Your work for this must be finished and shown to your lab TA by the end of this lab session or the start of your next session.

1. Create a "lab8" sub-directory in your "cs221" directory, and download the AVL tree source files, (in lab8.zip, available on the course web page under Lab 8) into it.

2. Complete the following function in avl.cc:

```
void balance( Node *& x ) {
// Check if node x is unbalanced (i.e., the heights of its
// two children differ by more than one).  If it is, rebalance
// at x using one of rotateLeft, rotateRight, doubleRotateLeft,
// or doubleRotateRight, whichever is appropriate.
```

3. You can uncomment lines like:

```
// std::cout << "doubleRotateLeft: a->key = " << a->key << std::endl;
```

so that you can see which procedures you are calling from balance(Node*), but the only other change you can make to the file is your implementation of balance(Node*).

3. Your output should match output.txt. You can compare manually line by line, or use:

```
./avl > my.txt
sdiff -s my.txt output.txt
```

No output from "sdiff -s" means its two input files are equal.