



# USE CASE MODEL

*Coffee Cart Rewards Management System for Android*

**Version 0.1**  
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**TEAM 04**

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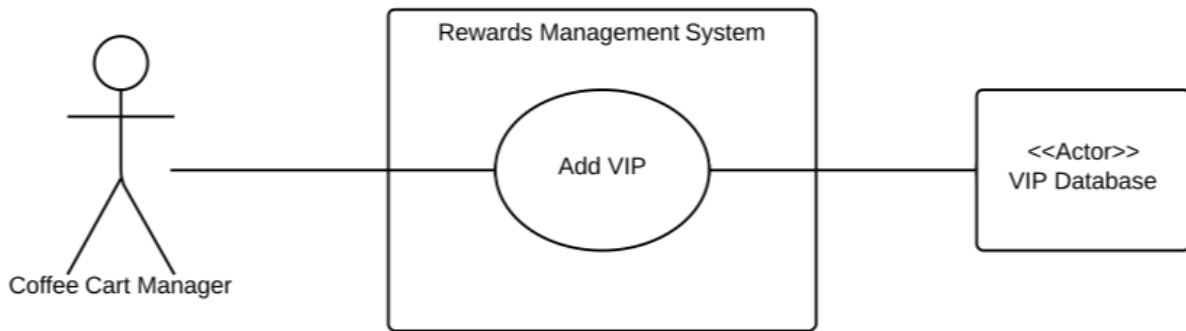
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# Use Case Model

## Use Case: Add VIP

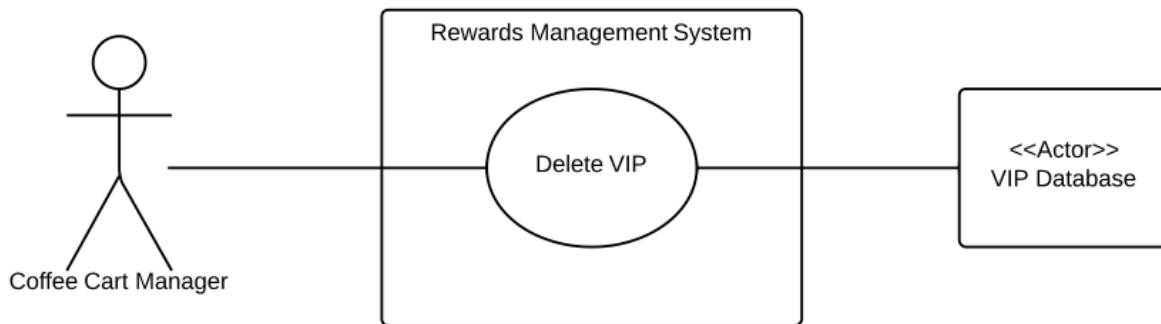


Use Case Name:	Add VIP
Related Requirements:	
Goal:	Allow new VIP accounts to be created for customers.
Precondition:	None
Successful End Condition:	A new VIP account with a unique card number is created for the customer.
Failed End Condition:	No VIP account is created.
Primary Actors:	Coffee Cart Manager
Secondary Actors:	VIP Database
Trigger:	The Coffee Cart Manager starts the VIP account creation process for a customer.

Main Flow	Step	Action
	1	The Coffee Cart Manager starts the VIP account creation process for a customer.
	2	The Coffee Cart Manager enters in the customer's information.
	3	The Coffee Cart Manager confirms the customer's information and submits it.
	4	All required customer information is verified as being present and valid.
	5	The customer information is sent to the VIP Database.
	6	If the customer's name, date of birth, and phone number are not altogether already in the system, the VIP Database creates a new VIP account and assigns a VIP card number to the customer.
	7	The VIP Database replies with a success message and the unique VIP card number.
	8	An information message confirming the successful creation of the account along with the unique VIP card number is displayed.
	9	The Coffee Cart Manager creates a VIP card with a unique VIP card number and gives it to the customer.
Extensions	Step	Branching Action
	4.1	Some required customer information is missing or is invalid.
	4.2	An error message is displayed to the Coffee Cart Manager.
	6.1	The VIP Database experiences an error trying to create a new VIP account, possibly because the name, phone number, and date of birth are all already in the system as a group.
	6.2	The VIP Database replies with an error message.
	6.3	The error message is displayed to the Coffee Cart Manager.

