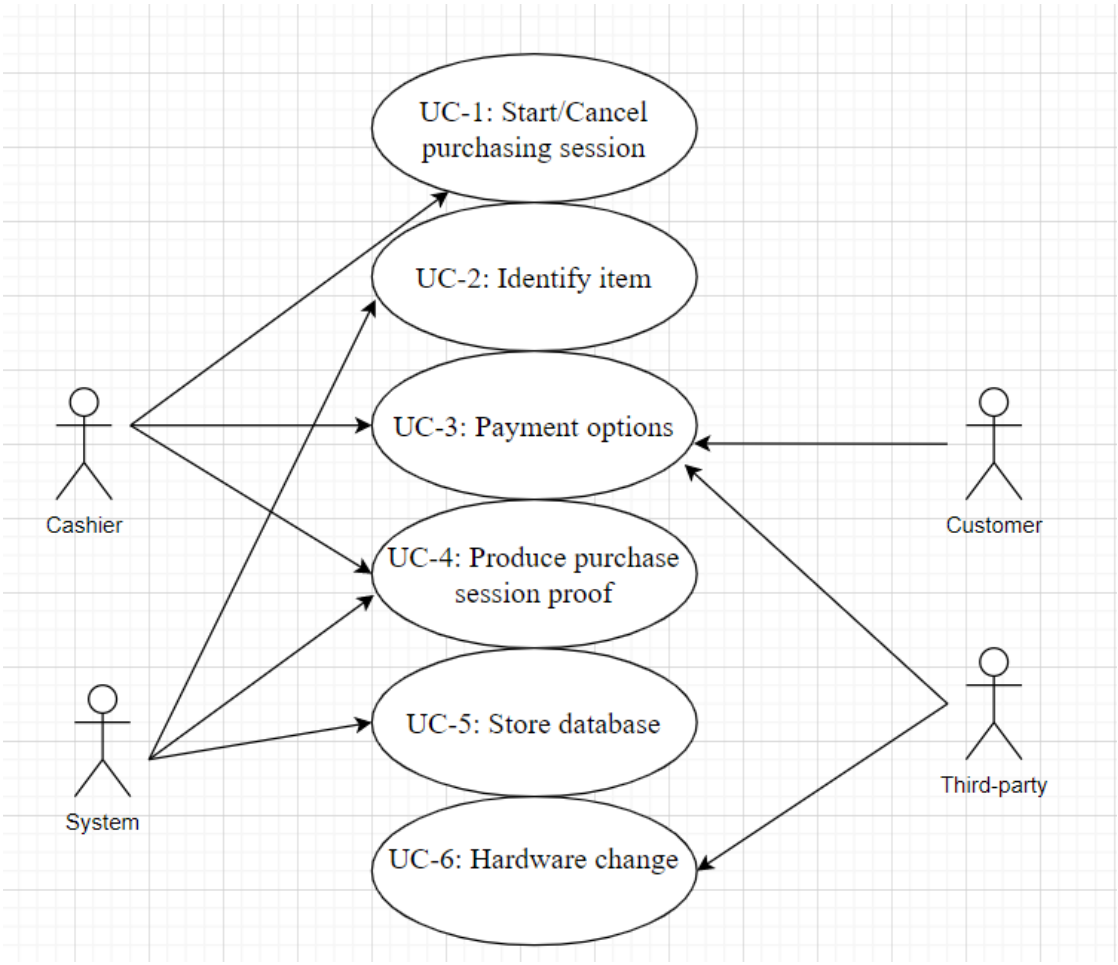
Assignment 2

1. **Identify the following:**
    a. **Use Case**

Use Case	**Description**
UC-1: Start/Cancel purchasing session	Cashier can start and cancel the purchasing session by entering personal ID number
UC-2: Identify item	Barcode can identity item and it's price
UC-3: Payment options	Cashier can offer customer Cash, Credit, Debit as a payment option through the keyboard
UC-4: Produce purchase session proof	A receipt can be printed to show proof of purchase and transaction
UC-5: Store database	All item prices, quantity and deals are saved in a database.
UC-6: Hardware change	Possible to change hardware


UC-1: Start/Cancel purchasing session
UC-2: Identify item
UC-3: Payment options
UC-4: Produce purchase session proof
UC-5: Store database
UC-6: Hardware change
Cashier
Customer
System
Third-party

