

# MobiLyte helped a cross-border ecommerce company build up a portal with financial functions

a MobiLyte Case Study

Authored by:  
MobiLyte Inc.,

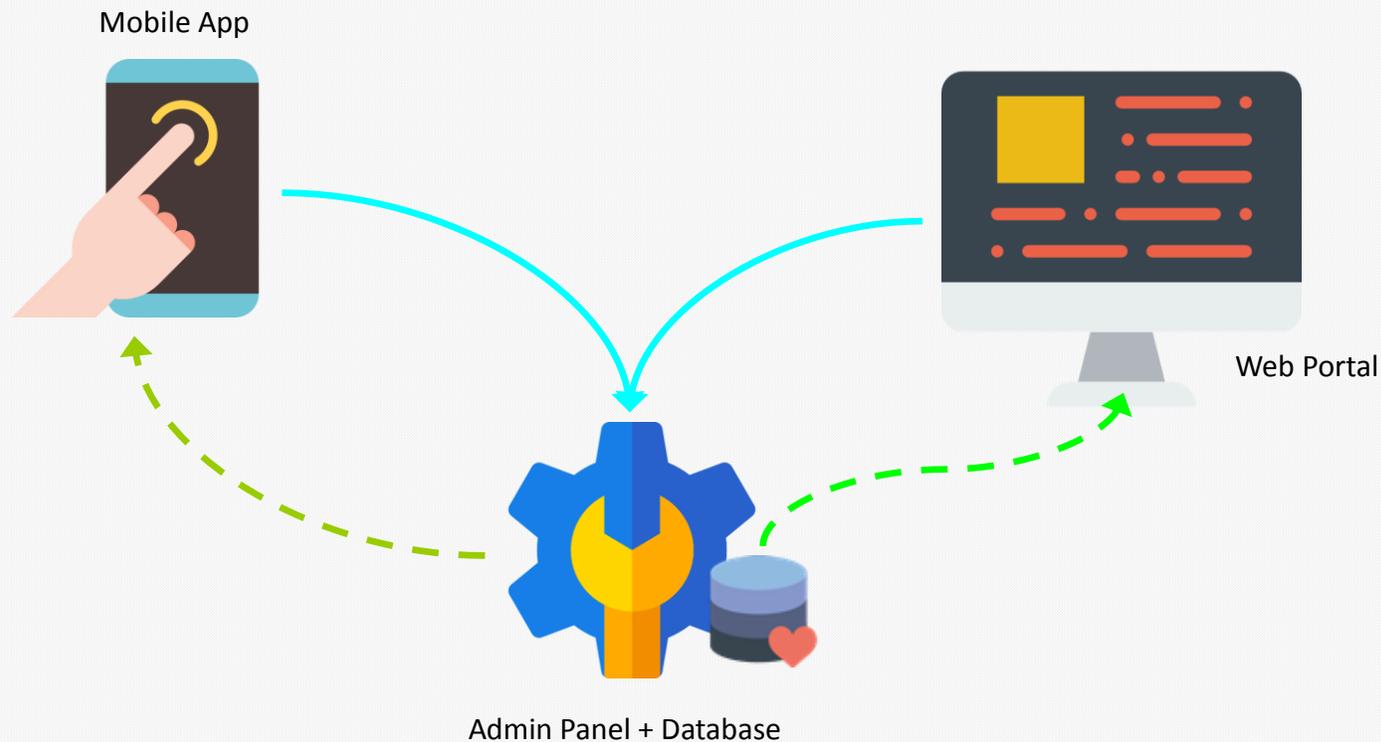
**Brief**

This product is a financial tool created to help support the commercial activities of Chinese individuals residing in USA. The system is to act as a portal that enables sales and purchase of products online. The system is also going to allow users to access financial assistance for both purchase of products and in the form of loans for business owners.

The objective is met by creating a three-layered system wherein users are able to interact by means of mobile applications, both Android and iOS, a website, and a super admin control panel that is also accessed via the internet.

The system further supports the business activities of Overseas Credit, a financial firm.