<b>Other Flows</b>	<b>(1)</b>	Cancellation: Any time after starting the account creation process and before any customer information is sent to the VIP Database, the Coffee Cart Manager may cancel the process.
	<b>(2)</b>	Timeout: Anytime a request is made to the VIP Database, if a reply is not received in a reasonable period of time, a timeout error message is displayed to the Coffee Cart Manager.

## Use Case: Delete VIP



Use Case Name:	Delete VIP
Related Requirements:	3
Goal:	Delete an existing VIP account.
Precondition:	The VIP card number of the customer must be known.
Successful End Condition:	The correct VIP account is permanently deleted.
Failed End Condition:	No VIP account is deleted.
Primary Actors:	Coffee Cart Manager
Secondary Actors:	VIP Database
Trigger:	The Coffee Cart Manager looks up the customer using their VIP card number.

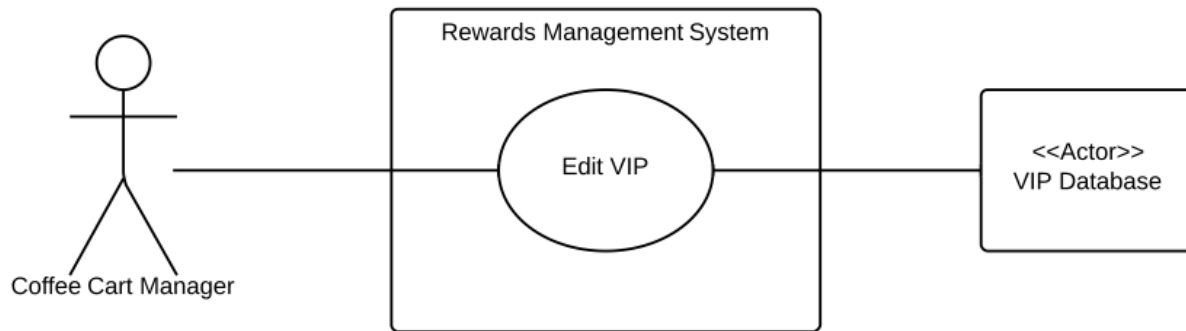
Main Flow	Step	Action
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	1	The Coffee Cart Manager looks up the customer using their VIP card number.
	2	The VIP card number is found in the VIP Database.
	3	The customer's information, including VIP points earned and VIP status, is displayed to the Coffee Cart Manager.
	4	The Coffee Cart Manager asks to delete the customer's account.
	5	The Coffee Cart Manager is asked to confirm deletion.
	6	The Coffee Cart Manager confirms the deletion.
	7	A message requesting deletion is sent to the VIP Database
	8	The VIP account is permanently deleted from the VIP Database.
	9	A message informing the Coffee Cart Manager that the deletion was successful is displayed.
	10	The Coffee Cart Manager creates a VIP card with a unique VIP card number and gives it to the customer.
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	2.1	The VIP card number is not found in the VIP Database.
	2.2	The Coffee Cart Manager is informed that the VIP card number was not found.
	6.1	The Coffee Cart Manager declines to confirm deletion.
	6.2	No deletion occurs and the customer's information is displayed to the Coffee Cart Manager.
	8.1	The VIP Database fails to delete the VIP account and replies with an error message.

	8.2	The error message is displayed to the Coffee Cart Manager.
Other Flows	(1)	Timeout: Anytime a request is made to the VIP Database, if a reply is not received in a reasonable period of time, a timeout error message is displayed to the Coffee Cart Manager.



