18553 - Ankit

/* Evaluation:

1. Code compilation:

1. Does code compile without errors? - Yes.
2. Was a readme.txt file included with instructions on how to compile and run? - yes.

2. Correctness (positive test cases):

1. Can I insert a key? - no. Data is loaded only from file. .
2. Can I delete a key? - yes. Duplicate keys are not deleted. Only first instance is deleted.
3. Can I search for a key? - yes. Search results are a bit confusing when a key is found. In the example below, when I enter A as the key to search for, it returns 18 and A. I don't know what 18 is.

   enter the string for search:
   A
   18
   A
4. Can I view display of tree? - No. The dot file is written out on exit.
5. Can I specify size of B+ tree node (# of keys in a node)? - no.
6. Do the nodes satisfy the B+ tree property? - Yes. A little difficult to verify though. The file is written out upon exit.
7. Can I create a B+ tree from a file of keys? - yes.
8. Can I save my B+ tree to a file? - no.
9. Can I load back the file saved in step 7? - no.
10. Can I insert and delete keys from the command line even after loading keys from file? - only delete.
11. Is Output for keys1.txt correct? - yes.
12. Is output for keys2.txt correct? - yes.

3. Programming Style & General Comments:

1. Are there useful comments that complement the code? - no.
2. Is the indentation style neat and consistent? - yes.
3. Are there had coded limits or magic numbers used in the code? - yes. Only 25 characters are read from each line:

   Line 33 in TestTree.java - while(line1.length() < 25)
4. Are there hard coded file paths used in the code? - Yes. The output file name is hardcoded.

   Line 25 in TestTree.java - output = new PrintWriter("output.dot");
5. General Comments:

4. Exception Handling:

1. Delete on empty tree - handled.
2. Delete a non-existent key - handled. Return value is incorrect. It says "deleted" when I delete a non existent key on an empty tree.
3. Insert a key that exists already (keys3.txt). - works. Allows duplicates.
4. Call display on empty tree (empty.txt). - handled.
5. Print an empty tree - handled.
6. Empty lines in input file (keys4.txt) - not handled. Empty lines treated as keys.

Score - 16/20.

*/