DESIGN DOCUMENT

for

PHI

(Promise House Inventory)

Prepared by
Group 3

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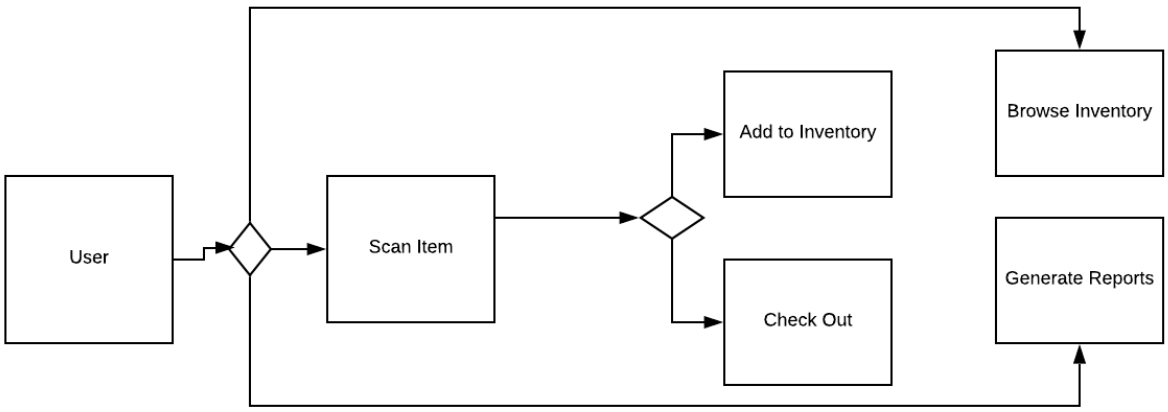
1. Context

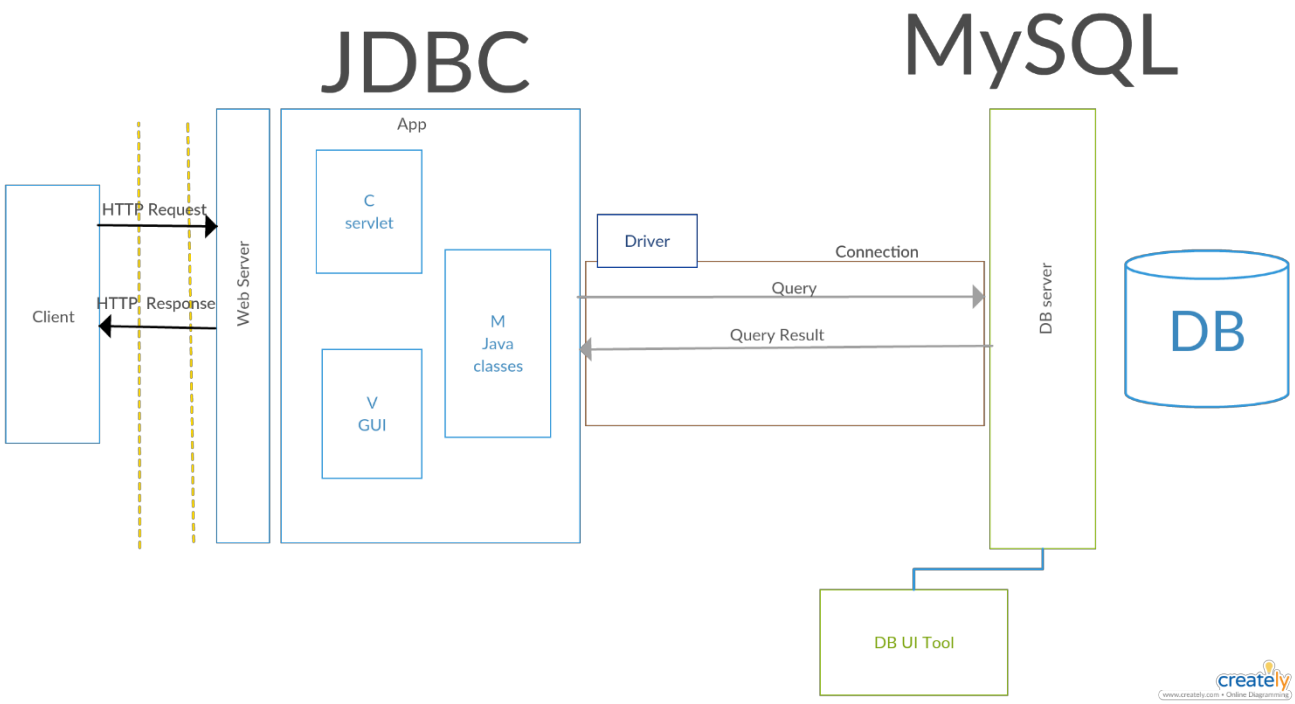
The Promise House is a student-led community resource center and food pantry at the Otterbein University. Promise House has been keeping track of their food pantry by hand. The large amounts of food donations made to the organization have to be tracked and monthly reports have to be submitted. While the system has been working well, physical management of the pantry can be tedious and leaves room for human error.

