

CASE STUDY ANALYSIS: Multi-Vendor Ecommerce App



Development of a Multi-Vendor Ecommerce App

Technical Specifications

Front End:

Web Application: Angular 5

Android & iOS App: React Native

Back End:

Web API: .Net (MVC framework)

ASP.Net Identity 2.0

Entity Framework 4.5

Database:

SQL Server 2014

3rd Party Implementations:

PayPal, Western Union Bank, Twilio, Native Base Components

Executive Summary

The E-Commerce App is a multi-vendor shopping app for mobiles (android and iOS) that can be used for buying and selling different kinds of products and services. Once registered with the app, a user can view, like, save or buy any product/service. The app is rich with the various modern features like Wish List, Shopping Cart, Order Tracking, Order History, Real Time Chat, and Online Payment etc. The administrator has access to a web based admin panel to manage the users, products, categories, stores, orders, business details and bank details etc.

Problem(s)

1. Hamburger (Menu with Navigation Drawer Icon):

Requirement was to create a sliding sidebar menu that would be used to navigate other screens of the app. It was quite troublesome to configure the one with desired layout and functioning as Stack was not at all in correct format.

2. Splash Screen

Splash Screen, also known as Launch Screen is a View that shows when the app starts first time. It automatically hides after few seconds and only shows when the application is restarted. There is no default option available in react native to show splash screen but as it has become an inseparable part of any Ecommerce app, it became mandatory to implement the one in any way.

3. Image Up-loader

The requirement was to upload images using camera as well as device storage. This is not available directly in React Native.

4. Payments

The requirement was to give provision to the app users to pay either by cash on delivery or by cards. The main challenge was that there is no common SDK available in react native for both Android and iOS.

5. Real Time Chat and SMS

Customers can send direct messages to the sellers on platform as well as can chat in real time. The problem here was to filter and manage firebase database with individual user's message history.

Solution(s)

1. We used and customized **react-native-drawer plugin** for customizing drawer labels, fix drawer toggle, make our own custom drawer component and add logout feature to drawer.

2. We used **react-native-splash-screen** plugin separately for android and iOS app so that we can show splash screen on both versions (android and iOS) of the app.



3. We had to use two plugins for this “**react-native-image-picker**” and “**react-native-image-resizer**” for uploading images, using device camera or device storage.

4. To integrate payments system, we have used **.Net SDK** and built a **custom API** which is handling all the payments. The integrated payment gateways (PayPal and Western Union) just receive payment amount and all other processing is managed by the custom built API.

5. We used and customized **react-native-gifted-chat** plugin to keep track of individual users' chat history in firebase.

Result:

ADMIN PANEL (Web Application):

A web application is in existence where admin can manage users, products, stores, business details, bank details, and orders etc. Only the administrator has access to the web app.

MOBILE APP:

The final output is a beautifully running multi-vendor e-commerce app with 3 kinds of users – Admin, Seller and Buyer.

Admin: The administrator has full access to the app with the provision to add categories and activate or deactivate any store.

Seller: A seller is the user who registers to the app for selling his products and/or services. They can create their own stores (only one per seller) where they can add/edit/remove their products and delete their information along with their availability status. A seller can also become customer of any other seller using the same profile. Sellers have full access to their profiles with the provision to add physical location of their stores if available

Buyer/Customer: A buyer is the user who visits the app to view, save or purchase the available products and/or services. A buyer has full access to his/her profile with the provision of automatic detection to their address using Google Map. They can add products to their carts and purchase those using credit card or COD. Buyers can also track orders and view their order history on the app. The most important and useful feature a buyer can use here is the direct private messaging or real time chat with the seller.