## Use Case: Edit VIP



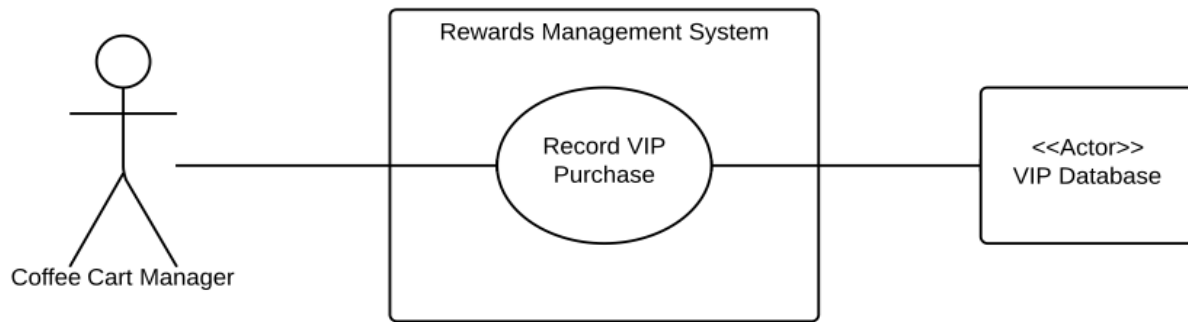
Use Case Name:	Edit VIP
Related Requirements:	4
Goal:	Edit an existing VIP account.
Precondition:	The VIP card number of the customer must be known.
Successful End Condition:	The correct VIP account is permanently edited.
Failed End Condition:	No VIP account is edited.
Primary Actors:	Coffee Cart Manager
Secondary Actors:	VIP Database
Trigger:	The Coffee Cart Manager looks up the customer using their VIP card number.

Main Flow	Step	Action

	1	The Coffee Cart Manager looks up the customer using their VIP card number.
	2	The VIP card number is found in the VIP Database.
	3	The customer's information, including VIP points earned and VIP status, is displayed to the Coffee Cart Manager.
	4	The Coffee Cart Manager asks to edit the customer's information.
	5	A new screen allowing the customers information to be edited is displayed.
	6	The Coffee Cart Manager changes the customer's information.
	7	The Coffee Cart Manager submits the edited information.
	8	The Coffee Cart Manager is asked to confirm that they want to submit their changes.
	9	The Coffee Cart Manager confirms that they want to submit the edit.
	10	An edit request is sent to the VIP Database.
	11	As long as the phone number is still unique, the VIP account is updated with the edit in the VIP Database.
	12	An information message indicating that the account was successfully updated is displayed.
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	2.1	The VIP card number is not found in the VIP Database.
	2.2	The Coffee Cart Manager is informed that the VIP card number was not found.
	8.1	The Coffee Cart Manager declines to confirm that their edit submission.

	<b>8.2</b>	No update is requested and the screen that allows the Coffee Cart Manager to edit VIP information remains displayed.
	<b>11.1</b>	The VIP Database fails to update the VIP account, possibly because the phone number is being changed to a phone number that already exists in the database, and replies with an error message.
	<b>11.2</b>	The error message is displayed to the Coffee Cart Manager.
<b>Other Flows</b>	<b>(1)</b>	Cancellation: Any time after going to the edit screen and before submitting their edit, the Coffee Cart Manager may back out of any changes by cancelling the edit process. They will then be returned to the screen that displays the customer's information.
	<b>(2)</b>	Timeout: Anytime a request is made to the VIP Database, if a reply is not received in a reasonable period of time, a timeout error message is displayed to the Coffee Cart Manager.