System Environment



## Operational Specifications

### Mobile Platform

iOS 7 - 10

Android 5.1 onward

### Web

Cross Browser compatible with:

IE: 9 onward

Firefox: 49.2 onward

Safari: 8.2 onward

### Server Requirements

To handle: 500 transactions per second via web

To handle: 1200 users concurrently



## The Environment

The application is to be an extended E-commerce platform composed of:

- i. Mobile Application: Android and iOS compatible
- ii. Website
- iii. Administrative Panel

The system is to interact with three distinct user roles, who have overlapping functionality.

- i. Buyer: The user who would use the mobile app only
- ii. Seller: The user who would use the mobile app and website
- iii. Administrator: The user who would use the web based administrative panel

## E-Commerce Simplified

To meet the unique requirements of the system, a custom e-commerce portal was created. This system was designed so that the seller could easily register himself, and add products to his inventory, via both the website and mobile app.

The system has been created keeping in mind the need for the administrator to verify the credentials and information input by the seller. A comprehensive administrative panel provides in depth system reporting, so that business decisions can be made in an informed manner.

The mobile app is able to provide a platform from which buyer users can easily locate items of interest and place and order for

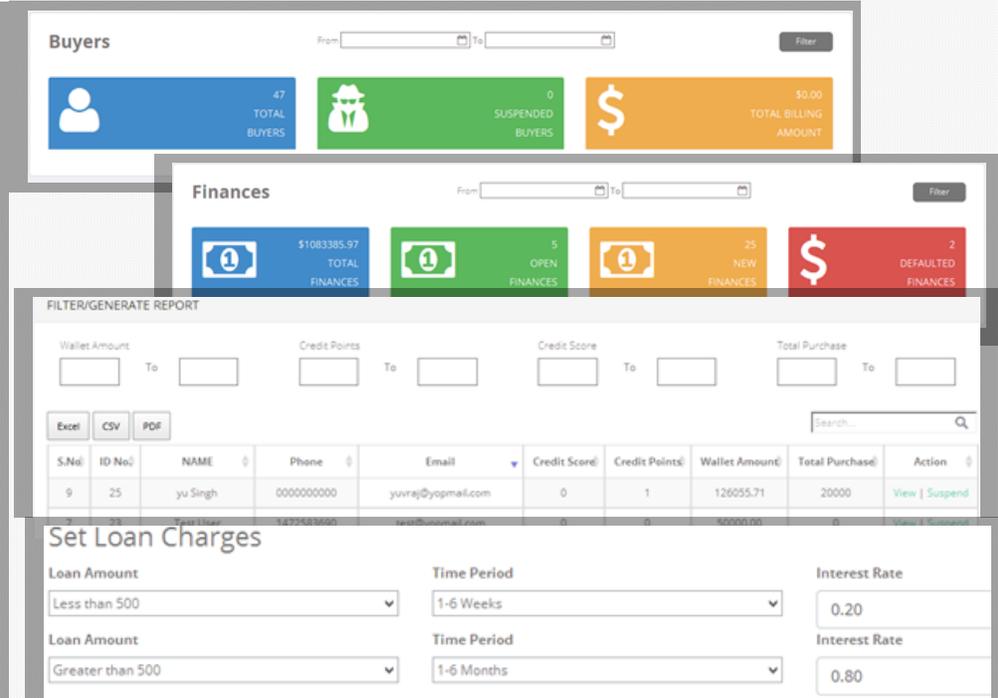
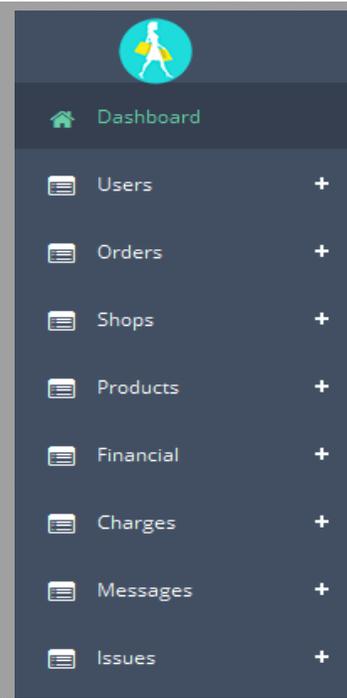
the same. The mobile app is able to provide a platform from which buyer users can easily locate items of interest and place and order for the same. The application is also able to act as a control center for the seller user. In addition to the website, the mobile app also provides the seller user is with a comprehensive shop, product and order management system. These include options for requesting for financial assistance while purchasing, or a loan request for seller users.

