

Assignment 2 Report

The idea for solving the first part (portrait mode) of the assignment was to create three separate activities, one for the actual list of contacts (MainActivity), one for the new contact flow (ContactDetails), and one for the contact profile (ContactProfile), each with their own unique layout files. In addition to the activity layout files, I also needed a specific layout for the contact item in a ListView, which consisted of a TextView and a CheckBox.

For the Contacts list, it was fairly simple as it consists of a ListView and two Buttons (Add and Delete), which I organized out in a LinearLayout. The Add button instantiates an Intent for the Contact Details activity, while the Delete button has an event listener that waits until checkboxes are selected and then deletes the selected contacts.

The Contact Details activity was also fairly straightforward as I had to use the knowledge I gained from assignment 1 to create multiple inputs, display a ListView of relationships, and display a button to Add the new contact. Because I thought that the whole relationships concept was going to be a little bit more challenging, I decided to include the relationships ListView later on in the project. The main function of the Contact Details activity is the Add button, which also instantiates an Intent and passes the new contact object back to the MainActivity as a Parcelable object and sets the result code to RESULT_OK, which is interpreted in the MainActivity to being the flow for adding the relationships. Also in the Contact Details activity, we had to implement the RelationshipAdapter, which holds the logic for reordering the relationship list to have the selected checkboxes on top.

Finally, the Contact Profile activity just contains information about the contact, which was easy to do as its somewhat similar to the Contact Details page without all the logic. Instead, the focus here was to implement a RelationshipAdapter for the relationships ListView to present the related contacts and when a user taps on a contact, to visit their profile.

For the landscape portion of the assignment, I created three separate fragments for the contacts list, the new contact screen, and the contact profile. For each fragment, I had to create three different layout files so that the display matched the requirements. I also made use of the ScrollView to make sure the ListViews within the different fragments are scrollable. Although the majority of logic was written in the classes for the activities, I still had to create fragment interaction listeners to make use of the event handlers in MainActivity.

In order to pass data between activities, I used Intents and Parcelable objects. For persisting data, I used SharedPreferences and to specifically read and write data to the default SharedPreferences, I made use of an external library made by google called Gson, which converted my ArrayList of contacts to a json string so it could be stored in the preferences. I created custom adapters for the display of contacts in a ListView, relationships, and contact profiles.

I completed both parts of the assignment for a total maximum score of 100.