**e-Cards iPhone Application**

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Mobile Device: iPhone Start: 12-oct-2015

OS: iOS End: 12-dec-2015

**Abstract**

e-Cards iPhone application digitalizes all bank cards (Debit, Credit, Forex and Discount and loyalty cards) of the customer and allows a new way of payment at the vendor locations through the customer’s mobile. Traditional plastic cards, chip cards will be transformed into virtual cards in the application and make all type of transactions possible. The application requires the customer credentials to login to the application which shows list of all cards owned by the customer. For making transactions using cards listed in the application, QR code needs to be generated from the selected card. That QR code securely holds the information of the code. The counterpart of e-cards application has the functionality to scan the generated QR code from the card. Usually vendors have Scanner app in their locations that allows the payment on the purchase through scanning QR code on e-Cards application.

In support services, customer services provide extended services to the customers to address their problems. Texting, emailing and face time call support are provided through the application to quickly address the issues. Customer can be able to check the unbilled transactions, monthly statements on each card. A generation of gift card and sending that card to others by providing the customer id of other customer will be made possible through the ease of handling e-cards application.

QR code scanner is other AUT which handles the tasks of scanning the QR code, decrypting the card details in it and sending the transaction details to the server. User can check the recent transactions in the statements in the e-Cards application.

**Testing AUTs and QA:**

iOS testing strategy involves both automation and manual testing. Testing broadly covers the test cases from the installation of application, crashing, memory management (memory leaks and allocations) to the deployment of application on real device with valid developer certificates of IOS.

Under automation testing, **Unit testing and Integration testing** is covered with **XCTest** framework provided in Xcode and **UI Automation** testing covered by **Automation Instrumentation** provided in Xcode tool. We can create suites of tests that automate performing user operation sequences and verifying results.

XCode project provides multiple targets for testing the functionality and UI response. Under application testing target, all test cases of the application will be written and tested. Test cases related to UI will be written under UItest target. The execution of the test cases gives test cases completion results along with code coverage.

Tools:

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| **Tool Name** | **Purpose** |
| XCTest | Unit testing and Integration testing |
| UI Automation | User interface testing and sequence flow testing |
| Memory leaks Instrumentation | Checks the obvious memory leaks in the application |
| Analyzer | Static analysis for code review |