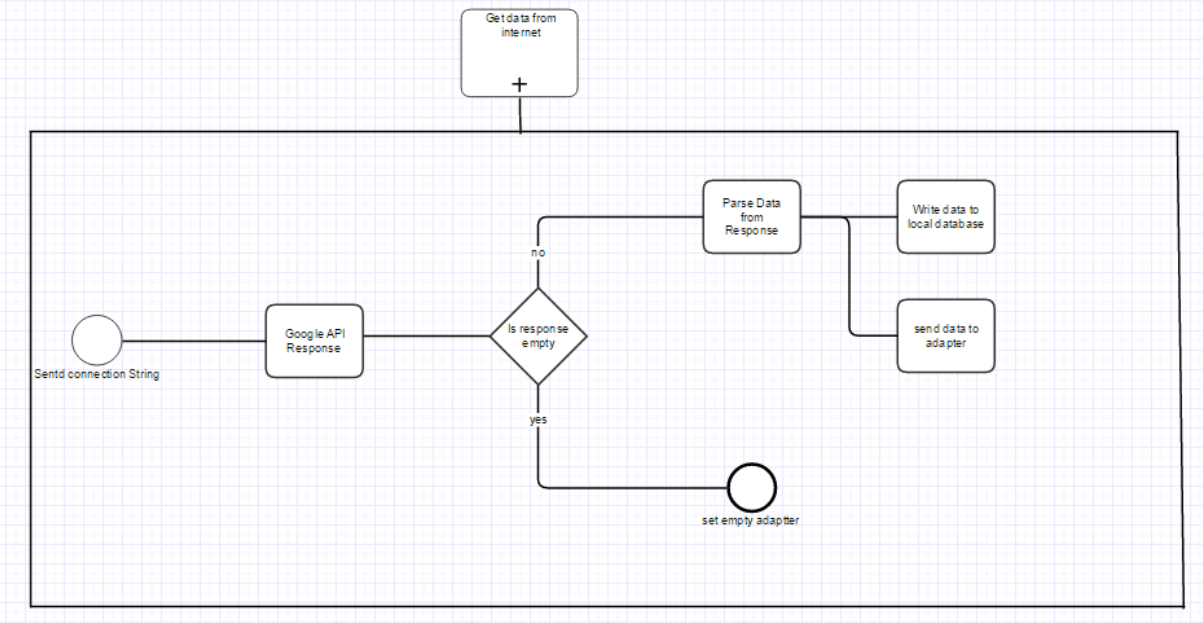
The information is retrieved from googles servers using the google maps API. The location of the user is provided by using either phones GPS service or Network location.

3. **Inner working.** The main functionality of the application is taking data from google servers and displaying them inside the application.



First the application will use either GPS (if is on) or Network location to figure out the precise positon of the user in form of GeoLocation.

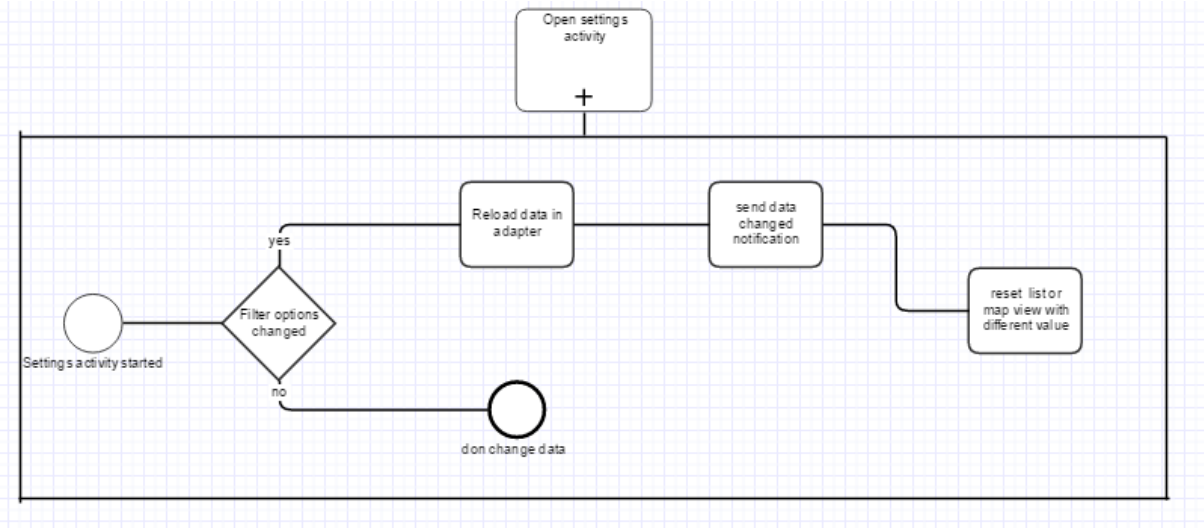
OnCreate in the main activity the application will connect to Google Places API using connection string, Google Places APIkey, the Geolocation retrieved earlear and filters that are checked in the Settings. Google places returns a JSON Data which will be parsed using GSON(JSON parser). Once the data is parsed it will be written in phone internal storage.



Then the data is displayed inside Recycler View. OnClick on ''Show on map''

Button the data is read from internal storage and it is displayed on map. Map will be available in fragment on main activity.

OnClick on item in the main list will open a new map activity and add pin on the new map with coordinates from the item in the list.



The Search functionality on all activities will filter the list or the map. (My first thoughts about the usage of the functionality were making an autocomplete call to Google API, but the number of call to the API is limited to 100 a day, knowing that autocomplete will make call every time a letter is typed it will make this functionality useless.)

4. **Market.** On the android market there are multiple similar applications. Example: NearMe Restaurants, Food and Drinks, Foursquare, Yelp, FieldTrip etc. They are similar in usage as well as inner working. Most of them are free without inner purchases. Some of them have ads hence that way they make money. Integrating ads in our application should not be very hard. In my opinion that would be the only way to make some money out of this app. The alternative would be charging for the app, but users wouldn't pay for app when there are alternative apps doing the same but are free.