**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
KeyCollisionException.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.

Submit the four files above along with

```
Dictionary.java
Makefile
README
```

to the assignment lab7. Although this is possibly the easiest lab assignment of the quarter, please do not wait until the last minute to start. Ask questions if anything is unclear.