The Promise House Inventory (PHI) application is a software program that would help them keep track of their pantry and form an inventory that is easy to use by the employees. PHI uses the UPC barcodes of the food items to manage the inventory. The user can carry four functions with PHI. They can scan in the product to the inventory, scan a product out of the inventory, view and edit the inventory and finally generate reports of the inventory based on the price and quantity of the products. These functions help the management of the inventory to be accurate and less error-prone. Our inventory scanning system is designed to run on any machine capable of executing .Jar files. It is capable of functioning on any platform that has JVM.



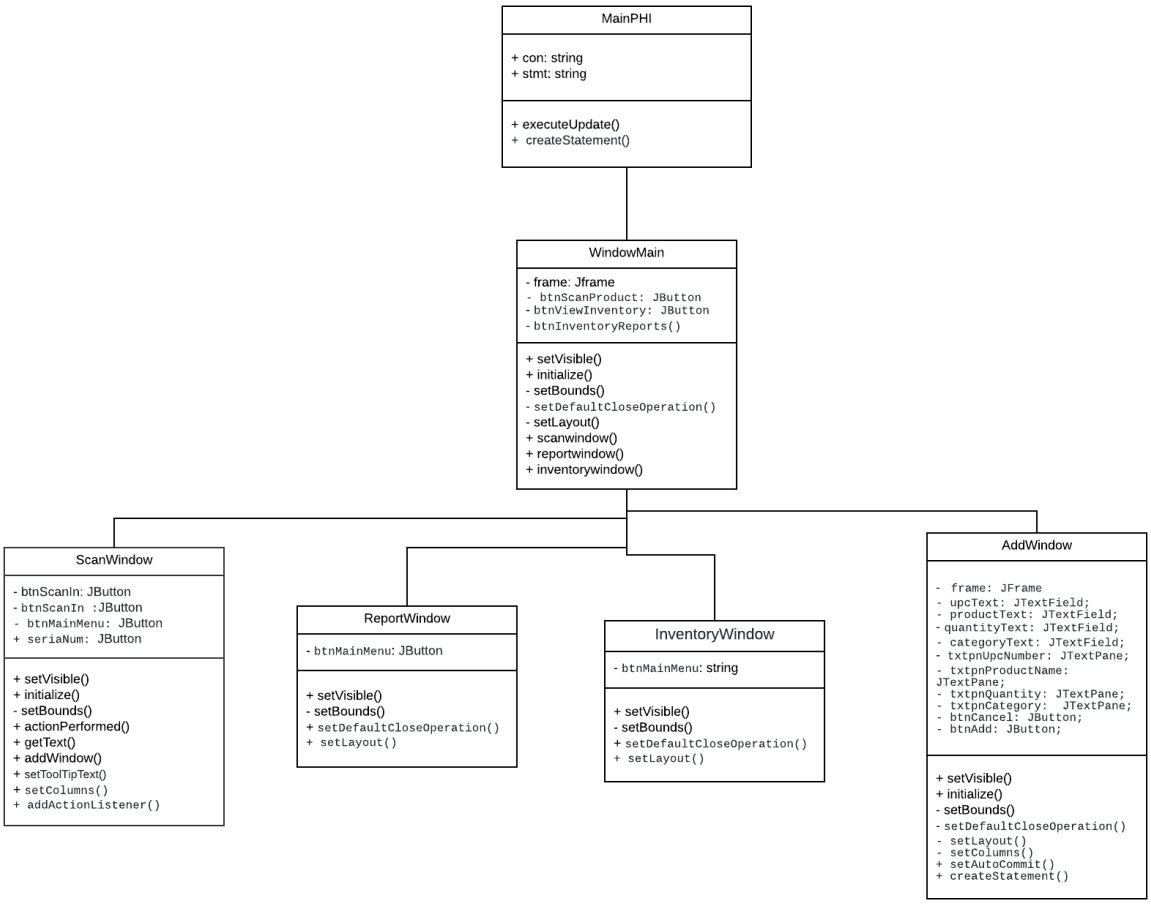
2. System Architecture

Our inventory scanning system is designed to run on any machine capable of executing .Jar files. The application should run on any Mac or Windows machine so long as they have the java virtual machine installed (JVM). We plan on implementing a Model View Controller Architecture. Our data stored in a MySQL database is the model. A GUI (Graphical User Interface) to view and modify the data is the view. Operations such as "Add to inventory", "Delete from inventory", "Search through the inventory", etc. that can be performed on the data will be in the controller. The PHI app also needs to take input from a scanner. The scanner will essentially take in UPC data and paste in the numbers in the text field.



