18563 - Sai Kumar

/* 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? - yes. Only from file.
2. Can I delete a key? - No
3. Can I search for a key? - No. Though there is a search method implementation, there is no option provided to invoke it. The program terminates right after launch. There is no user interaction. The keys given in the input file are read, converted to B+ tree, the dot file is written out (not the png file) and the program terminates.
4. Can I view display of tree? - Yes with some manual steps (to convert dot file to image)
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
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? - No (leaf nodes not in ascending order)
12. Is output for keys2.txt correct? - No (leaf nodes not in ascending order)

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. Length of key is hard coded to 5 characters in BPlusTree.java line 236.

```
int str_len=5;
```

4. Are there hard coded file paths used in the code? .- Yes. Output file name is hard coded in BPlusTree.java line 143

```
FileWriter fw = new FileWriter("BTree.dot");
```

4. Exception Handling:

1. Delete on empty tree. - delete not implemented
2. Delete a non-existent key.- delete not implemented
3. Insert a key that exists already (keys3.txt) - works okay. Duplicates are allowed. .
4. Call display on empty tree (keys5.txt) - incorrect output in this case. Keys not in file are present in tree.
5. Print an empty tree - unable to test since keys5.txt is generating tree with keys when in fact it should be empty.
6. Empty lines in input file (keys4.txt). - empty lines being considered as keys.

Score - 10/20

*/