

Q1 .

Requirements:

Req ID	Description
R-01	A Cashier has to start a product purchasing session through the keyboard prior to any products being read by the barcode scanner.
R-02	A Cashier can cancel a purchasing session at any time during the session resulting in nullifying all items that have been scanned since the start of the session.
R-03	When a product has been identified using a barcode scanner, its name and price are displayed on a display.
R-04	If the barcode of a product cannot be read by the bar code scanner then the message "Unknown product" will be displayed and the barcode can be entered via the Cashier's keyboard.
R-05	When all the selected products have been read, the Cashier can select a payment option through the keyboard such as Cash, Debit or Credit Card. (in the case of a Debit and Credit Card payment a 3 rd party payment system is used to complete the payment.)
R-06	After a successful payment verification, the Cashier can end the product purchase session and a list of all the selected products with the unit price, quantity and total price are printed to a paper ticket receipt.
R-07	Products can be cancelled at any time during the session by the Cashier selecting a product cancel option on the keyboard and either scanning or entering the barcode on the keyboard.
R-08	It must be possible to be able to change hardware platforms in the future.
R-09	The Cash Register will contain a local database of products.

Use Case	Description
UC-1 Scanning items for purchase / displaying item and price (R-03)	Users items are scanned by cashier and the price and name of the item is displayed
UC-2 Manually inputting an item code if not found by barcode (R-04)	When an item barcode is not recognised the cashier can manually input the item code
UC-3 Starting a purchase session or Ending a purchasing session (R-01 , R-07)	The cashier must start a session before scanning products, and has the option to manually cancel a session if the customer changes
UC-4 Select payment type (R-05)	Allow the user to use debit/credit or cash payment methods to checkout
UC-5 Verify user payment (R-06)	The system receives customers payment information and verifies the details through a secure portal
UC-6 Print purchase receipt and update local database (R-07, R-09)	After the purchase is complete the cashier can print a receipt for the customer and the local database system of the item inventory is updated



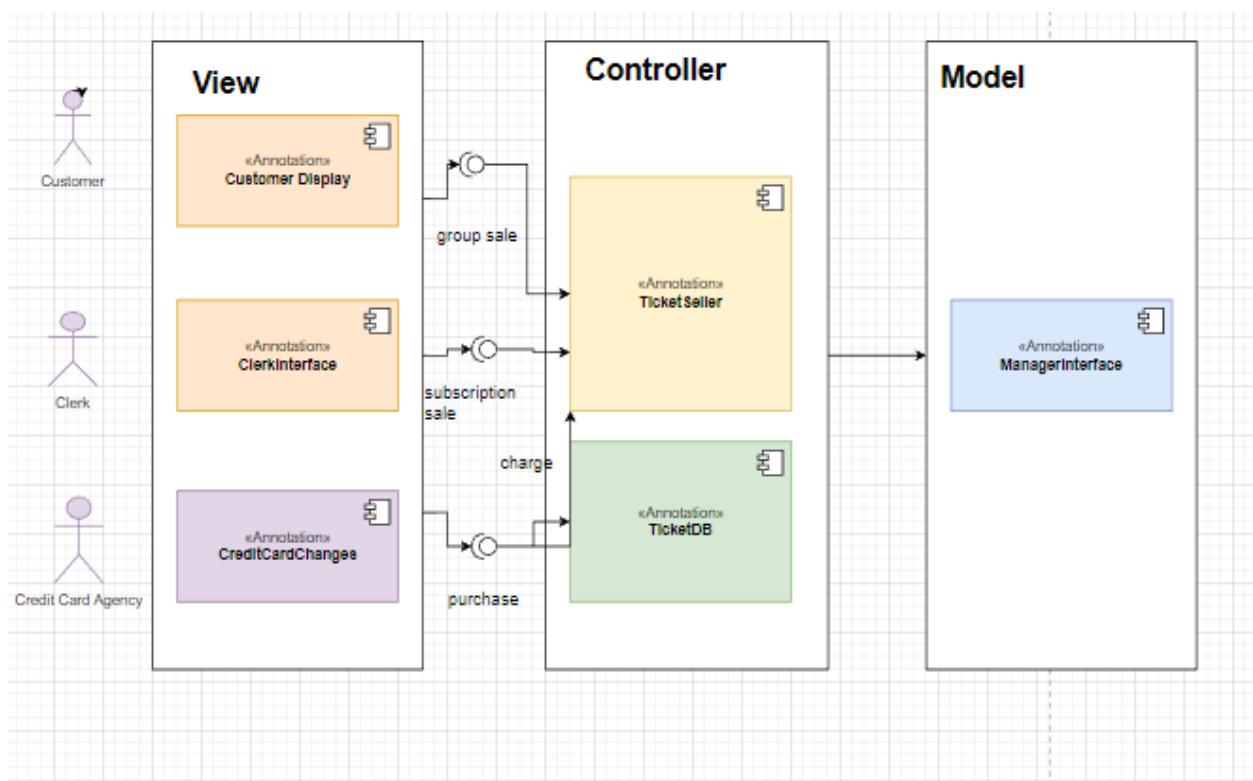
Quality Attributes (6 with descriptions):