The system has a comprehensive wallet system, which provides for payment, earning, and redeeming abilities for both user types. For ease, multiple payment gateways have been integrated. This further provides support for multiple currencies.

## Functional Specifications

### Web

- To be able to manage users on the system
- To approve seller users
- To approve products added by seller users
- To be able to manage orders
- To be able to download required reports
- To maintain financial reports
- To provide issue resolution
- To provide category management
- To be able to send out mass and individual messages



## System Control

The nature of the system is such that it required a considerable amount of moderation. This moderation ranged from controlling the users who are able to sign up as sellers, to the information regarding their products that they are putting up.

The administrator also has the need to be directly involved in all financial aspects of the system. It is required that the admin is able to track and resolve issues for any order being generated on the environment. To this end a complete, but simplified, and custom e-commerce system was developed.

The admin is also required to receive various forms of communication from the front-end users. This includes, but is not limited to, contact form messages, reported issues, and finance requests. The admin is able to manage the status of all of the above via the system. The admin also receives in depth metrics regarding a user's financial profile, calculated via a custom algorithm. These details help the admin in making key decisions regarding a request. An approved request can be logged, and maintained via the admin panel itself.

The final key aspect of the admin panel is in depth reporting regarding various parameters that are important to the business. All reports have been developed such that they can be downloaded in excel format, making book keeping scale-able as well as a breeze.

## Functional Specifications

### Mobile App

To permit the buyer user to browse and locate stores

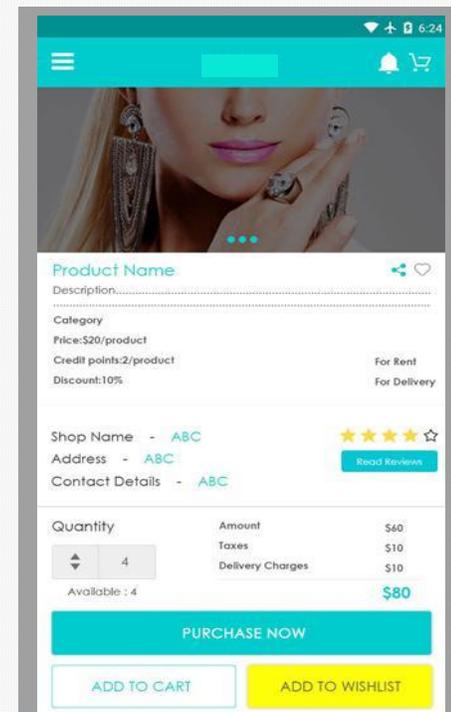
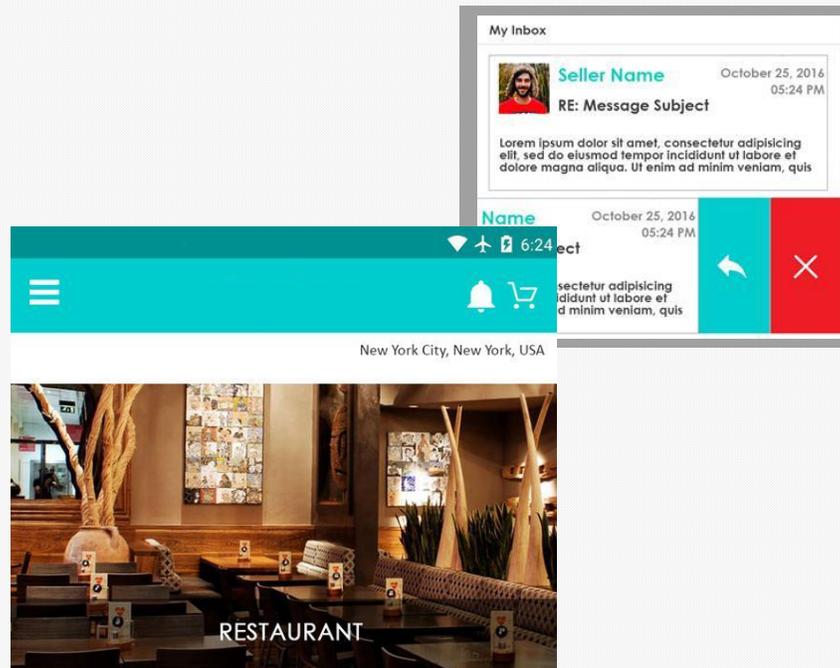
To permit the buyer user to browse and locate products