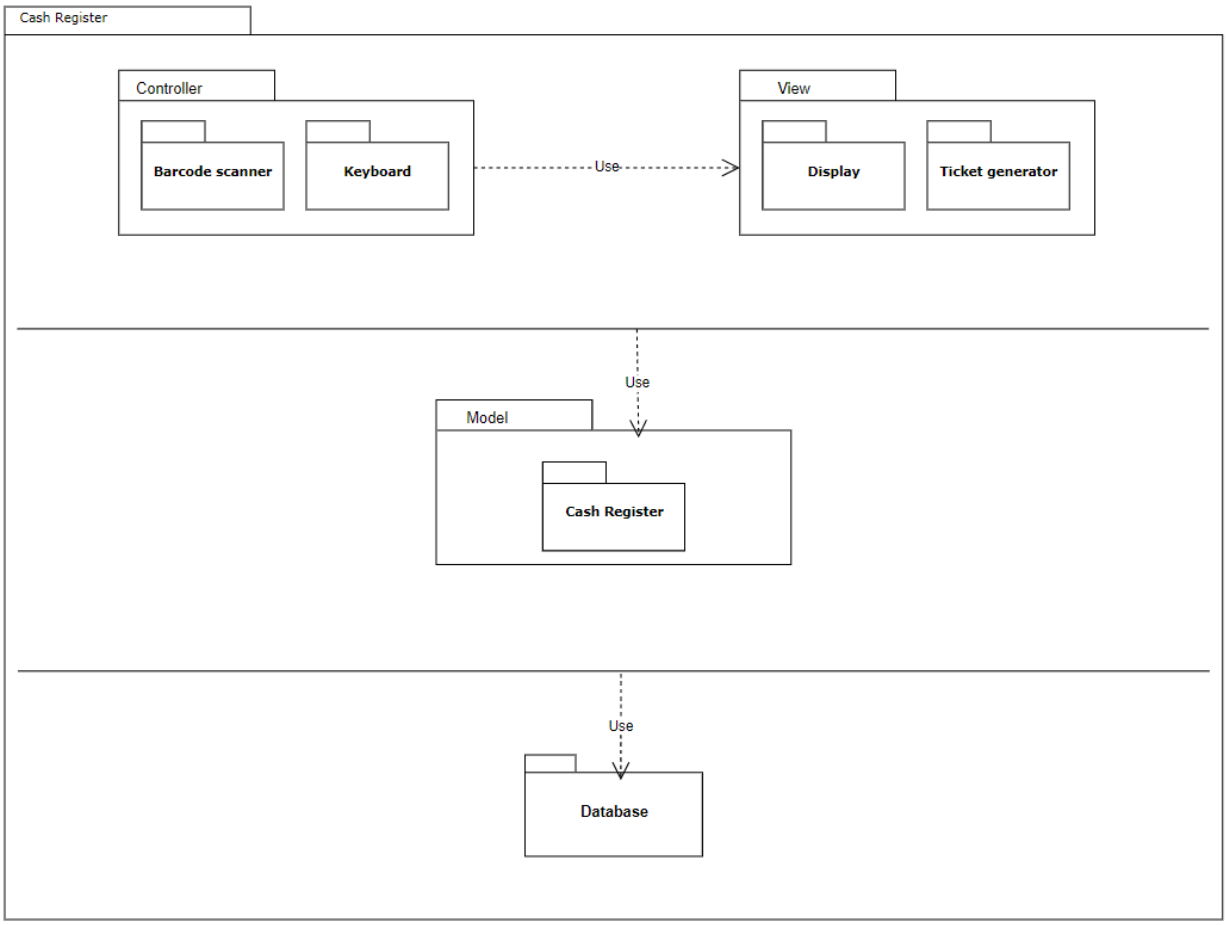
b. Quality Scenarios

ID	Quality Attribute	Scenario	Associated Use Case
QA-1	Availability	Barcode is able to scan products and retrieve information about the product from database	UC-2, UC-5
QA-2	Modifiability	Able to change hardware to upgrade materials and upgrade database to update prices, deals, and quantity.	UC-5, UC-6
QA-3	Usability	Able to scan items again in order to get the correct information	UC-2
QA-4	Security	Debit/Credit options for payment should be secured	UC-3

