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1231E

Mobile Devices – Homework

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1. Overview

The purpose of the first assignment was to build a simple Log in application for mobile devices. The purpose of the second assignment was to enable the user to add a list of links and show he weather and for the third assignment, we should dynamically generate a layout using JSON.

The two major platforms on the market are Android and iOS.

Android is the world's most popular mobile platform, powers hundreds of millions of mobile devices in more than 190 countries around the world. It's the largest installed base of any mobile platform and growing fast — every day another million users power up their Android devices for the first time and start looking for apps, games, and other digital content. That's why we chose **Android SDK** to develop our application**.**

The application was built using the **Eclipse IDE**, with the **ADT plug-in** for **Android SDK**.

2. Specifications

a. The application will display a welcome page
b. The user will be able to log in or create an account
c. An authenticated user can modify the profile, with the data being saved in a database
d. An authenticated user can change the password and the e-mail address
e. An authenticated user can see the weather information, add some links which will be opened in the browser
f. An authenticated user can also answer some questions about his/her dog and after that the user is taken to a new screen where the answers will be displayed

3. Perquisites

a. A device with at least Android 4.0 (Ice Cream Sandwich)
b. The device must have an internet connection
c. The application is target for the Android 4.3, API Level 18
d. 1 MB of free space

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4. Documentation

a. Creating an account

Launch the application on your phone and from the welcome screen (Fig 1) choose **Sign Up**. A new activity will appear where you can enter your information (Fig 2). Press **Sign Up** again to create the account. If everything was right, the application will open the **Log In** activity (Fig 3).

(Fig 1)

(Fig 2)


(Fig 3)

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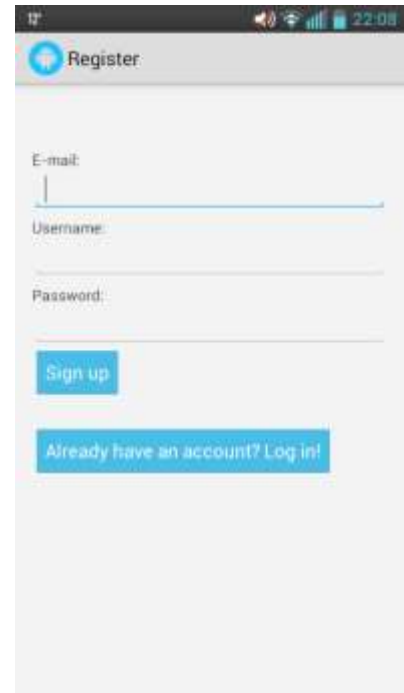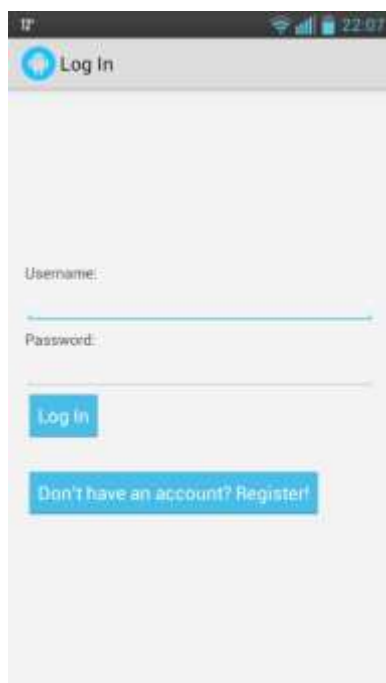
b. Log in

If you already have an account, fill in the username and the password in the **Log In** activity (Fig 3).

c. Manage profile

After successfully logging into the application you will be redirected to your **Homepage** (Fig 4). If you have a new account, the links list will be empty. You can complete your profile by adding a photo and some links which you would like to visit. You can also change your e-mail address if you tap on it. Then, hit the **Save Profile** button at the end in order to save your data. **Caution:** The updates will not be saved after you close the application without pressing **Save Profile** button.
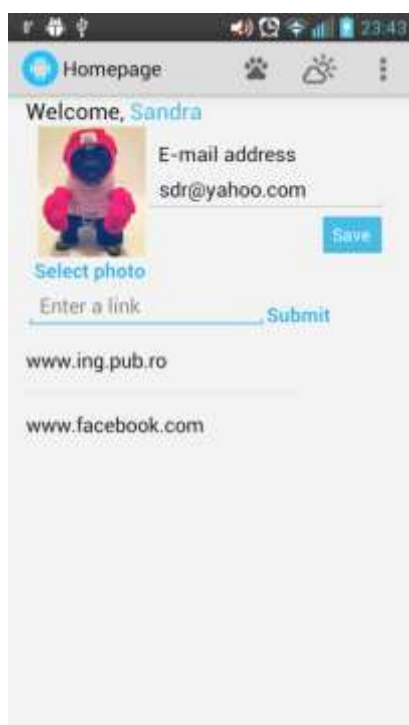