## Use Case: Record VIP Purchase



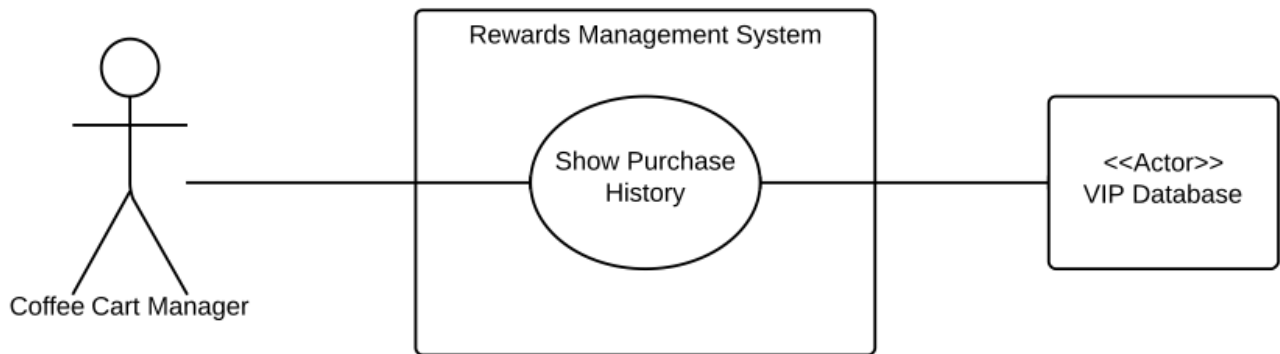
Use Case Name:	Record VIP Purchase
Related Requirements:	5, 6, 9, 10, 11, and 12
Goal:	Record items and points associated with a VIP Purchase.
Precondition:	The VIP card number of the customer must be known.
Successful End Condition:	The items and points associated with the purchase are recorded and the running total of all points earned by the customer is updated.
Failed End Condition:	No record of the purchase is made.
Primary Actors:	Coffee Cart Manager
Secondary Actors:	VIP Database
Trigger:	The Coffee Cart Manager looks up the customer using their VIP card number.

Main Flow	Step	Action
	1	The Coffee Cart Manager looks up the customer using their VIP card number.

	2	The VIP card number is found in the VIP Database.
	3	The customer's information, including VIP points earned and VIP status, is displayed to the Coffee Cart Manager.
	4	The Coffee Cart Manager asks to record a purchase to the customer's account.
	5	A new screen allowing a purchase to be recorded is displayed.
	6	The Coffee Cart Manager enters the items to be purchased and their quantities.
	7	The Coffee Cart Manager submits the purchase information.
	8	The VIP Database is used to help calculate the customer's VIP status and determine whether any discounts apply.
	9	The discounted price is displayed to the Coffee Cart Manager and they are asked if they would like to continue to record the purchase.
	10	The Coffee Cart Manager charges the customer the discounted price and indicates that the purchase should be recorded.
	11	The number of VIP points to be awarded is calculated and added to the purchase information.
	12	The purchase information is sent to the VIP Database, which records it and updates the total number of VIP points awarded to the customer.
	13	An information message indicating that the purchase was successfully recorded is displayed.
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	2.1	The VIP card number is not found in the VIP Database.
	2.2	The Coffee Cart Manager is informed that the VIP card number was not found.

	10.1	The Coffee Cart Manager declines to continue recording the purchase.
	10.2	No purchase is made and the screen allowing purchase information to be entered is displayed with the values previously submitted.
	12.1	The VIP Database fails to record the purchase and replies with an error message.
	12.2	The error message is displayed to the Coffee Cart Manager.
Other Flows	(1)	Cancellation: Anytime after entering the screen to record purchase information and before submitting the purchase, the Coffee Cart Manager may back out of their changes by cancelling the edit process.
	(2)	Timeout: Anytime a request is made to the VIP Database, if a reply is not received in a reasonable period of time, a timeout error message is displayed to the Coffee Cart Manager.

## Use Case: Show Purchase History



Use Case Name:	Show Purchase History
Related Requirements:	7
Goal:	Show purchase history for the last 30 days or in total.
Precondition:	The VIP card number of the customer must be known.
Successful End Condition:	The desired purchase history is displayed to the user.
Failed End Condition:	The purchase history fails to display.
Primary Actors:	Coffee Cart Manager
Secondary Actors:	VIP Database
Trigger:	The Coffee Cart Manager looks up the customer using their VIP card number.