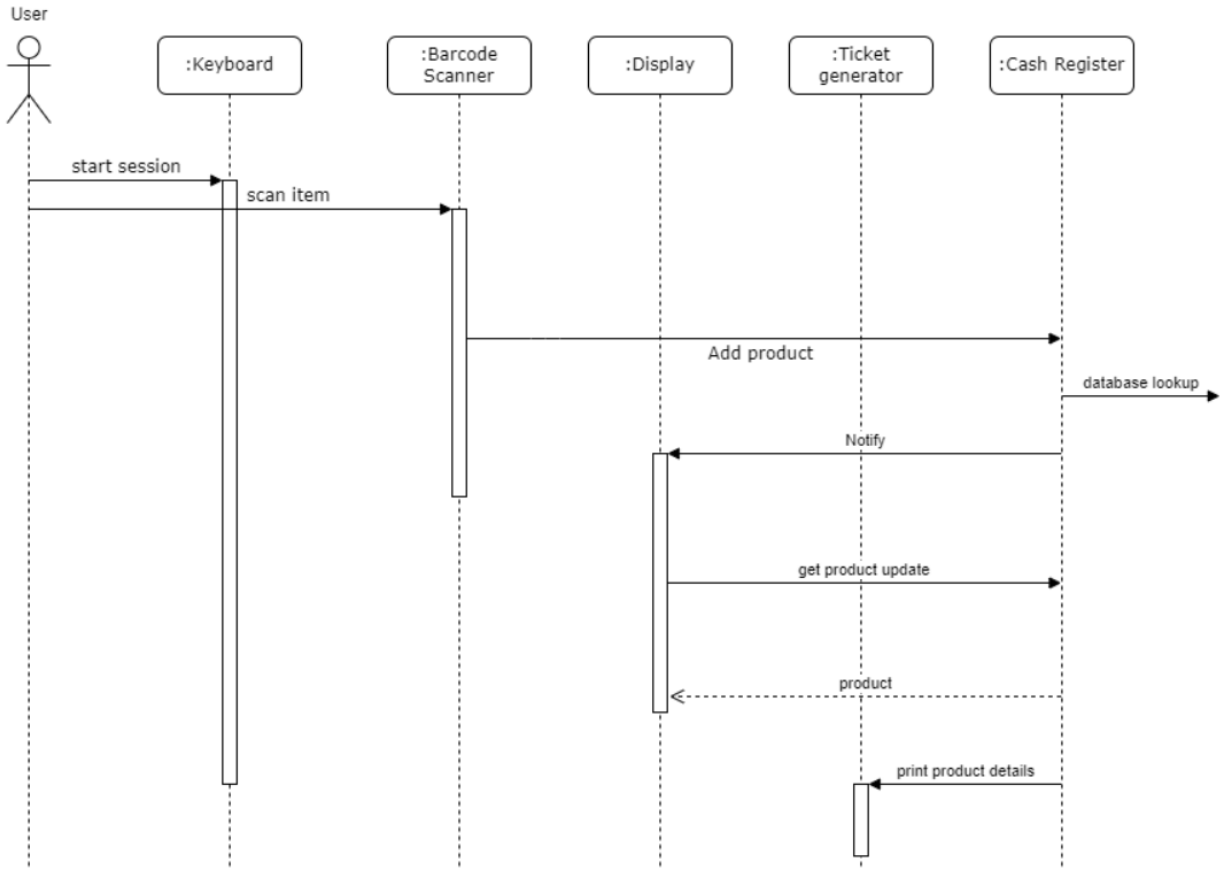
c. Constraints

ID	Constraint
CON-1	Database must be updated regularly
CON-2	All hardware must be in good condition to work