Allow the buyer to make a purchase, make a payment and track an order

To permit seller user to add products to his shop

To permit seller to manage orders

To permit users to request financial assistance



## E-Commerce Simplified

The mobile application for covers both the iOS and Android operating systems. The application has been built to allow an exchange of goods and services between the two major user roles: Buyer and Seller. The mobile application allows the buyer user to browse and search shops on the basis of location. The buyer is able to view details regarding a store, and the products that the seller has added to his store.

The cart functionality allows the buyer to purchase an item, make payments and thereon track his order. For payments, and for the business objectives, a comprehensive, and secure wallet system was implemented. With the integration of secure payment gateways, the system converts

paid amounts into virtual currency that can be used to make purchases. Further, the amount sitting in a user's wallet earns interest every night.

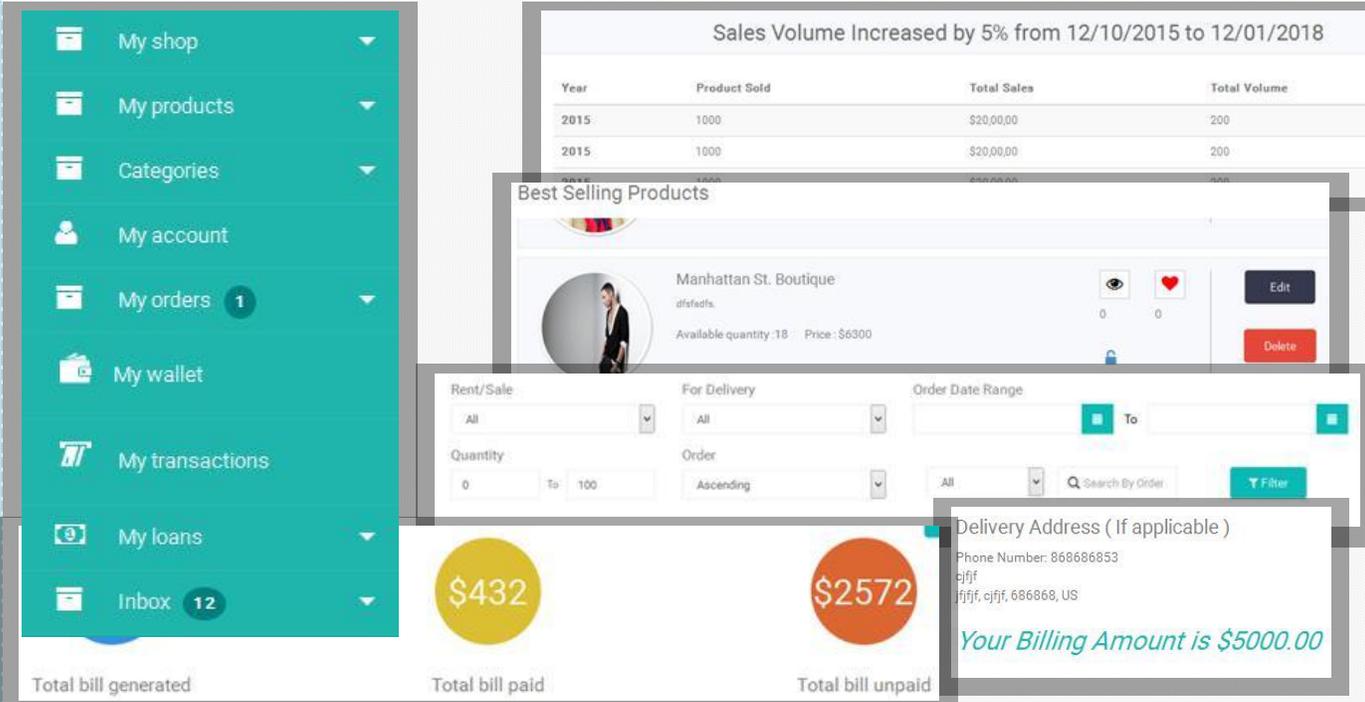
As a seller, the user is able to manage their shop and products, as well as order. The seller receives all dues in his virtual wallet, which like the buyer user, can be redeemed whenever the seller wishes so. The seller can also generate bills that can be forwarded to other users on the system using QR codes or by using a registered phone number.