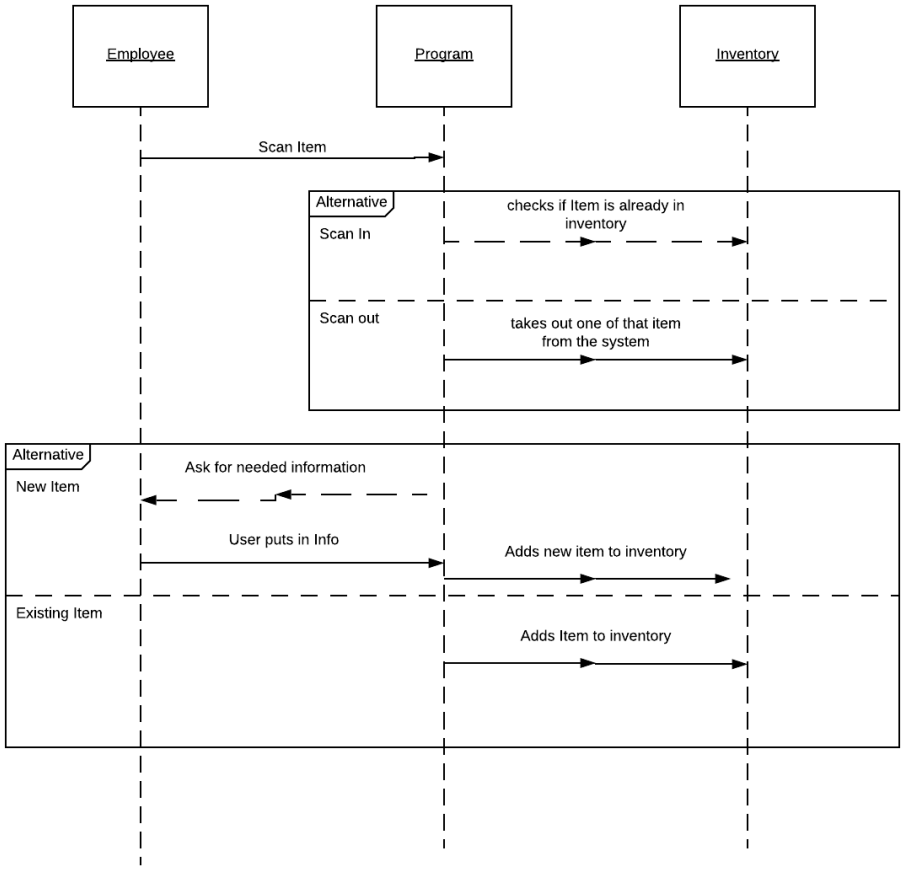
3. Class Diagram

We make several windows for the users to view. The MainWindow provides the user with three options: Scan Product, View Inventory and Inventory Reports. The ScanWindow provides interface for scanning a product. It also provides a JButton to get back to the MainWindow. The AddWindow is for client to add product information of a new product into the database. The InventoryWindow provides the database of the inventory. The ReportWindow provides the client with the monthly reports of the inventory based on the price and quantity of the food items. The most common methods found in each windows are: initialize () and actionPerformed (). These methods are used to set up the windows and make them functional.



4. Design Models

I. This sequence diagram goes over the interaction of when an employee is to scan an item. Scanning in an item requires more user input if the item is not currently in the system. If the item is not currently in the database PHI will prompt the user to fill out the required fields to add the item into the database. Though if the item is already in the database the item will simply be incremented into the database. How PHI will go about checking if an item is already in the database will be based off the primary key, which is the UPC.



II. This use case diagram represents the possible interactions the user can partake in. If the employee is to scan in an item, the program will check whether the UPC is new to the system. If the item is new, the program will prompt the user to fill out the need information for the item. If the user is to scan out an item, the program will decrement the total number of that one specific item. View inventory will give the user a list of what all is currently in stock. Inventory Report will allow generate the user a report that describes the prices and quantity of all the items currently in the inventory.