(Fig 4)   (Fig 5)

In order to change your password, tap the **Overflow** button in the Action Bar. A menu will appear, as in Fig 5. Choose **Change Password** and then introduce your old password and your new password (Fig 6) and hit OK. It is not required to hit **Save Profile** after this operation**.** In order to change your e-mail address, tap the e-mail field, write your new e-mail and tap the Save Button.
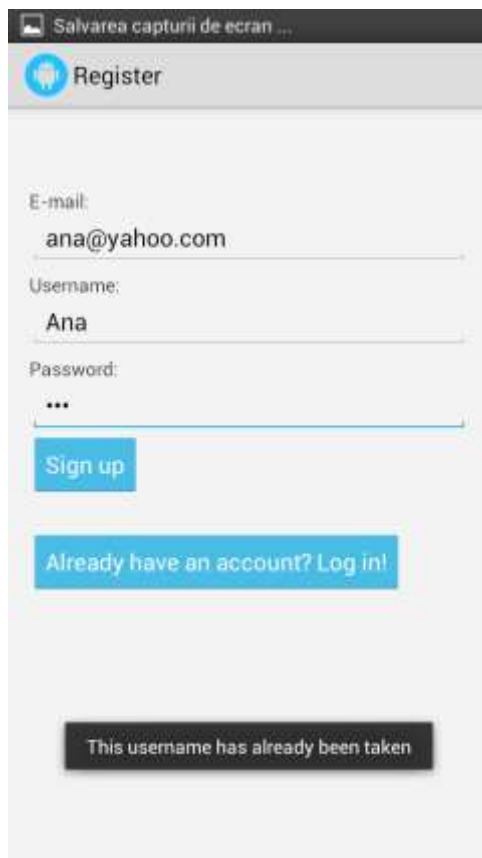
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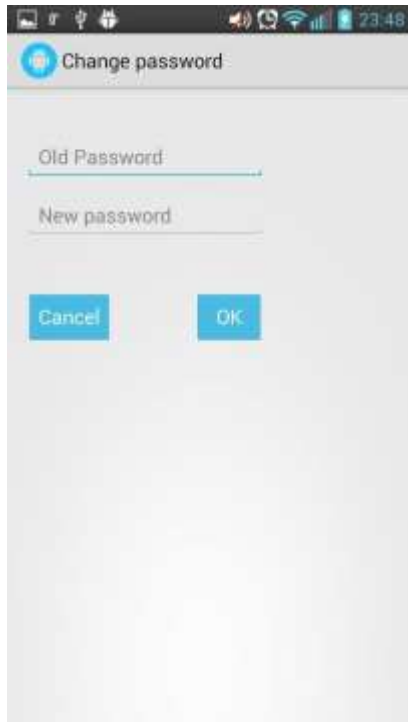
(Fig 6)

d. Show weather

By tapping the *cloud and sun* icon in the Action Bar, the weather is displayed (fig 11) for the current location of the user. It has a simple and minimalist user interface, showing the user exactly what they need to know about the current weather conditions. The user shouldn't have to specify the name of the city every time they want to use the application. The application will remember the last city the user was interested in. Moreover, we use the sunrise and sunset times to display the sun or the moon, depending on the current time of the day and only if the weather is clear. Also there are icons which represent thunderstorms, drizzles and signify rain. The user also has the option of changing the city.

