

Traceability:

Traceability is a technique that provides a relationship between different levels of requirements and the use-cases in the system. It means that not only all the functionalities expressed by the use-cases have been implemented but also we have traceability information from the requirements to the use-cases and to the test cases.

Use-Case Index:

UC – 1.1	Purchase
UC – 2.1	Account
UC – 3.1	Daily Report

Use-Case Description**UC - 1.1:****1.1 Name**

Purchase

1.2 Goal

This use-case satisfies all of the goals of purchasing an item from a customer. The purchase would include the items chosen by customer (coffee, dessert), pre-ordered items and the checkout process.

1.3 Use-Case Team Leader/Members

Tony Potter, Murali Raju, Omar Ramos, Chandra Sapkota

1.4 Precondition

Item has been chosen or pre-ordered by customer and brought to checkout.

1.5 Postcondition

Item has been purchased and VIP points earned

1.6 Constraints/Issues/Risks

The total might not include the reduced price for coffee (half or for free)

1.7 Trigger Event(s)

Customer pre-ordering or choosing one in cart to purchase

1.8 Primary Actor

Customer

1.9 Secondary Actor(s)

Salesman

UC – 2.1:

2.1 Name

Account

2.2 Goal

This use-case satisfies all of the goals of registering a new customer, editing the information of an existing customer or deleting the information all together.

2.3 Use-Case Team Leader/Members

Tony Potter, Murali Raju, Omar Ramos, Chandra Sapkota

2.4 Precondition

The cart manager has logged onto the system to retrieve the information of the customer

2.5 Postcondition

The information such as name, phone number, birthdate and VIP card number of a customer is either registered, edited or deleted.

2.6 Constraints/Issues/Risks

The system may not be able to update the information right away.

2.7 Trigger Event(s)

Customer desiring to register, edit information or delete his/her information.

2.8 Primary Actor

Manager

2.9 Secondary Actor(s)

System

UC – 3.1:

3.1 Name

Daily Report

3.2 Goal

This use-case satisfies all of the goals of generating a daily report of purchased items, pre-ordered items, best sellers dessert of the day and the number of customers registered as a VIP member.

3.3 Use-Case Team Leader/Members

Tony Potter, Murali Raju, Omar Ramos, Chandra Sapkota

3.4 Precondition

Pre-orders and sales have been made in the day. Desserts have been sold and new members have been signed.

3.5 Postcondition

Reports has been generated

3.6 Constraints/Issues/Risks

Reports turned out faulty showing inaccurate data.

3.7 Trigger Event(s)

All events dealing with sales and customers registered in the day.

3.8 Primary Actor

System

3.9 Secondary Actor(s)

Manager

Requirements Index:

A requirement ID has been given to all the requirements as shown below:

Req – 1	Enter customers information in the system to be a VIP member
Req – 2	Add additional VIP members to the system
Req – 3	Remove customers from the system
Req – 4	Edit customer's information
Req – 5	Calculate items purchased by the customer in 30 days
Req – 6	Calculate points earned by VIP customer in 30 days
Req – 7	Calculate total points earned by the customer in lifetime
Req – 8	VIP customers be able to pre-order desserts in advance
Req – 9	VIP customer upgraded to gold level
Req – 10	VIP customer permanently upgraded to god level
Req – 11	Gold level customer receive free coffee refill
Req – 12	VIP customer receive coffee refill for half price
Req – 13	VIP customers get free dessert for every 200 points
Req – 14	Owner generates report of items purchased in a day
Req – 15	Owner generates report of items pre-ordered in a day
Req – 16	Owner generates report showing best seller of the day
Req – 17	Owner generated report showing all the VIP customers signed up in a day

Traceability Matrix from Requirements to Use-case:

This traceability matrix will help correlate and trace requirements to their use-cases.

		UC – 1.1	UC – 2.1	UC – 3.1
	Total	7	6	7
Req - 1	1		X	
Req – 2	1		X	
Req – 3	1		X	
Req – 4	1		X	
Req – 5	2	X		X
Req – 6	2	X		X
Req – 7	2	X		X
Req – 8	1	X		
Req – 9	1		X	
Req – 10	1		X	
Req – 11	1	X		
Req – 12	1	X		
Req – 13	1	X		
Req – 14	1			X
Req – 15	1			X
Req – 16	1			X
Req - 17	1			X

Test cases index:

A Test-case ID has been given to all the test cases as shown below:

TC - 1	Account setup - Enter with all fields (First Name, Last Name, Phone Number) set
TC - 2	Account setup - Enter with all fields set, text for phone number
TC - 3	Account setup - Enter with only name fields set
TC - 4	Account setup - Enter with only one name field set (test once with first name, once with second name.)
TC - 5	Account setup - Enter with only one name field set (test once with first name, once with second name.)
TC - 6	Data Entry - Change Information
TC - 7	Data Entry - Change any two of three fields (test once for each group of two fields)
TC - 8	Data Entry - Change all three fields
TC - 9	Data Entry - Delete Entry
TC - 10	Ordering Items - With no account
TC - 11	Ordering Items - With forgotten account number
TC - 12	Ordering Items - With Account (not yet VIP status)
TC - 13	Ordering Items - With Account (currently VIP status)
TC - 14	Pre Ordering Items - Non VIP Pre-Order an item
TC - 15	Pre Ordering Items - VIP Pre-Order an In Stock item within one month of current date
TC - 16	Pre Ordering Items - Pre-Order an item more than one month of current date
TC - 17	Pre Ordering Items - Pre-Order an item for a date in the past
TC - 18	Pre Ordering Items - Pre-Order an item no longer available on given date
TC - 19	Pre Ordering Items - Cancel existing Pre-Order, confirmation number given
TC - 20	Pre Ordering Items - Cancel existing Pre-Order, confirmation number not given, account number given
TC - 21	Pre Ordering Items - Cancel non-existing Pre-Order
TC - 22	Get Daily Report - Request daily report for current date

TC – 23	Get Daily Report - Request daily report for past date
TC – 24	Get Daily Report - Request daily report for future date (within one month.)
TC – 25	Get Daily Report - Request daily report for future date (more than one month.)
TC – 26	Get Daily Report - Request monthly report for given month

Traceability Matrix for use – case to test-cases:

This traceability matrix will help correlate and trace use-cases to their test cases.

	Use-case	UC – 1.1	UC – 2.1	UC – 3.1
Test-case	Total	15	6	6
TC -1	1		X	
TC -2	1		X	
TC -3	1		X	
TC -4	1		X	
TC -5	1		X	
TC -6	1		X	
TC -7	1	X		
TC -8	1	X		
TC -9	1	X		
TC -10	1	X		
TC -11	1	X		
TC -12	1	X		
TC -13	1	X		
TC -14	1	X		
TC -15	1	X		
TC -16	1	X		
TC -17	1	X		
TC -18	1	X		
TC -19	1	X		
TC -20	1	X		

TC -21	1	X		X
TC -22	1			X
TC -23	1			X
TC -24	1			X
TC -25	1			X
TC -26	1			X