Assignment 1a

COMP 2526 Object-Oriented Programming with Java

Due on Tuesday January 17th at 11:59 PM

1   Purpose

Welcome to COMP 2526! For your first assignment you will refresh the basic programming and Java skills you learned last term. You will explore the WHY and the HOW in Object Oriented Programming in future, iterative enhancements of assignment 1a.

2   Description

For your first assignment, you will begin with the provided `Main.java` source file and add the necessary features to complete a simple address book program.

3   Requirements

The program must satisfy the following requirements:

1. Add a person to a "database" (an array)
2. Search the database for a person given the name
3. Delete a person in the database given the name
4. Display all the people in the database on the console using the following format:

```
Name                Phone Number
Bob                 451-1234
Sue                 723-5382
```

The `Main.java` source file is a starting point. Some of the methods have been implemented or partially implemented, and the class has not been commented yet. The class contains these methods:

1. `displayMenu()` displays the menu
2. `getChoice()` gets the user's choice
3. `remove()` deletes a person from the database
4. some UI methods:

    (a) `addPerson()` gets a new person's data (name and phone number) and calls the add() method
    (b) `deletePerson()` gets the name of the person to delete and calls the remove() method
    (c) `findPerson()` gets the name of the person to find and calls the search() method
    (d) `run()` runs the UI methods

5. a `main()` method to test the features.

You must implement the following 3 methods:

1. `public int search(final String name)` accepts the name of the person to find and returns the position of that entry in the address book (database) OR returns -1 if not found. Note this method is used by the `remove()` method.

2. `public void add(final String name)` accepts a new person's data (name and phone number) and adds the new person to the address book.
3. `public void displayAll()` displays all the records in the address book (database) using the described format. Use a spacing of 20 chars for the name and 15 for the phone number and left justify them both.

You must also edit the following 1 method:

1. `public void findPerson()` requires code to display the database search result (a single record) using the same format as displayAll().

The starter class `Main.java` was written to work with a simple String object so you are encouraged to make adjustments to the given code. You may consider implementing a separate class to store the Person data, for example.

This isn't a difficult change to make, but wouldn't it have been better if the program had been well thought out first? Assignment 1b will be just that. Assignment 1c will be a final demonstration of how it is easier to add features to a well thought out class.

Some additional notes:

1. Validate your code with Checkstyle. This term we will continue to use the Eclipse Checkstyle plugin. Instead of the COMP 1510 xml file, we will use the Google check configuration that is installed with the Checkstyle plugin (with one minor change). Read the document COMP 2526 Code Style Guidelines (on ShareOut in folder COMP/2526/Assignments /A1a) to learn how to correctly modify and use the Google check configuration. You can learn more about Google's code style here: `https://google.github.io/styleguide/javaguide.html`.
2. For this and future assignments we will provide you with an Eclipse project that includes unit tests. Unit tests allow us to automate testing our code for correctness. We will talk about unit tests in lab.

4 Marking Guidelines

Submit your assignment on ShareOut at or before 11:59 PM on Tuesday January 17 2017. Late assignments will not be accepted. Grades will be assigned as follows:

25%	Search method
25%	Add method
20%	Display method
10%	findPerson() display modification
20%	Comments and style (remember to use the Checkstyle plugin!)

Good luck, and have fun!