Java Programming Assignment 2

## Goals

To learn how to create work with Java Collections.

## Description

You want to keep a list of all the books in your personal library. To do this, you will write a program which will allow you to enter the information on each book. After the information is entered, you will be able to display it in various formats and to search for books by a specific author.

The information will be added like this:

Add: The Caterbury Tales by: Geoffrey Chaucer  
Add: The Hitchhiker’s Guide to the Galaxy by: Douglas Adams

To get a list of all books, sorted alphabetically by author you would type

List:

To find all books by an author (last name only) you would type:

Find: Adams

You can use the word “end” to terminate the program. To sort the books alphabetically by author, you will need to get all the keys from the HashMap and then sort them before using them to retrieve the books associated with each author.

You should start by creating a Book class to hold the author’s full name and the title of each book. These can then be stored in a HashMap and quickly retrieved by the authors surname.

HINT: you can do rapid lookups by using a HashMap<String, ArrayList<Book>> where the author’s last name is the key and the value is an ArrayList of the books the author wrote. When a new author is first added, you will create an empty array list as their value and then add the new book title to the array list for the author. Using an array list for the value in the HashMap allows the same author to have written several books.

## Deliverables

Submit a zip file of the entire NetBeans project.