

## CS212 Lab 18 Chapters 10

### File Input Output

#### Notes:

- All I/O exception classes and Writer and Reader classes are all in `java.io.*`. Only Scanner class is in `java.util.*`.
- We use `PrintWriter` class for writing to the file and `Scanner` class for reading from the file.
- We always have to open a new instance of a file to write and read.
- We create a new instance of a file just the way we for any other class. But you need to decide where you would like to save your files. Either create a folder before hand or you can first create the folder and then add the file name.
- You need to create a `PrintWriter` variable and set it to null.
- Use a try block followed by one or two catch blocks depending on what you are doing.
- Close all reader and write objects at the end.

## Goal

- To read from and write to a file that can be edited in a text editor.

Write a program that will record the purchases made at a store. For each purchase, read from the keyboard an item's name, its price, and the number bought. Compute the cost of the purchase (number bought times price) and write all the data to a text file. Also, display this information and the current total cost on the screen. After all items have been entered, write the total cost to both the screen and the file. Since we want to remember all purchases made, you should append the new data to the end of the file.

1. Import java.io.File, java.io.FileNotFoundException, java.io.PrintWriter, of course, the scanner class.
2. This program just needs static main method.
3. Create a File object. *File fname = newFile(file\_path + fname);* *file\_path* tells exactly where your file is going to be stored. For example, you can store on windows machine in C:\Examples folder.
4. Ask the user to enter the actual file name and append it to the file-path.
5. After creating the file name, declare a PrintWriter variable and set it to null.
6. Open the try block and complete creating the PrintWriter object.
7. At this point, your file is connected to a PrintWrite object and is open.
8. You can Write a line of text telling yourself what is going to be stored.
9. Write a header line for the data you are going to write.
10. You will write 4 columns of data. Item,unitprice,quantitybought,totalcost of the item which is calculated by multiplying unitPrice and quantity.
11. Use a do while loop to write the data to the file. Think how you can repeat reading the data for as many items as the user wants using this loop.
12. Ask the user to enter the first three (item name, unitPrice, quntity)
13. After reading the quantity, consume the last newline character by reading it with scan.nextLine().
14. calculate the totalcost of the item and create a string consisting of all four quantities just separted by a comma or a single space and write this string to the file using println method of the PrintWriter class.
15. Kepp the running total of the cost of all the items so far.
16. When the user says the are no more items to enter, write the total cost to the file and also print it on the screen.
17. Close the try block and complete the catch block. After that, close the PrintWriter object then the scanner object.
18. Run your program and look at your data file.