Homework 2

INFO 5100 Application Engineering and Development

Due Wed 2/14 at 11:59

The objective of this home work exercise is to get you to practice a number of important engineering and programming ideas:

1. Data conversion between strings and integers
2. If statements and range comparisons.
3. Data type conversion
4. Insertion into jTables
5. Arraylists

Write a swing application to do manage a list vital sign measurements taken over time for a patient. The vital sign values of interest are as demonstrated in the table enclosed in the slides for the if statement lecture. The user should be able to create three kinds of information components:

1. A patient object with a patient name, and patient id, primary doctor name (first and last), preferred pharmacy and name, etc.
2. A list of measurements capturing the vital signs for the patient over a time period of months or years. A vital signs class will include the following attributes: respiratory rate, heart rate, systolic blood pressure, weight in pounds and weight in kilos. In addition, the vital signs class will have a time stamp of when the vital signs where taken.
3. The user interface will include buttons for a) creating a patient, b) viewing a patient, c) adding a vital sign, d) display vital signs.
4. When showing the vital signs they must be displayed in a table showing all the vital signs, plus the time stamp of when taken, as well as a column showing if the specific vital sign attribute is normal or abnormal. For example, for a preschooler with a heart-rate of 70 then that is abnormal. In that case, the “70” must be shown in RED as a way to signify the abnormality.
5. As described in the slides, you need to define a method on the vital signs class called isNormal() that will return true or false depends on the rules in the table. In addition, you need to learn how to convert the numbers that are read as strings to integers so you can do the comparison if things are within range or not.