

The FileWriter & BufferedWriter Classes

Class FileWriter (java.io) *FileReader creates an output file stream.*

Method	Description
Constructor: <code>FileWriter(File filename, Boolean append)</code>	Creates an output file stream for the File object. If append is true, then data written to the file will be added after existing data, otherwise the file will be overwritten. This constructor throws an IOException if the file cannot be created or opened.
<code>close()</code>	Closes the output file stream. This method throws an IOException if the file cannot be closed

Class BufferedWriter (java.io) *BufferedReader sends text to the stream.*

Method	Description
Constructor: <code>BufferedWriter(Writer stream)</code>	Creates a buffered-writer stream from stream. Writer is the FileWriter superclass
<code>newline()</code>	Writes a newline character to the output stream. This method throws an IOException if the stream cannot be written to
<code>write(String str)</code>	Writes the string str to the output stream. This method throws an IOException if the stream cannot be written to.
<code>close()</code>	Closes the output file stream. This method throws and IOException if the stream cannot be closed

ICS4U Module 5: Note ↓ Exercise 3b

Sample Program: prompts the user for names and scores and then writes them to a new file.

```
/*
 * CreateDataFile.java from Module 5
 * A program that demonstrates writing data to a file.
 */

import java.io.*;
import java.util.Scanner;

/**
 * A program that writes data to a file, overwriting existing file, if any.
 */
public class CreateDataFile {

    public static void main(String[] args) {
        File dataFile = new File("StuScores.dat");
        FileWriter out;
        BufferedWriter writeFile;
        Scanner input = new Scanner(System.in);
        double score;
        String name;

        try {
            out = new FileWriter(dataFile);
            writeFile = new BufferedWriter(out);
            for (int i = 0; i < 5; i++) {
                System.out.print("Enter student name: ");
                name = input.next();
                System.out.print("Enter test score: ");
                score = input.nextDouble();
                writeFile.write(name);
                writeFile.newLine();
                writeFile.write(String.valueOf(score));
                writeFile.newLine();
            }
            writeFile.close();
            out.close();
            System.out.println("Data written to file.");
        } catch (IOException e) {
            System.out.println("Problem writing to file.");
            System.err.println("IOException: " + e.getMessage());
        }
    }
}
```

Note: will overwrite the StuScores.dat file each time it is run

Output:

Enter student name: Tyra
Enter test score: 98
Enter student name: Carmen
Enter test score: 83
Enter student name: Mikayla
Enter test score: 77
Enter student name: Juan
Enter test score: 92
Enter student name: Andre
Enter test score: 67
Data written to file.

Programming Exercise:

Modify your Statistics application to allow the user to enter the names and grades of the students. The user should be prompted for the name of the file to create and for the number of student grades that will be entered. After the data has been entered and written to a file, the file should be read and the lowest, highest, and average score displayed.

Submit your source code to the Google Doc “ICS4U – Activity Submission Form”