But the users earn points when they transact via the system. These credits can be used to discount the purchase bills.

The website provides the same functionality as the app for seller users.

**Functional Specifications**

- To register a seller user
- To allow a seller to upload products to his shop
- To allow seller to manage orders via app
- To allow seller to manage their profile
- To allow seller to manage their finances
- To allow seller to apply for a loan



**Ease of Use**

For a secure, and flexible product and shop management system, the seller is also provided with a website. This website along with being a portal for the seller, is a gateway to market their services.

The portal permits a seller user to register himself, which in turn activates his account only after the user has been verified and approved by the administrator.

The seller is able to provide in depth documentation regarding his business. Further, the seller is able to set up products for sale with all necessary details involved. This extends from product brief to taxes and delivery charges.

The environment also allows a seller to generate a bill for purchases that are not made via the system. The billing system is based on QR code that can be scanned, and then paid. The same bill can be forwarded among users, so that a user other than recipient can also clear the bill.

The bilingual website is also able to provide the seller with the option to apply for a business loan. The application for the loan is expansive to the point that the administrators are able to judge whether or not the concerned seller is eligible for a loan. The same process is further aided by a custom algorithm. This algorithm calculates the value of a seller on the basis of his background and the activity as seen on the system.

# PROJECT APPROACH

## PROJECT APPROACH

Agreement on terms

Elicitation of requirements and documentation

Finalization of solution

Project Planning

Design & Development

Quality Assurance

Deployment



## TEAM STRUCTURE

Project Manager

Project Owner

Development Support:  
Sr. Business Analyst  
Business Development Exec

Development Team:  
Sr. iOS Developer  
Sr. Android Developer  
Sr. Web Developer  
QA Engineer  
Graphic Designer

## Informed Decision Making

The approach towards project management at mobiLyte Inc. is one geared to generate outstanding results with minimal time and cost to client. The fine-tuned project execution places emphasis on planning so that objectives are clearly defined along with time lines.

The process begins with Business Analysis, wherein an analyst garners information from the client. This involves understanding of the business objectives, as well as real world implications of the project. A problem statement is defined, to solve which a solution is proposed. Upon detailing the solution, documentation is generated, which accurately records every piece of information that the system needs to take into account while being developed. Documents in the form of wireframe, functional, system and business requirements are

shared with the client for feedback and approval.

The development team along with the project manager generate a feasible project plan. The prime objective of the project plan is to implement core functionality at the earliest so that all major roadblocks are identified and tackled at the earliest stage of the project, thereby reducing risk. Timely updates on design, development is a key factor in mobiLyte's approach towards client satisfaction.

Quality assurance is a key aspect of ensuring project success. Every deliverable till final deployment is thoroughly tested by MobiLyte's excellent quality assurance team.

