18564 - Sai Prashant Das

/* 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? - only when provided via input file. Not in an interactive manner.
2. Can I delete a key? - Fails with java.util.InputMismatchException
3. Can I search for a key? - yes. Works correctly.
4. Can I view display of tree? - yes.
5. Can I specify size of B+ tree node (# of keys in a node)? - Not from command line.
6. Do the nodes satisfy the B+ tree property? - yes
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. This too fails with an exception.
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? - Key size is hard coded to 25.
4. Are there hard coded file paths used in the code? - yes.

```
PrintWriter writer  =new PrintWriter("BTree.dot");
```

4. Exception Handling:

1. Delete on empty tree - unable to test since delete fails with an error.
2. Delete a non-existent key - - unable to test since delete fails with an error.
3. Insert a key that exists already (keys3.txt) - Duplicates allowed. Works okay.
4. Call display on empty tree (keys5.txt). - Fails with java.lang.ClassCastException.
5. Print an empty tree - Unable to test since delete (needed to make empty tree) fails.
6. Empty lines in input file (keys4.txt) - empty lines are being treated as keys.

Score - 12/20. (Giving extra credit even though delete is not working since insert seems to work well).

*/