

ITIS/ITCS 4180/5180 Mobile Application Development

Lecture Assignment 1

In this assignment you will build an Android application. You will get familiar with common Android components and how to interact with them. You will build a form that accepts user input, verify the various input values, and show appropriate error messages when needed. This assignment consists of 2 parts:

Part 1 (50 Points): Building the Form (MainActivity)

You will build a Profile Form application similar to the one shown in the Figure 1(a) to the right. You will be dealing with the layout files, and strings.xml files to create the form. The layout XML file can be modified through the raw xml, or through the GUI tools provided within eclipse. To build the form, you will perform the following tasks:

1. Use TextView components for the Username, Password, Verify Password, Email and Device as seen in the Figure. The actual string values for these labels must be read from the strings.xml file provided.
2. Use EditText components for the Username, Password, Verify Password, and Email Input fields. Each of the inputs will have a hint (placeholder) value read from the strings.xml file. For example, the Username input has a hint value equal to Username.
3. For the Device selections, use a RadioGroup with three RadioButton components. By default, the RadioButtons must be unselected. The labels for each radio button must be read from the strings.xml file programmatically (Do this in the onCreate() method).
4. Add a CheckBox with the label Accept Agreement (from strings.xml), which by default should be unchecked.
5. Finally, you will add 3 buttons, a Reset, Submit, and Exit App button. The text for these buttons must also be read from the strings.xml file.
 - a. The Reset button should have a click event listener that will reset all form fields (Clear all input fields, and remove all selections for radio buttons check boxes).
 - b. Clicking an enabled Submit button will verify all the provided input values and selections as seen in the following part (Part 2).
 - c. The Exit App button will exit the application.

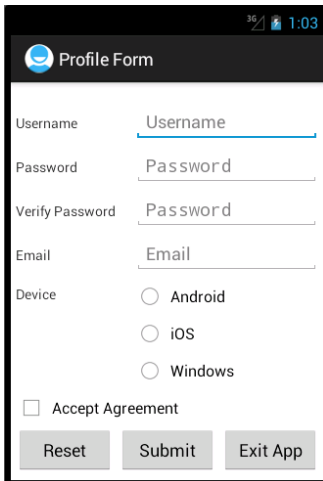
Part 2 (50 Points): Input Verification (MainActivity)

Once you build your Profile Form, users are able to input values and make various selections. It is now your responsibility to verify the inputs and selections once the user clicks the Submit button. When verification fails, you will be asked to show a proper error message to the user. Use the error message values provided in the strings.xml file. The form verification should be handled as follows:

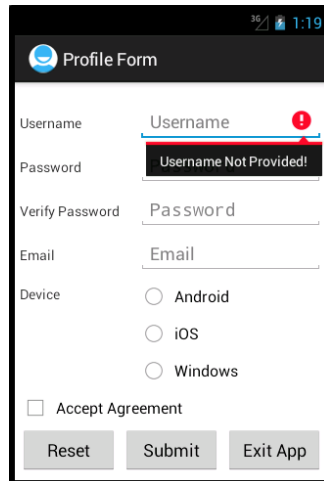
1. If any of the Username, Password, or Email input fields are empty show the corresponding error message using the setError() method. For example, if the Username field is empty, you will show "Username Not Provided!" (read from the username_error_message string in strings.xml).
2. If the Password and the Verify Password input fields are not equal, show the provided error message using the setError() method.
3. If the email entered by the user is invalid show the provided message using the

setError() method. To verify the email, use the Java Pattern and Matcher classes.

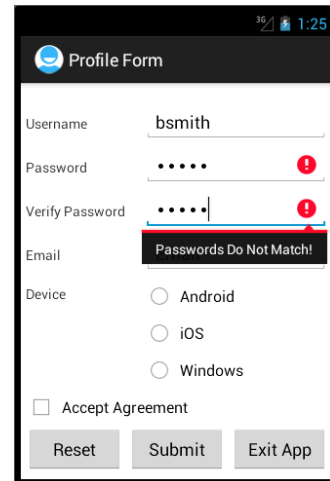
4. If no device is selected, show the provided error message in a Toast.
5. Users must check the Accept Agreement checkbox. If it is not checked then show a Toast message with the provided error message.
6. When all of the above cases are verified and all inputs are correctly inputted, upon clicking the submit button create a Toast indicating that the data has been correctly entered.



(a) App Start Screen



(b) Error Message



(c) Error Message

Figure 1, App Screenshots