Homework 13

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**Homework Problem 1**

**Requirements**

Write a program that imports two text files with integers in ascending order and merges them into a single file with all of the integers listed in ascending order.

**Design**

*Main*

Create two scanners, one for each input file, a printwriter for creating a new file, and an array list to store the integer values. Read the file contents into the array list, sort the array list, and place the contents of the array list into a new file. Don’t forget to close the scanners.

**Iterative Development Steps**

1. Import the io and util packages and crease a main class that throws the IOException.
2. Create the scanners, print writer, and array list.
3. Read the scanner file contents into the array list and sort the array list.
4. Send the sorted contents of the array list to a new file created by the print writer.

**Tests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | Input | Expected result | Actual result | Cause |
| method1 normal input | t1.txt  t2.txt | C13h2.txt with values from input text files in ascending order | C13h2.txt with values from input text files in ascending order | Good code |

**Homework Problem 2**

**Requirements**

Write a program that checks for similarities between two files.

**Design**

*main*

Creates a keyboard scanner and prompts the user to enter file names which get placed into two file scanners. A while statement then compares the two files object by object. If by the end of the file there are no differences found, the result of similarity is displayed. If a difference is found, the result of differences is displayed.

**Iterative Development Steps**

1. Import the util and io packages and create a main method that throws the IOException.
2. Use scanners to import file names and contents
3. Compare the files object by object.
4. If any differences are found, display that the files are different, otherwise display that the files are similar.

**Tests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | Input | Expected result | Actual result | Cause |
| Comparing different text files | T1.txt and t2.txt | “Files are different” | “Files are different” | Proper comparison |
| Comparing similar text files | T1.txt and t3.txt | “Files are similar” | “Files are similar” | Proper comparison |
| Comparing different text and bin files | T1.txt and bin1.bin | “Files are different” | “Files are different” | Proper comparison |

**Homework Problem 3**

**Requirements**

Write a program that displays the decimal code for the space, digits, and upper and lower case letters.

**Design**

*main*

Create strings that represent the space, digits, upper case letters, and lower case letters. Use (int)[String].charAt(index of character) to display the decimal code for a given character.

**Iterative Development Steps**

1. Create a main method that contains the code that is operated upon.
2. Create strings reference variables to reference the space, digits, and upper and lowercase letters.
3. Display the decimal code for each character by using (int)[String].charAt(index of char).

**Tests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | Input | Expected result | Actual result | Cause |
| method1 normal input | N/A | Correct decimal codes for characters used | Correct decimal codes for characters used | Good code |

**References**

An Introduction to Programming Using Java, Anthony J Dos Reis.