NFR----screen rotation

In this requirement, we implement it by:

1. Creating a land layout directory. In this directory, we add land layouts corresponding to layout of portrait.
2. Modify the detailed xml file, for example, change the relationship and distance of two adjacent buttons

Here are comparisons before and after the screen rotation implementation:

Activity\_main.xml (portrait):



Activity\_main.xml (land before):



Activity\_main.xml (land after):



activity\_login.xml (portrait)



activity\_login.xml (land before)



activity\_login.xml (land after)



activity\_newAccount.xml (portrait)



activity\_newAccount.xml (land)



activity\_footprint\_map.xml (portrait)



activity\_footprint\_map.xml (portrait)



and we disable the new\_footprint.xml (land) in order to get a better input environment:



Unit testing using the Android JUnit framework:

In this part, I create ActivityTest.class under androidTest directory. In order to use android test automation framework, I add Robotium.jar into the build path. Currectly I use the newest version 5.2.1.

I let the Unit test begin by the main.class.

Let solo = new Solo(getInstrumentation(),getActivity());

We test the three most import part of out application:

1. Testing wrong username and password when login
2. Testing footprints related activity after logging in
3. Testing new user.

In each test, the solo will call assertCurrentActivity() to check if the test program goes into the correct activity. And will fill in text and click the button automatically as I wish.