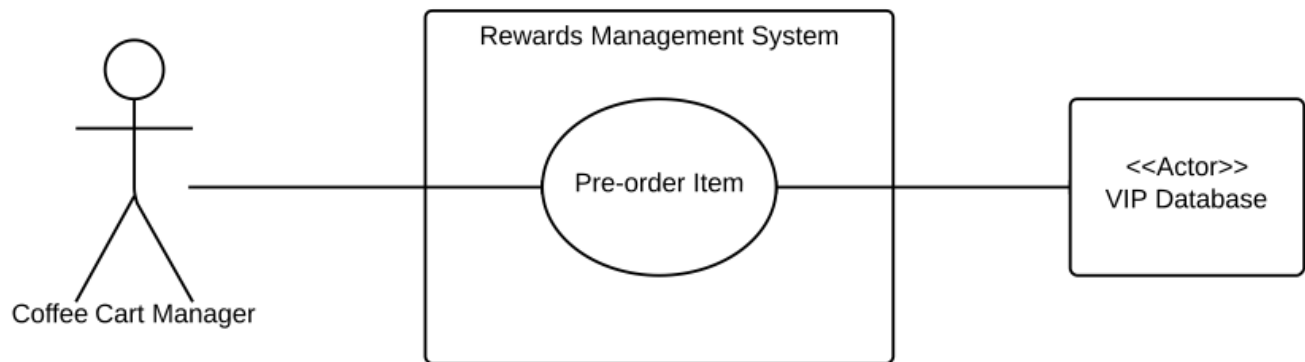
Main Flow	Step	Action
	1	The Coffee Cart Manager looks up the customer using their VIP card number.

	2	The VIP card number is found in the VIP Database.
	3	The customer's information, including VIP points earned and VIP status, is displayed to the Coffee Cart Manager.
	4	The Coffee Cart Manager asks to display the purchase history of the account.
	5	A request is made to the VIP database to return the last 30 days of purchase history.
	6	A new screen displays, showing the last 30 days of purchase history, including the number of point earned from each purchase and the total number of VIP points earned in the last 30 days.
	7	The history screen has an option to switch between viewing 30 days and the total purchase history of the customer.
	8	The Coffee Cart Manager switches to view the total purchase history of the customer.
	9	A request is made to the VIP database to return the total purchase history.
	10	Instead of displaying just the last 30 days of purchase history, the screen displays the total purchase history of the customer, including the total number of VIP points ever earned.
	11	The Coffee Cart Manager switches back to view just the last 30 days of purchase history.
	12	A locally cached copy of the purchase history from the last 30 days is displayed.
	13	The Coffee Cart Manager switches back to view just the total purchase history.
	14	A locally cached copy of the total purchase history is displayed.
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	2.1	The VIP card number is not found in the VIP Database.
	2.2	The Coffee Cart Manager is informed that the VIP card number was not found.



	<b>6.1</b>	The VIP Database is unable to access the last 30 days of purchase history and replies with an error message.
	<b>6.2</b>	The error message is displayed to the Coffee Cart Manager.
	<b>10.1</b>	The VIP Database is unable to access the total purchase history and replies with an error message.
	<b>10.2</b>	The error message is displayed to the Coffee Cart Manager.
<b>Other Flows</b>	<b>(1)</b>	Timeout: Anytime a request is made to the VIP Database, if a reply is not received in a reasonable period of time, a timeout error message is displayed to the Coffee Cart Manager.

## Use Case: Pre-order Item



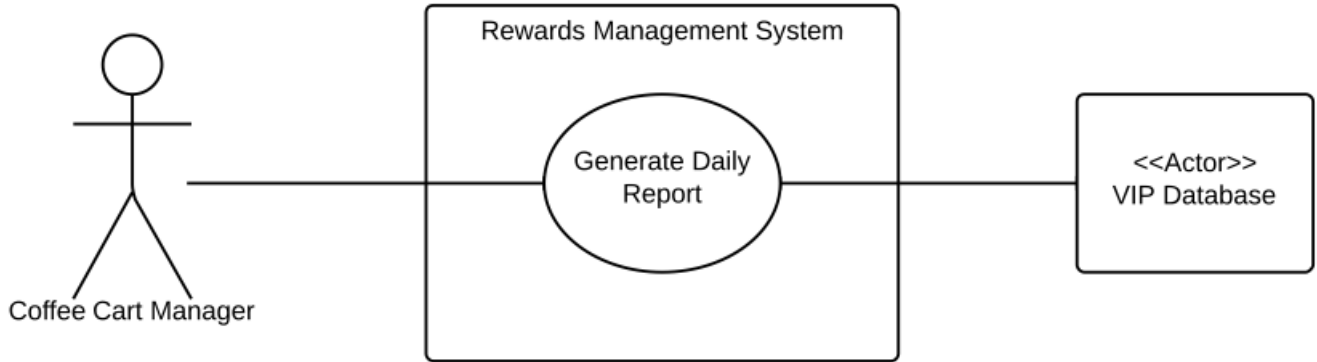
Use Case Name:	Pre-order Item
Related Requirements:	8
Goal:	A customer should be able to request that an item be prepared for them up to 30-days in advance.
Precondition:	The VIP card number of the customer must be known.
Successful End Condition:	The desired pre-order is recorded in the VIP database and submitted to a third-party vendor for fulfillment.
Failed End Condition:	The pre-order is not made.
Primary Actors:	Coffee Cart Manager
Secondary Actors:	VIP Database, Third-Party Vendor
Trigger:	The Coffee Cart Manager looks up the customer using their VIP card number.

