CMPS 12B
Introduction to Data Structures
Lab Assignment 7

Your goal in this project will be to translate the Binary Search Tree (BST) based Dictionary in C, posted on the webpage, into Java. The files

```
DictionaryInterface.java
DuplicateKeyException.java
KeyNotFoundException.java
DictionaryClient.java
```

are provided in the examples section of the webpage, and should be submitted unchanged with this project. The file `model-out` contains the correct output of the program `DictionaryClient.java`. You are to write the implementation file `Dictionary.java` and submit it with the above files, along with a `Makefile` that creates an executable Jar file called `DictionaryClient`. Note that although you should test your ADT operations independently as usual, you will not submit a file called `DictionaryTest.java` with this project.

`Dictionary.java` will implement all operations in `DictionaryInterface.java` using a BST as the underlying data structure. Begin by studying the file `Dictionary.c` found on the webpage at Examples/Lecture/C_Programs/DictionaryADT/. Notice that the C version contains a number of private helper functions used by the ADT operations. It is strongly suggested that you write these same methods into your Java implementation, as private functions of course.

Put your work in a directory name lab7 and as usual include a pair programming log from logTemplates.txt named log.txt. The lab7 directory should contain the four files mentioned above (had repeated here) unchanged

```
DictionaryInterface.java
DuplicateKeyException.java
KeyNotFoundException.java
DictionaryClient.java
```

along with files created by you

```
Dictionary.java
Makefile
README
log.txt
```

Please do not wait until the last minute to start. Ask questions if anything is unclear.