Requirement Traceability Matrix

Req ID	Req Description	Use cases Involved	Code file	Method Name	Test Case Id	Test Case Description
Req101	TC Cart Manager adds a New Customer	TC Cart Manger ->Add Customer ->External Library	AddCustomerActivity.java Customer.java External Lib-PrintingService.java	handleAddNewCustomer() handlePrintCard() PrintingService.printCard()	TC001_Add_Customer to TC006_Add_Customer	To verify whether the TC Cart Manager is able to add new Customers and 8-digit unique ID gets generated automatically after the Customer is added and a card is printed.
Req102	TC Cart Manager scans a Customer card	TC Cart Manager ->Hardware Devices ->External Library	External Lib - QRCodeService.java	handleScanCard() QRCodeService.scanQRCode()	TC007_Scan_Customer_Card TC008_Scan_Customer_Card	To verify whether the TC Cart Manager is able to scan a Customer's card using the Customer's unique id
Req103	TC Cart Manager edits Customer Info	TC Cart Manager -> Edit Customer Info	EditCustomerInfoActivity.java Customer.java	handleEditCustomerInfo()	TC009_Edit_Customer_Info to TC015_Edit_Customer_Info	To verify whether the TC Cart Manager is able to Edit the Customer's info which already exists and newly modified details get updated to the System.
Req104	Once the Customer makes Purchase and swipes credit card his/her Credit card is scanned	Customer & TC Cart Manager ->Do Purchase ->External Library	MakePurchaseActivity.java CreditCard.java External Lib - CreditCardService.java	handleMakePurchase() handleScanCreditCard() CreditCardService.readCreditCard()	To be done	To verify whether once the Customer makes Purchase a transaction has been initiated,Customer's credit card has been scanned for Authentication purpose.
Req105	Once the Customer makes Purchase, Transaction is initiated,Credit is calculated and Discount/Rewards have been applied and email should be sent to the Customer when he/she gets a credit	Customer ->Transaction ->Calculate Credit & Apply Discount & Rewards -> Send email -> External Library	MakePurchaseActivity.java External Lib-EmailService.java	handleMakePurchase() Calculate Credit - To be done handleApplyRewardDiscount() EmailService.sendEMail()	To be done	To verify whether once the Customer makes Purchase a transaction has been initiated, Credit is calculated and Discounts/Rewards have been applied

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Req106	Once the Discount & Rewards have been applied, the Customer should be connected to the Payment Service provider to make the payment and email should be sent after Payment processing is done	Customer ->Transaction-> Send email -> External Library & Payment Service provider	MakePurchaseActivity.java External Lib- PaymentService.java & EmailService.java	handleMakePurchase() PaymentService.processPayment() EmailService.sendEMail()	To be done	To verify whether the Customer is connected to payment-processing service provider that can process credit card transactions via External library and email is sent once payment processing is done.
Req107	Email should be sent as soon as the customer qualifies for the VIP status	Customer ->Transaction-> Send email -> External Library	MakePurchaseActivity.java	To be done	To be done	To verify whether email is sent to the Customer when he/she achieves VIP status.
Req108	TC Cart Manager views the Transaction history of a Customer	TC Cart Manager -> View Purchase & Rewards History	ViewTransactionActivity.javaTransaction.java	To be done	To be done	To verify whether at any particular point in time, the TC Cart manager should be able to view, a complete list of Customer transactions