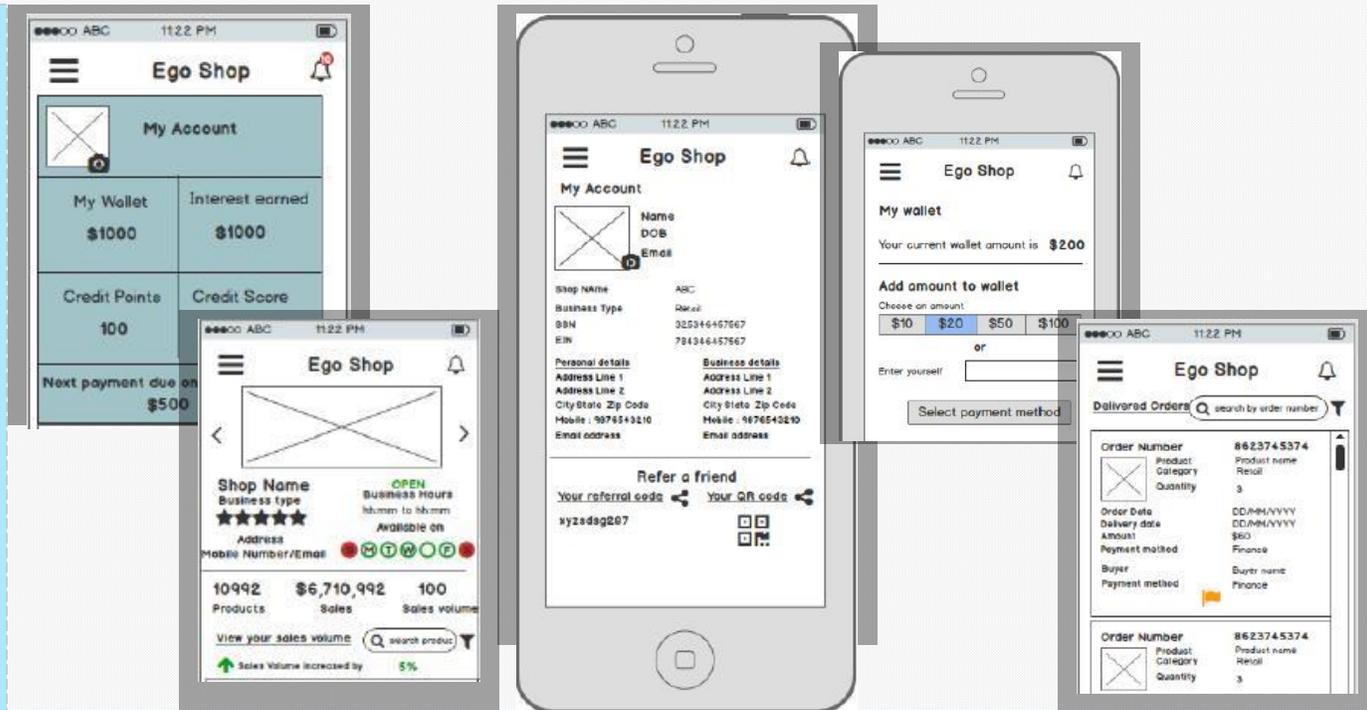
STEP I

Project Initiation

Agreement on terms

Elicitation of requirements and documentation

Finalization of solution



Solution Creation

Project initiation is about ensuring the scope and scale of the task at hand is understood clearly. Clear understanding of business processes and requirements enables the team to create a solution that provides real world value to the client. To this end, the vision of how the system to be built fit into the complete environment was heavily discussed.

Post discussions a problem statement was established, to solve which the proposed solution of a layered system wherein the roles of the iOS App, Android App, Website and Administrative Panel were understood. Details of how the mobile app, website and admin panel would interact in providing control and usability to both front end users as well as the administrator were clarified.

The final deliverable for mobiLyte were defined to be:

- Project Documentation
- Wireframe
- Functional Requirement Document
- Flow Chart
- Requirement Traceable Matrix
- Notifications Document

- iOS Application
- Android Application
- CodeIgniter based website
- Administrative Panel