ID	Quality Attribute	Scenario	Associated UC
QA-1	Performance, Security	When users checkout, the system uses proper protocols to verify and protect payment information, and allow for multiple methods of payment.	UC-1
QA-2	Modifiability, Availability	Allow managers to update hardware components of the cash register system	All
QA-3	Testability	When needing to implement new forms or new features on the system, the maintenance team should be able to test it out without interrupting the main services	UC-2
QA-4	Usability, Availability	Creating new sessions or ending current session on register terminal through the system interface	UC-7, UC-6
QA-5	Performance	The system prevents out of rotation items, or items that are not found in the database to be purchased	All
QA-6	Security	Any employee that is using the system must sign in and verify their credentials before being able to start a purchasing session.	All

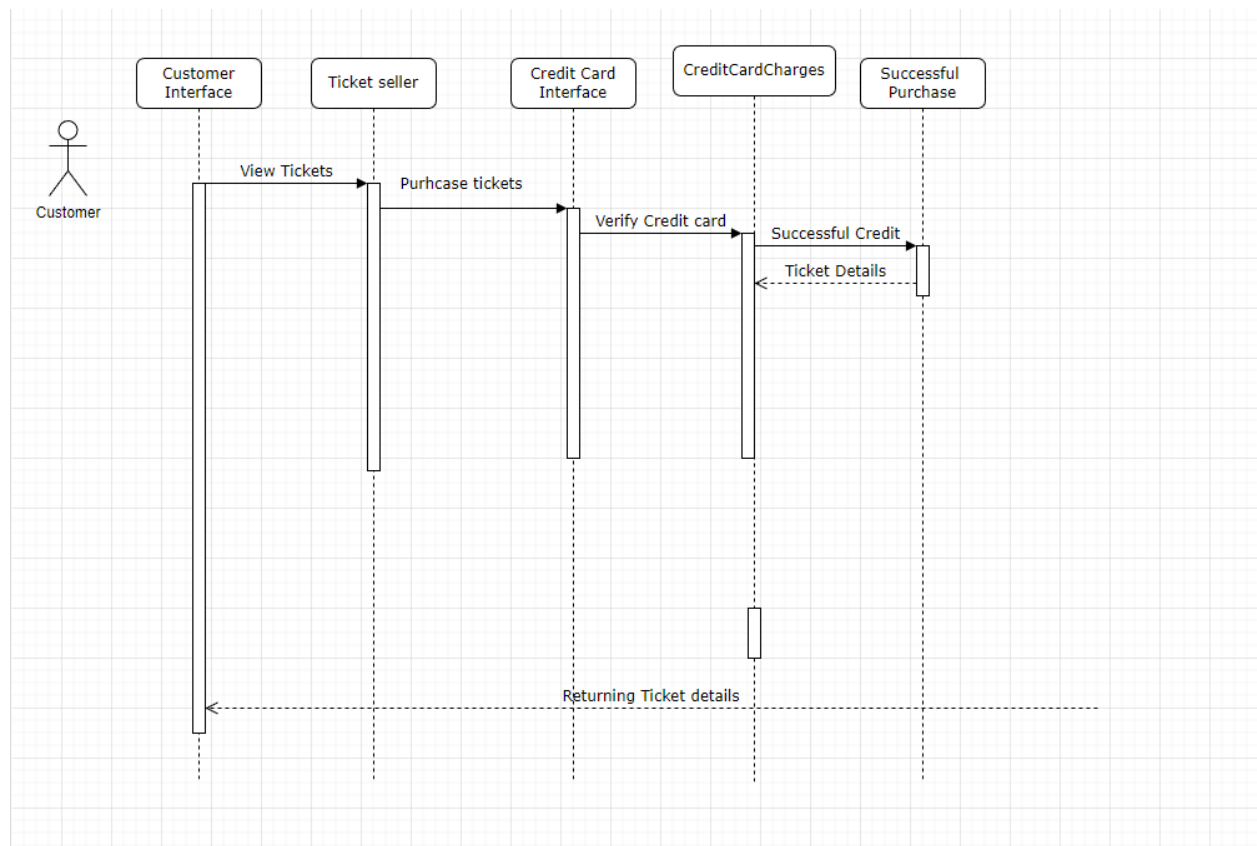
Constraints:

ID	Constraint
CON-1	Cashiers are only allowed to start one session at a time
CON-2	The system does not accept payment types that are not from canadian banking institutions
CON-3	Cashier cannot exceed an item quantity based on the amount in stock of the local database
CON-4	The system must use a database (mySql) for all its data regulation tasks

Q2:



Q3:



Q4:

General GUI template for the cashier system

490x445 (474x437)

Cashier System

Scanned Items:

Enter Product ID:

Enter Product to list

Total:

Checkout

Print Receipt

Start Session

End Session

Cashier System

Scanned Items:

item 1

item 2

item 3

Total: \$79.63

Checkout

Print Receipt

Start Session

End Session

Enter Product ID:

Enter Product to list