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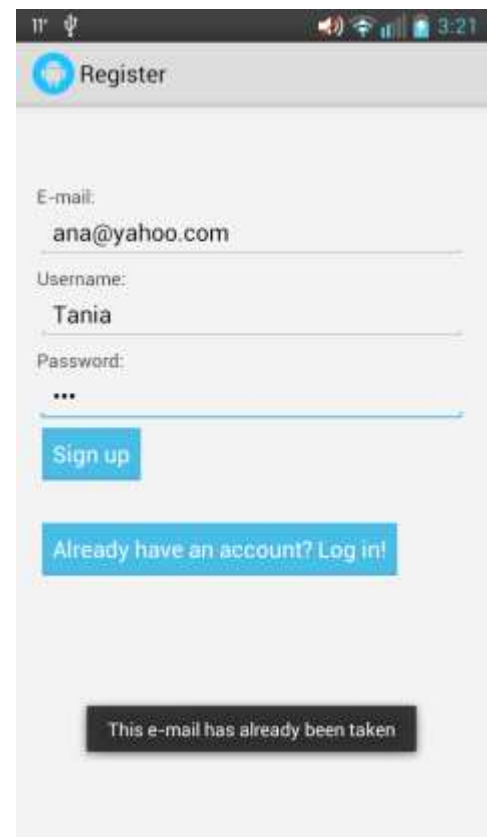Sarb Anamaria Loredana
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5. Tests

a. Test 1 – Sign up

In order to register, the user is asked to complete the e-mail, username and password fields. You are not able to register with empty e-mail, username or password fields. The database is checked before, such that there are not identical usernames. If there is another account with the same username, the account won't be created and a message will be prompted (Fig 7). Also, if there is another account with the same e-mail address, the account won't be created and a message will be prompted (Fig 8).

(Fig 7)

(Fig 8)

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b. Test 2 – Log in

If you already have an account, you can log in. But if the password or username field is empty, a message will be displayed.

Moreover, if the username or the password doesn't match any recording in the database, then a message like in Fig 9 will be displayed.
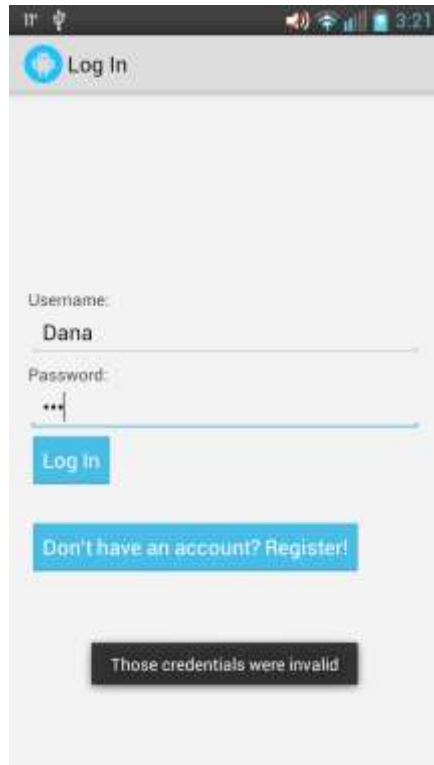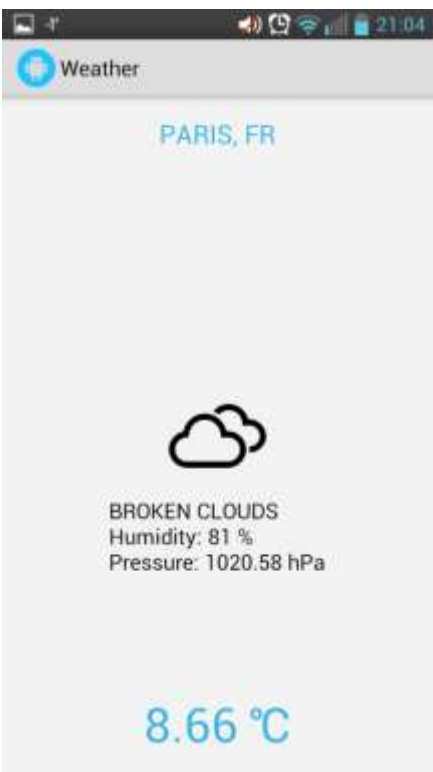

(Fig 9)

c. Test 3 - Profile

Each user can insert into their Profile/Homepage a profile picture and add some links, which can be opened in the browser (Fig 10). The user is allowed to change the old password with a new one and the e-mail address, then save the changes by hitting the **Save Profile** button. Another icon placed on the action bar manages My Pet activity, in which we generate a layout dynamically based on a questionnaire (Fig. 12) that the user is required to complete. He has to answer questions like: the breed of his/her dog, the dog's

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name, age and sex. This layout is generated after pressing the Done button. Depending on the chosen breed a corresponding image will appear in an ImageView and the rest of the information will be displayed in two TextBoxes (Fig. 13).

(Fig 10)

(Fig 11)

(Fig. 12)

(Fig. 13)