

CIS 2168: Assignment #5

Due on Friday, October 03, 2014

11:59pm

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Problem 1

List Folders (100%) In this assignment, you write a program that lists all the files and subfolders in a given folder. The sample program can list all files (include subfolders) at the current folder.

```
// Directory path here
String path = ".";
String files;
File folder = new File(path);
5 File[] listOfFiles = folder.listFiles();
  for (int i = 0; i < listOfFiles.length; i++) {
    if (listOfFiles[i].isFile())
      {
        files = listOfFiles[i].getName();
10      System.out.println("File:"+files);
      }else{
        files = listOfFiles[i].getName();
        System.out.println("Folder:"+files);
      }
15 }
```

Now, you need to write a program that lists all files and subfolders in given folder by their level order. You list all siblings before you list their children. User can provide any folder name as a command line argument. If the command line argument is not provided, then your program searches from the current folder. For example: in your current folder, you have files and subfolders as shown in Figure 1. When you execute your program, the output is:

```
Level 1:
100,200

Level 2:
5 100: 101,102,103,104,105,106,text101.txt,text102.txt,text103.txt,text104.txt
  200: 201,202,203,204,205,206,text201.txt,text202.txt,text203.txt,
    text204.txt,text205.txt,text206.txt,text207.txt

Level 3:
10 100/101:1001,1002,1003,1004,1005,1006,text1001.txt,text1002.txt,
    text1003.txt,text1004.txt
  200/202:2001,2002,2003,2004,2005,2006,text2001.txt,text2002.txt,text2003.txt
```

Implementation Requirements

You are not allowed to use **java provided collections** ArrayList, LinkedList, Stack, or Queue.

What will you learn from this assignment

Queue and Stack

Grading

Homework is 100 points. 80 will reflect functionality and correctness. 20 points on your program will reflect your programming style, documentation. **If you code does not compile, you will not receive any**

credit.

Commenting and Documenting Code

Code must be properly commented. The main idea is that the grader should be able to understand your code easily, not have to tear his or her hair out wondering what some statement is doing. The first time you have to deal with poorly commented code (if you haven't already), you will understand how annoying it is. In particular, the top of each code file should contain your name, the course and assignment numbers, and a brief summary of what's in the file. Line-by-line comments should be included as necessary to make the code easy to read. A clear coding style, together with informative variable and function names, will reduce the number of comments required. Obscure code or cryptic function names will cause loss of points (for bad style) and also require more extensive comments.

What to submit

A single zip file called Assignment5_firstname_lastname.zip, where firstname is your first name, and lastname is your last name. In this zip file, put:

1. Java source
2. A README file with:
 - Instructions to compile and run of your code (include a description of command line options).
 - If your solution is not perfect, explain what parts you did and what part you did not do.
 - List of files submitted
 - All your data and results (in plain text files).
 - Anything else you want TA know
3. Submit this zip file to Blackboard

