Group Assignment 1 - ICS372

DUE: February 7, 2018

Introduction

Your assignment is to design and build a program for a hospital conducting a clinical trial at a number of remote sites. Nurses will use the software to record data that patients have entered into their journals. It will be evaluated against the following requirements:

1. ***The software shall read a file that is in JSON format containing patient readings.***
2. ***The software shall support 4 different types of items in the input file: weight reading, temp reading, blood pressure reading, and number of steps.***
3. ***The software shall read and store the item ID for each entry and associate it with the specified patient ID.***
4. ***The software shall read and store the associated metadata for each item.***
5. ***The software shall support the following commands for each patient: add reading, start patient trial, and end patient trial.***
6. ***The software shall only allow adding readings to a patient that is part of the trial.***
7. ***The software shall keep records for a patient that has left a trial, but will disregard new readings.***
8. ***The software shall be able to export all the readings into a single JSON file***
9. ***The software shall show the list of associated readings for each patient.***

Usage of the Java standard libraries or other libraries as part of your program is expected. Make sure you include external jar files with your source when you submit it. Documentation of the program is expected as well. Be sure to include a class diagram of the program and a sequence diagram of the check in and check out process.

I will attempt to build/execute your code as soon as possible after I receive it, so if you turn it in early and I can't get it to work, you can re-submit (within reason).

Format

As a group deliver the code as a GitHub repo including all the necessary code to execute it including libraries (excluding the Java runtime). If you used an IDE, please tell me which one you used and include necessary files for opening your project in that IDE. Include class diagrams of the code you created.

As an individual, submit a 1 paragraph write up of what you contributed to the project and what you learned.

Submission

The individual portion can be submitted via D2L to the professor prior to or on the due date.

The group portion can be submitted via email to the professor prior to or on the due date.

Evaluation

This assignment will be evaluated/graded based on:

1) Functionality - Does the program meet the requirements?
2) Design - Were good design principles used in the construction of the program?
3) Style - Do you have comments and well written code?
4) Documentation - Do the diagrams indicate how the software is structured?
5) Self Evaluation - Did you contribute, did you learn anything?

Example JSON input file:

```
{
   "patient_readings":[
      {
         "patient_id":"12513",
               "reading_type":"weight",
         "reading_id":"48934j",
               "reading_value": 189,
        "reading_date": 1515354694451
      },
      {
         "patient_id":"15566",
               "reading_type":"steps",
         "item_id":"1adf4",
               "Reading_value":6958,
        "reading_date": 1515354694451
      },
         {
         "patient_id":"15566",
               "reading_type":"temp",
         "reading_id":"1a545",
               "reading_value": 98.6,
        "reading_date": 1515354694451
      },
         {
         "patient_id":"336558",
               "reading_type":"blood_press",
         "Reading_id":"85545",
               "reading_value": "120/60",
        "reading_date": 1515354694451
      }
   ]
}
```