Main Flow	Step	Action

	1	The Coffee Cart Manager looks up the customer using their VIP card number.
	2	The VIP card number is found in the VIP Database.
	3	The customer's information, including VIP points earned and VIP status, is displayed to the Coffee Cart Manager.
	4	The Coffee Cart Manager asks to enter a pre-order into the system.
	5	A new screen is displayed which allows the Coffee Cart Manager to enter in information about the pre-order.
	6	The Coffee Cart Manager enters in a date within the next 30 days and selects an item from a list of items that may be pre-ordered and submits the pre-order.
	7	The pre-order is sent to the VIP database.
	8	The VIP database checks and finds there is an open slot, sends the pre-order on to the third-party vendor for actual fulfillment, and replies with a confirmation.
	9	The confirmation is displayed to the Coffee Cart Manager.
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	2.1	The VIP card number is not found in the VIP Database.
	2.2	The Coffee Cart Manager is informed that the VIP card number was not found.
	8.1.1	(Optional) The VIP Database checks and finds that there are no open slot on that date and replies with a message showing the nearest dates both before and after the chosen date that the item may be pre-ordered, if any.
	8.1.2	A message explaining that the pre-order is not possible and showing the alternative dates is displayed to the Coffee Cart Manager.
	8.1.3	The screen for entering pre-order information is displayed.

	8.2.1	Although a slot is available, the VIP database fails to successfully record the pre-order or fails to successfully submit the pre-order to the third-party vendor and replies with an error message.
	8.2.2	The error message is displayed to the Coffee Cart Manager.
Other Flows	(1)	Cancellation: Any time after entering the screen to pre-order items and before submitting a successful pre-order, the Coffee Cart Manager may cancel the pre-order process.
	(2)	Timeout: Anytime a request is made to the VIP Database, if a reply is not received by the Coffee Cart Manager in a reasonable period of time, a timeout error message is displayed

## Use Case: Generate Daily Report



Use Case Name:	Generate Daily Report
Related Requirements:	13
Goal:	Anytime during the day, a Coffee Cart Manager ought to be able to view all VIP purchases and pre-orders made so far that day at any coffee cart.
Precondition:	None.
Successful End Condition:	A report listing all purchases and pre-orders should be displayed.
Failed End Condition:	No report is produced.
Primary Actors:	Coffee Cart Manager
Secondary Actors:	VIP Database
Trigger:	The Coffee Cart Manager invokes the daily report generation feature.

Main Flow	Step	Action

	1	The Coffee Cart Manager invokes the daily report generation feature.
	2	The request for a daily report is sent to the VIP Database.
	3	The VIP Database successfully performs one or more queries to return any purchases and any pre-orders made so far that day.
	4	The VIP Database replies with the results.
	5	A daily report is displayed to the Coffee Cart Manager, with a section for purchases, including the amount of total sales made that day, and a section for pre-orders, with information about the item ordered and the date the order is to be fulfilled, including the amount of total expected revenue from pre-orders made that day. Finally, the report should include the sum of both purchases and pre-orders for that day.
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	3.1	There is an unexpected error when the VIP Database tries to perform queries for daily purchases and pre-orders.
	3.2	The VIP Database replies with an error message.
	3.3	The error message is displayed to the Coffee Cart Manager.
	8.2.2	The error message is displayed to the Coffee Cart Manager.
<b>Other Flows</b>	(1)	Timeout: Anytime a request is made to the VIP Database, if a reply is not received in a reasonable period of time, a timeout error message is displayed to the Coffee Cart Manager.