

1. **For existing native mobile autotest try to use another locator (xpath, classname, ?). Define these locators using Appium Inspector. Are there any difference with id version?**

Yes, there is a small difference in a way of how this element would be found. Our code changes from:

```
By addButton = By.id(app_package_name + "addContactButton");
```

to:

```
By addBtnByXpath = By.xpath("//android.widget.Button[@content-desc=\"Add Contact\"]");
```

or if we use classname, it would be like:

```
By addBtnByClassName = By.className("android.widget.Button");
```

The last form of the record is much shorter, no other advantages I've found.

2. **Modify existing tests to run on a real device. What should be changed?**

In order to run tests on a real device we are to change value of device name from **"emulator-5554"** to real device name while setting capabilities. In my case it was **"CB5A1R9R0P"**.

3. **Connect a real device to Appium (describe required actions) and run tests. Are there any difference with run on emulator?**

To run tests on a real device I had to create new Capability Set in Appium, with **"deviceName": "CB5A1R9R0P"**. No other changes made. The difference was in the duration of the tests. On real device it took 60 seconds, while on emulator tests took less than 40 seconds. No other differences I've noticed.

4. **What should be improved/changed in existing test code? Why, for what?**

In my opinion there should be done different changes in order to make future support and project development easier.

First of all, no hardcoded strings should be in test classes. They are to be in a special class Constants. Properties like platform, device name, URL's and others have to be in *.properties file in resources folder. No `Thread.sleep(5000);` commands are allowed. Java Code Conventions must be respected.