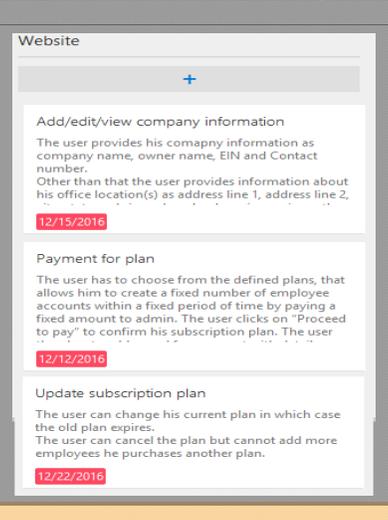
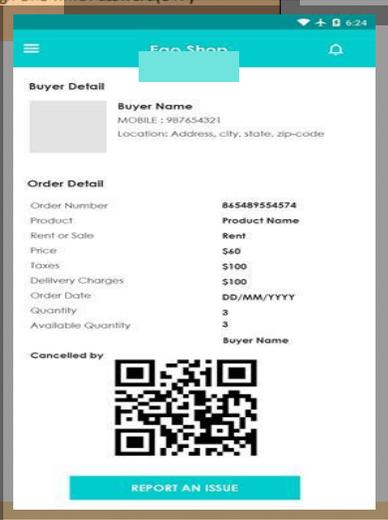
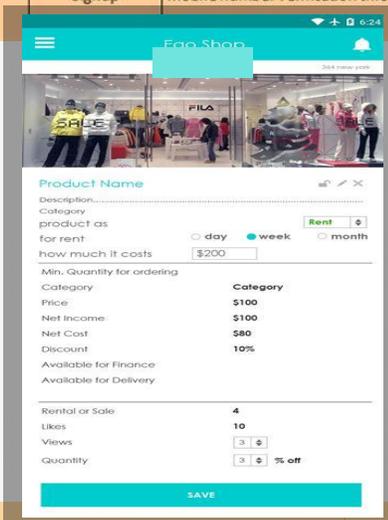
STEP II

Project Development

Project Planning

Design

Role	Epic	User Stories	S No.	Change/Feedback Description	Log Date
Seller Buyer	Signup	Seller provides credentials for registration(mo	1	Buyer: Every time user refresh cancelled orders tab under my orders component, images changes for same particular order.	05/01/2017
Seller Buyer	Signup	Seller provides referral code or scan QR code t the process.			
Seller Buyer	Signup	Mobile number verification through One Time	2	Buyer: Cancel button is not working on the confirmation screen for cancelling the order.	05/01/2017



Project Planning for Success

Documentation created by Business Analysts is shared and clarified to the development team. Based on the information required team members created a Project Plan. This plan is to outline the time required to build every minute detail into the system as per the Functional Requirement Document and the Functional Traceable Matrix.

The project plan approached the required tasks in an agile framework. Backlogs were identified, and milestones were established. Scrums listing out functionality to be achieved in a given time frame were generated such that time for QA, debugging and deployment was accounted for.

Project plans are thereon used to chart the progress of the project. The very first task for project development is finalizing the design.

Designs are based on answers received from standardized questionnaires filled by the client and the wire frame provided by the business analyst. The designs generated by the team are sent for rounds of feedback and approval from the client.

During this exercise, the development team is able to set up the required environments, and get a head start on database architectures.

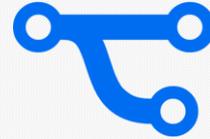
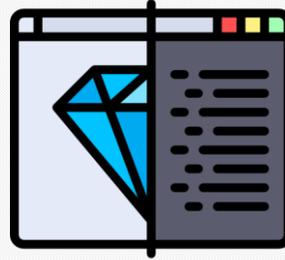
### STEP III

#### Project Development

Development

Quality Assurance

Deployment



#### Software Engineering

For the development of the Financial Application environment, a considerable amount of time was spent in Research and Development, to bring on board technical skills necessary. Time was spent in analyzing payment gateways, their advantages and disadvantages, as well as their processing fees. Further time was spent to understand banking norms in USA and China.

Third party APIs used had to be researched as well, so that scenarios for each possible interaction from the user end can be addressed in an industry compliant manner.

Further, in development a major roadblock encountered was

ensuring that the system provided a good level of order, and financial management, without getting into too many details. The aim of the e-commerce and financial modules of the system was to provide the base required, however, to limit the system before it expands into something that becomes cumbersome to use.

Further, sourcing and managing Chinese content was a key challenge. Ensuring that formatting of the website and application were not affected, as well as the system doesn't get bloated with multi-language support was a key objective.