CS0004: Assignment #1

Name: _____

Instructions

Congratulations, you get your first job as a software engineer for a small start-up company. Your first task is to design a "conversion calculator" iPhone app that takes in a given number of inches and converts it to centimeters (1 in = 2.5 cm). You decide to use what you learned in CS0004 to do some planning before writing code for the app.

1) First, you need to analyze the problem. What will the app need to be able to do? What should the end user be able/not able to do? What are some of the features the app should include? Develop some general focal points that should be emphasized during design and development.

2) Now, it's time to create an algorithm. What are the inputs? Do the inputs need to be validated? How does the program process the input? What is the output?

3) Create a Flow Chart for the "conversion calculator" app to help develop the algorithm.

4) Create a Hierarchy Chart for the "conversion calculator" app to help develop the algorithm.

5) Write down the algorithm for the "conversion calculator" as a list of steps.

6) At this point, your boss tells you that the requirements for the project have changed. Now the app has to be able to convert from inches to centimeters AND inches to furlongs (1 in = 0.000126262626 furlongs). Create a flow chart for the "new conversion calculator" app.

7) Write down the algorithm for the "new conversion calculator" as a list of steps.

8) Sketch the user interface for the "new conversion calculator" app. Be sure to include both what the user sees and how the user interacts with the app. Use your experience using software in the past to create an app that is intuitive to use.