AP COMPUTER SCIENCE A – SORTING CSV RECORDS

The goal of this assignment is to write a program `SortCSV.java` that sorts the records of a `.csv` database according to a column index of the field values. You should start with the file `SortCSVStub.java`. Note that the program `SortCSV` will need to use the classes `CSValueDB`, `CSValueRecord`, `FieldValue`, and `package IO`.

1) In particular, you need to add code to method `boolean lessThan ( CSValueDB db, int recordIndex1, int recordIndex2, int sortIndex )` which determines if the record corresponding to `recordIndex1` is less than the record corresponding to `recordIndex2` according to the field value column index `sortIndex`. If the type of the field corresponding to `sortIndex` is `i` (`int`) or `d` (`double`), then interpret less than as "<". If the type of the field value is `s` (`String`), then interpret less than in terms of alphabetization order, *i.e.*, in terms of method `compareTo` of class `String`.

2) Add the necessary code to method `sort ( CSValueDB db, int sortIndex )` which will sort the records of the database. Use a bubble sort. Start with the file `BubbleSort.java`. You should modify the method `sort ()` to sort and interchange `CSValueRecord` objects (instead of `int`s). Use method `lessThan` from item **1** to perform the comparison of the `CSValueRecord` objects.

3) When you run the program `SortCSV`, the console should look like, *e.g.*,

```
     input file name = ? Cereal.csv
77 records of 15 fields loaded.
sort by column index = ? 14
    output file name = ? sorted.txt
```

3) when sorting the records according to "Rating", *i.e.*, column index `14`. Note that the bold print corresponds to user input.

4) In any case, once your program is working correctly, show me your code `SortCSV.java`, and the sorted output file.