2. Component Dependency Diagram

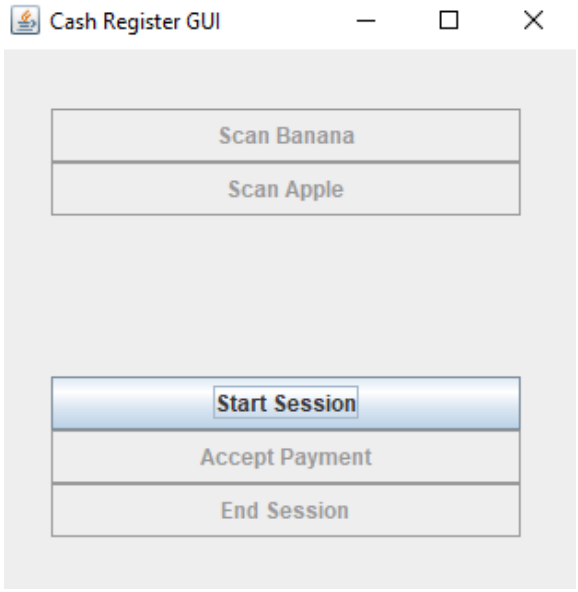


3. Sequence Diagram

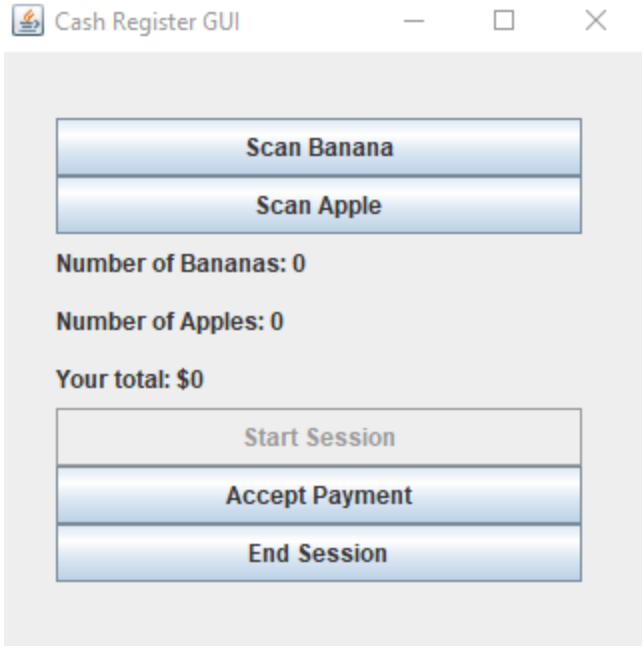


4. Modified Code

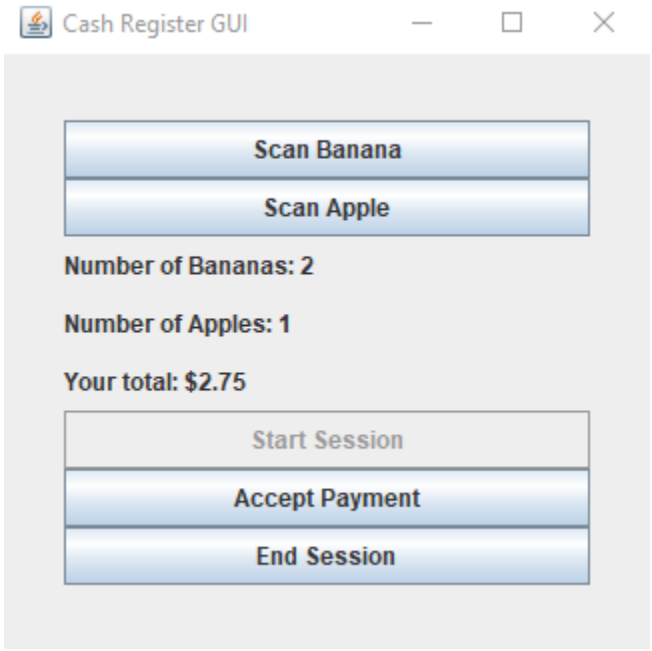
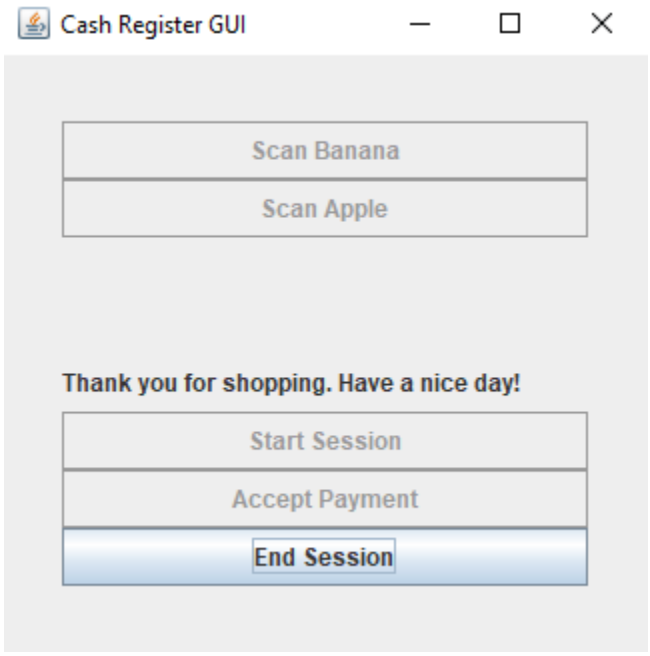
Upon launching the application you will see a menu with 5 buttons. To start a transaction, click the Start Session button.



Now you may “scan” as many items as you want by clicking on their respective buttons. You will see the amount of that item as well as the total increase.



When you are ready to pay for your items, simply click the Accept Payment button.



Lastly, click the End Session button to end the transaction.