

Online Auction System

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Abstract -- An online auction is type of an auction that takes place over the Internet. It is a popular method for buying and selling products and services. Such systems give the best price to the seller as well as the buyers. The application proposed in this paper was developed with the objective of making the system reliable, easier and fast. Through this application, anyone can sell anything on the website by sitting at home. The application is made as simple as surfing a website. Even non-technical persons can easily interact with the process of buying and selling on the application. An online auction system permits a customer to submit online orders for items and/or services from a store that serves both walk-in customers and online customers. The online auction system presents an online display of an order cut off time and an associated delivery window for items selected by the customer of any 2nd hand products. The online auction system does not settle with a credit supplier of the customer until the item selected by the customer is picked from inventory but before it is delivered. Therefore, the customer can go online and make changes to the order. In addition, available service windows are presented to the customer as a function of customer selected order and service types and further, the order picking is assigned in accordance with a picker’s preference. When ordering goods, a virtual shopping cart is also provided by many shopping systems for holding items selected for purchase. Until a customer completes their shopping trip, successive items selected for purchase are placed into the virtual shopping cart. Virtual shopping carts may be examined at any time, and their contents can be deleted and edited at the customer’s end.

Keywords: Online auction, App development, Service windows, Platform development, User interface design, User experience design

I. INTRODUCTION

ONLINE auction is a business model, where bidding is done in order to sell items. We treat the fraud detection with a binary classification. For buying product online user have to provide his personal details like email address, license number, PAN card number etc. Only the valid user will have authority to bid. This prevents various frauds occurring in online shopping. In online auction system proposed in this paper, one is able to sell 2nd hand product in online mode. This project is different from others as many such websites don’t follow rules like return of items, price refunds, product-quality etc.

II. PROBLEM STATEMENT

When we buy any second hand product from a website, often there is no rule to return that product if the buyer is

not satisfied. Complains against that seller due to frauds/scams are common. Here, we attempt to rectify such unethical practices.

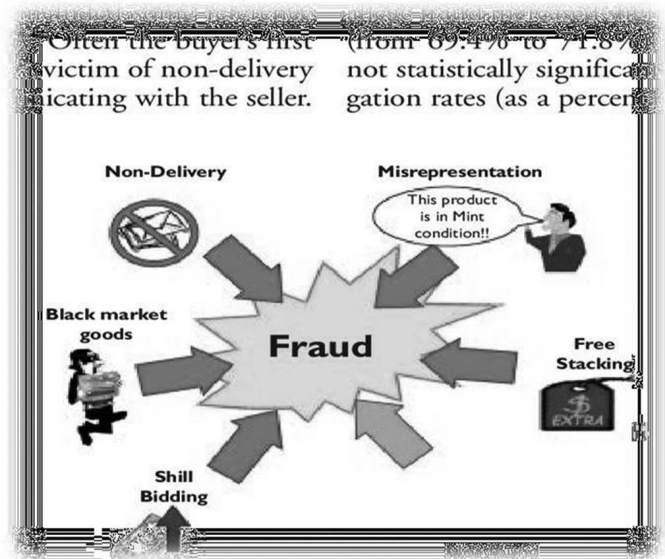


Figure 1. Online sales are vulnerable to many types of frauds.

III. DESIGN

Market Analysis: To make the most out of a mobile app, comprehensive market research and promotion analysis are required. Areas needing attention include:

Consumer Demographics: One should be sure about various categories of customers and integration before making any sales. Accordingly, presentation of products or services is determined. Diverse mix of buyers need different ways of showcasing commodities for success.

Niche Competitors One must know competitors well for ensuring sales. It pays to study their app design and features: what people like about their app and what they don’t? One should find their strengths and weaknesses to add value to your app design. There is a well-known piece of advice: “While it is wise to learn from experience, it is wiser to learn from the experiences of others” — Rick Warren.

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Figure 2. Global Online auction market (2022-2026).

IV. SPECIFICATIONS AND PROTOTYPE

Depending on the target audience and the business model, MVP features and functionality are finalized e.g., for book shopping app, it must have a preview of the book besides comments from previous buyers. However for a grocery shopping app, an option to pay by coupons and discounts is desirable to lure buyers.

A prototype represents the first glance of what the mobile shopping app would look like. An App builder can help to create a prototype. Try to cover every visual aspect of the app.

V. APP DESIGN

Two approaches are followed:

UI Design: It means ‘User Interface Design’. Easy-to-use and user-friendly interface is the obvious necessity. It allows customers to interact with the app intuitively and understand the app better. Buttons, color schemes, post types, functions, come under the UI design.

UX Design: It means ‘User Experience Design’. This encompasses the feeling that customers get while using the app. Easy-to-read fonts, and font sizes, smooth scrolls, and the performance of the app come under UX design. Making payments should be smooth and secure. It must have various payment gateways apps, credit card details, and net banking to enhance customer experience. As Jeff Bezos says: “*If you do build a great experience, customers tell each other about that. Word of mouth is very powerful*”.

VI. THE RIGHT PLATFORM

One needs to choose a proper e-Commerce platform for creating a shopping app that can grow business the most. Countries like China and India are one of the fastest-growing markets for smartphones and Android is dominating that arena: In case of Android operating system, one gets a vast

market to grow. Customers in the US, North America and Eastern Europe prefer iOS. Interestingly, these customers are willing to pay more. Another benefit pushing you to create a showing app for iOS is that it takes less time as you need to design it for only the latest two versions. However, an Android-based shopping app needs to be designed for a wide range of devices and screen sizes. Thus, the middle ground is to make a shopping app compatible with both iOS and Android. Hence, it is recommended that design it first for iOS and then for Android.

VII. APP DEVELOPMENT & TESTING

Mobile app development involves coding, bringing the design to real life. Developing an application is not a one-time process: It needs to be tested regularly and updated and modified. Smooth functionality, usability, and performance all depend on app development. Since the code needs to be simple and functional at the same time, it is wise to hire app developers. Even if one knows coding, calling developers saves considerable time. A shopping app has to support online-transactions and shipping integrations. This needs utmost secured coding skills and rigorous testing before launch. If not done right, one may face a lawsuit and brand degradation, which is more expensive than hiring a professional app builder.

REFERENCES

- [1] Cennamo, Carmelo and Juan Santalo, “Platform competition: Strategic trade-offs in platform markets”, *Strategic Management J.*, vol. 34, no. 11, 2013, pp. 1331–1350.
- [2] Thomas R Eisenmann, Geoffrey Parker and Marshall W. Van Alstyne, “Platform development. *Ibid.* vol.32, no. 12, 2011, pp. 1270–1285.
- [3] A.D. Miyazaki and A. Fernandez, “Consumer perceptions of privacy and security risks for online shopping, *J. Consumer Affairs*, vol. 35, no. 1, 2001, pp. 27-44.
- [4] Jean-Charles Rochet and Jean Tirole, “Platform competition in two-sided markets”, *J. European Economic Association*, vol. 1, no. 4, 2003, pp. 990–1029.
- [5] M. Samadi and Nejadi A Yaghoob. “A Survey of the effect of consumers’ perceived risk on purchase intention in e-shopping”, *Business Intelligence J.*, vol. 2, no. 2, 2009, pp. 261-275.



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