Lab 2 Collections

Exercise 1

Create a text file (names.txt) of names, with one name per line.

A sample is shown below:

Paul Brady

Dina Smith

Ned Walsh

Paul Brady

Ned Walsh

Ben Brady

There are duplicate names in the file.

We would like to generate an invitation list but don’t want to send multiple invitations to the same person.

Write a program that eliminates the duplicate names by using a HashSet.

Use the Scanner and FileInputStream classes to read each name from the file and add it to the HashSet.

Output all names in the HashSet to generate the invitation list without duplicates using an iterator.

Try outputting the names using an iterator

Exercise 2

Write a program that uses a HashMap to compute a histogram of positive numbers entered by the user. The HashMap’s key should be the number that is entered, and the value should be a counter of the number of times the key has been entered so far. Use -1 as a sentinel value to signal the end of user input.

For example, if the user inputs:

5

12

3

5

5

3

21

-1

then the program should output the following (not necessarily in this order):

The number 3 occurs 2 times.

The number 5 occurs 3 times.

The number 12 occurs 1 times.

The number 21 occurs 1 times.

Use a do while loop for keyboard input

Write the code to print the hash map in a static method which takes a parameter of type HashMap. Use an iterator.