## CS4301 Mobile App Development

## Spring 2019 Assignment 3

**Project Phase 1**

This is the start of a four-part project in which you will create a simple contact manager. As we learn new concepts and aspects of Android programming, we’ll add to the application.

The first part is screen layout and simple I/O functionality. Be sure to write this part as modules (preferably separate classes, in separate files) using the three-layer architecture so you can easily replace modules as necessary.

You will have two Activities. In the first will be a scrolling list with the names, last name first, of your contacts. Your Action Bar should have a button for adding a new contact.

The second Activity shows contact detail, which you should reach by tapping on a contact. You should have the following fields:

1. First Name
2. Last Name
3. Phone number
4. Birth date (may be left blank on entry)
5. Date of first contact. Should default to the current date but may be changed.

You may have a label to the left of or above each field, or you may put the name of the field in it as ghost text, which will be replaced when you start typing. We will discuss other ways of doing this, as well.

The two date fields must be implemented using a **fragment** that brings up a calendar from which you can choose a date. Specifically, you should have two fragments. One merely shows the date. However, when you click on it, it brings up the calendar and a date field into which you can enter data. Once you dismiss that fragment, your program should load the first one.

There should be two buttons on this screen: Save and Delete. You can have these as separate buttons or put them on the Action Bar.

If you select a contact and modify it, its fields should come up on the second screen. Entering new data and saving modifies the contact. Pressing the *back* button returns to the list without saving changes. Any and all fields may be modified.

Pressing the delete button once a contact is visible in this screen removes it from the list.

After you modify or delete a contact, return to the screen containing the list.

For now, your “database” should be a simple text file. Each contact consists of a line with the fields separated by **tab** characters. When you modify or delete anything, you must also rewrite this text file.

**This can be a group assignment.** You may work alone or with one other person. Once you choose a partner, you must stay with that person through all four phases of this project. Only one person in a group should submit the assignment, but make sure you put the other person’s name in the upload information. Both people will get the same grade unless both agree one should get a different grade. In addition, if you are working with a partner, the names of both people must be in the header comments in each source file and the name of the person who wrote each function must be in the header comments for that function. You may be asked to demonstrate the program’s operation to the grader.

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| **Grading criteria** | |
| Program works according to above specification. | 50% |
| Program is structured well, using three-layer architecture and object-oriented design. | 40% |
| Program comments and naming conventions, including names of authors in functions. | 10% |

You can lose significant points for the following:

Not using fragments: -30

Not having file I/O as a separate class: -20

Using different Activities for adding and modifying; these should both be available from the second Activity. -20