COMP 1451 Lab 2-b (10 points)

Take-home lab

Chapter 5 of your textbook introduces several new concepts including maps. For this lab you will work with the **HashMap** collection class in the Java Class Library and some of the methods of the **String** class.

Create a project to store your friends' email addresses. Create a class called EmailInfo. This class has a single instance variable, an object of type HashMap. The hash map will store your friends' names and email addresses, both String objects. Assume for now that each friend has only one email address and that you don't have friends with identical names. Declare the field like this:

```
private HashMap<String, String> addressBook;
```

The constructor must initialize the field by creating a new HashMap object.

You will provide these methods:

```
/** @return the properly-formatted name. /*
private String formatName(String name)

/** Add a friend to the address book. The friend's name must be
formatted before being stored. */

public void addFriend(String name, String email)

/** Remove a friend from the address book. The name passed in
can be in upper case, lower case, or mixed. The friend and
his/her email will be removed from the address book.*/

public void removeFriend(String name)

/** Return an email address based on friend's name. The name
passed in can be in upper case, lower case, or mixed. The
friend's email address will be returned.*/

public String getAddress(String name)

/** Find and display friends based on their email address. There
might be more than one friend using the same email. */
public void findFriends(String email)

/**  List all friends and their email addresses */

public void listAll()
```

The take-home lab is due the night before the next class. Upload it to the appropriate D2L dropbox. A suggested solution will be discussed in class and labs not already in the dropbox will not receive any points.