18554 - Ashik

/* Evaluation:

1. Code compilation:
    1. Does code compile without errors? - No. I get the following error when compiling:
        B_Plus_Code.java:329: error: cannot find symbol
                delete(key);
                ^
         symbol: method delete(String)
         location: class B_Plus_Code
         1 error

    I commented out the above line in the hope of finding something to give you a score with. Even after changing the application to accept my input file, I get the following error:

    Exception in thread "main" java.lang.IllegalArgumentException: The file: files\output\keys1_tree.png doesn't exist

    Why are you trying to open the png image file???

```
B_Plus_Code.java:394 Desktop.getDesktop().open(newFile("files/output/"+file_name+"_tree.png"));
```
    2. Was a readme.txt file included with instructions on how to compile and run? - No. The READ_ME.txt file is empty.

2. Correctness (positive test cases):
    1. Can I insert a key? - No. Only loaded from file.
    2. Can I delete a key? - No. I am able to find the key after deleting. Delete option is there. It says key is deleted. I am, however, able to find the key after deleting it.

    3. Can I search for a key? - Partially. Searching for a key that does not exist should not be treated as an error:

        Enter the Key to Search: 4
        ERROR: check your input try again

    4. Can I view display of tree? - No.
    5. Can I specify size of B+ tree node (# of keys in a node)?
    6. Do the nodes satisfy the B+ tree property?
    7. Can I create a B+ tree from a file of keys? - yes.
    8. Can I save my B+ tree to a file? - no. Option not present in user menu.
    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? - partially.
    2. Is the indentation style neat and consistent? - yes.
    3. Are there had coded limits or magic numbers used in the code? - Yes.
      I don't know that the 3 and 25 are in the line of code below.
    4. Are there hard coded file paths used in the code? - Yes. The program does not allow the user to specify a path.
```
B_Plus_Code.java:518 B_Plus_Codeb_tree=new B_Plus_Code("files/input/b+tree_inp.txt",3,25);
```
    5. General Comments:

4. Exception Handling:
    1. Delete on empty tree - not handled.
    2. Delete a non-existent key - Not handled. It does not return an neat message stating key was not found. In the example below, Key G does not exist in file.

        Enter The Key to Delete:G
        key to be deleted G
        Options:
        Search (1)
        Delete (2)
        Exit   (3)

    3. Insert a key that exists already (keys3.txt) - Works okay. duplicates are allowed.
    4. Call display on empty tree. - No option to display
    5. Print an empty tree. - No option to print.
    6. Empty lines in input file (keys4.txt). - Not handled. Empty lines added as keys.

Score - 10/20

*/