Project 2. Designing a GUI for the warehouse

Due date: Thursday, March 1, in class.

In this assignment we shall design a user interface for the warehouse that we created earlier. This will be a designed as a multi-panel interactive system. The system will have the following behavior:

1. The first screen (login panel) will ask what kind of user is accessing the system - manager, salesperson or client.

2. The next panel asks for a username and password. All clients use their IDs as login names and as passwords. The manager (the salesclerk) uses the string "manager"("salesclerk", respectively) as both username and password. Password checking will be done by a separate "security system" object with a method (like, say, `bool verifyPasswd(user, password)`) that can be invoked from the GUI.

3. The next panel shows what operations are available:

   (i) The clients can do only the client operations: View the account, put in an order, check the sale price of a product, etc.
   (ii) The "salesclerk" operations are: Receive an order from a manufacturer, print a list of all products with quantity on hand, add a client, add a product, add a manufacturer, load database, print a list of all mfrs for a product along with the profiles and any other ops except the ones listed as manager ops.
   (iii) The manager operations: Place an order to a mfr., modify the sale price of an item, assign an item to a manufacturer. All manager operations need a password for confirmation.

4. A salesclerk menu also provides an option to "become a client". If this is chosen, the system asks for a clientID and if it is valid, switches the menu to the client menu. The salesclerk can then perform client operations for the specified client. When the logout option is chosen, it goes back to the salesclerk menu. Likewise the manager menu provides an option to "become a salesclerk" (the system asks for the manager's password), and upon logout, goes back to the manager menu.

5. As an example, one of the Client ops is to display the account information. When this option is chosen, it will display the basic client info like name, address, balance due etc. It will then have choices for other itemized things like "show orders", "show invoices", "show payments" and "quit". If you click on show orders, it will then display the details of the orders on the list. If the client chooses quit again, he/she goes back to the client-menu panel.

6. In general, all operations have an associated panel through which information is sent and received by the system. Each panel will have choices for operations like back, quit and/or logout as appropriate.

What to turn in:

1. Using the above guidelines, create a complete user manual for the system. The manual should give a clear idea for the look and feel and layout of the GUI, and also explain its behavior. Create templates for some (not all) of the typical "frames" that the user will interact with.

2. Design the GUI by modeling it as an FSM. List all the states of the FSM and describe the purpose of each. Each state of the GUI is defined by the manner in which the GUI interacts with the user when in that state.