

# Documentation

## “Local Vigilante”

### 1) Intro

Project theme: Aplicatie mobila pentru sesizarea autoritatilor cu privire la neregulile intalnite in oras.

My project helps notifying the authorities and raising the awareness about all the wrong things met in the cities of Romania on a daily basis by our local citizens.

My application will be a platform in which the citizens of the biggest cities of Romania will be able to submit forms with info about the problem they found.

### 2) Solution description

A citizen spots something wrong in his city. For example, a sewer cap has been stolen by the local gypsies and the open sewer was not properly signalized. Our vigilante for today, John Doe, spots the dangerous sewer and opens the “Local Vigilante” app on his Android smartphone. He logs in with his credentials, and then he clicks on Add Petition. A form opens. He starts filling out the Category of the problem noticed, the Description, the exact location, and then he snaps a photo of the dangerous sewer.

Just hours away, the local authorities came and fixed the problem. The local community is now thankful to mr. John Doe, and all other “Local Vigilante” users.

### 3) Implementation

The app opens up with a page in which you can sign in or you can continue to the Home Page as a Guest. After you fill in your credentials and click on Sign In, you will be redirected to the Home Page. If you choose to continue as a guest, you will be redirected to the same page, but your possibilities will be limited.

In the Sign In Activity, the user must put in his credentials, and he has the possibility to locally save them, by using a Check Box and thanks to Shared Preferences.

He can also choose to register/create new account. You must fill in the form with your personal information (Edit Text), date of birth (Date Picker), city (Spinner), gender (Radio Buttons), and you must accept the Terms and Conditions, and you can sign up to receive a weekly newsletter (Checkboxes).

If the user clicks on Forgot my password, he will be prompted to an Activity in which he must fill in his email address and click the Send button to reset his password. As I don't have an email server to use, the correct password will be printed in a Toast.

In the Home Page, we have 4 buttons: Add Petition, Public Petitions, My Petitions and My Profile. The Add Petition button will prompt you to an activity in which you will be able to fill in the form with the problem you found in the city. You must fill in a Title, a Description, and choose a location with the Place Picker. Subsequently, you can check the chosen location with a different button which opens up Google Maps and shows the place you have chosen (based on exact coordinates). You can also add a photo. I have implemented this feature using an Image Button which launches a Camera Intent, so users can also preview their photo before submitting the Petition.

In the Public Petitions, you can see all the petitions submitted, and not yet solved. In the My Petitions Activity, the petitions are filtered by my User Id, which is passed along with the Intents from activity to activity, so where ever the user is inside the app, his User Id is always known. So only the petitions submitted by the User will show up. I have used a List View with a Custom Array Adapter, along side with a XML layout for each petition in the List View.

In My Profile activity, the user can change his password, and there is also a button which exports .txt reports to the phone's storage. All the functionalities are based on a SQLite database. Firebase cloud database is also present but not fully implemented.

I personally think that making an Android app is very interesting, but Android Studio could be improved quite a bit.

#### **4) Conclusions**

In my opinion, the app has a lot of potential, but it still needs a lot of work for it to get into production. There must be developed an activity for displaying each petition, with the possibility of signing each and every one of them. In the Home activity there could also be a button which shows the petitions that you signed and you support. And also in the My Profile activity, the user could edit other details about himself, or even delete his account.

For the app to reach production and mass adoption, the Firebase Cloud Database must be fully implemented, and the app must have way better security, and servers behind it, supporting many aspects of the application.

#### **5) Bibliography**

<http://youtube.com>

<http://stackoverflow.com>

## 6) Anexes

