E-Commerce Website with Enhanced Security

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Abstract - *E-commerce websites enable the distribution, selling, buying, marketing and servicing of products or services over the internet. It helps to reduce costs while reaching a wider market. The primary goal of an e-commerce site is to sell goods and services in online. People can buy goods or products in online just by visiting website and ordering the items in online by making payments on online. In existing systems, there is always a threat to digital wallet due to hackers. E-commerce digital marketing with enhanced security is provided to prevent the website from hackers. In the proposed system, security at the transaction time is provided. Both OTP and e-mail messages to verify the user to secure the user account. But, in existing system they either send OTP or e-mail messages to verify the user account. In this way it makes e-commerce system more secure and prevent the website from unauthentic operations. Further, the product reachability by advertising and digital marketing strategies are provided. Search Engine Optimization (SEO) techniques are also added to make the website easily reachable by the people.*

Key Words: *E-Commerce market, one time password, Security, Search engine optimization, Payment gateway*.

1. INTRODUCTION

E-commerce enhances efficiency and flexibility of the trading activities. It minimizes the distance issues of trade. It allows user to view catalogues remotely. This system is beneficial for online e-commerce application as well as application for financial institutions. It is also required by several web applications. The demand of online buying is increasing day by day. The identification and authentication of a personal using cryptography, provides high assurance in its security model. We have a tendency to plan associate degree formula for enhancing the safety of OTP. SEO (Search Engine Optimization) is the development of subsequent the principle of the search engine such as site structure, webpage language and interaction diplomatic strategies for the balanced planning to improve the site search performance in the search engine and increasing the opportunity of customer discovery and access to the website.

Fig-1.1 process of ecommerce

2. EXISTING SYSTEM

In existing systems, there is always a threat to digital wallet due to hackers. E- Commerce digital marketing with enhanced security is provided to prevent the website from hackers. They either send OTP or e-mail messages to verify the user account. The existing system only provides text-based interface, which is not as user-friendly as Graphical user Interface.

2.1 Disadvantages in Existing System

a) The existing system can reach large numbers of users and their friends to spread spam,

b) The existing system can obtain users' personal information such as email address, home town, and gender, and etc.

c) The existing system can "re-produce" by making other malicious apps popular.

3. PROPOSED SYSTEM

In the proposed system, security at the transaction time is provided. In this we introduce a method to send both OTP and e-mail messages to verify the user to secure the user account. But, in existing system they either send OTP or e-mail messages to verify the user account. In this way we make e-commerce system more secure and prevent the website from unauthentic operations. Further, the product reachability by advertising and digital marketing strategies are provided. Search Engine Optimization (SEO) techniques

are also added to make the website easily reachable by the people.

3.1 Language(s) or Software tools used

- MySQL (My Structured Query Language)

- Java script and

- PHP (Hypertext pre-processor)

- HTML (Hypertext Markup Language)

- CSS (cascading style sheet)

The above are the required software tools to build a website. Product details will be entered to the database using MySQL software. Further security features include OTP, email verification.

3.2 Authentication Method

In authentication we used OTP method. Static passwords have been in use which is vulnerable to attacks such as reply attack. One Time Password (OTP) is a particular kind of password that is valid only for only one login session or transaction. OTP provides a secure way for user authentication as it becomes invalid when used beyond the prescribed time frame. High level of randomness is the significant property required for OTPs. True randomness can be generated from real-world parameters that can produce unpredictable variations in its output. This paper presents an embedded hardware OTP generation system based on remote request via DTMF signals. The proposed hardware uses a confluence of real-world parameters and software-based chaotic function on an embedded platform for OTP generation. The proposed system also facilitates change in the generation of OTPs via discretionary external inputs from users.

Fig -3.1 OTP process

In OTP process is our cloud server generates 12 bit OTP in that we programed for separating 6 bit OTP number for SMS and another 6 bit OTP number for email verification.

3.3 Search Engine Optimization

SEO (Search Engine Optimization) is the development of subsequent the principle of the search engine such as site structure, webpage language and interaction diplomatic strategies for the balanced planning to improve the site search performance in the search engine and increasing the opportunity of customer discovery and access to the website. SEO is a scientific development idea and methodology, which develops beside with the development of search engine, and promotes the development of search engines at the same time. The major factors for good ranking positions in all the main search engines are:

3.3.1 On-page optimization

Matching web page content and key phrases or keywords searched. The main factors to optimize web pages are keyword and key phrases density, keyword formatting, putting keywords in anchor text and the document meta-data (page title tags, Meta description tags, Meta keyword tags etc.). Each web page on some website should have different title tag, Meta tag description and Meta tag keywords. The number of times the key phrase is repeated in the text of the web page is a key factor in determining the position for a key phrase.

3.3.2 External links (back links, backward links) and inbound links

Google and other search engine counts link to a page from another website as vote for this page. In other words, web pages and websites with more external links from other websites will be ranked more highly. The quality of external links is also very important factor, so if links from other web pages are from a website with a good reputation and with relevant content and key phrases, then this is more valuable. Many of web focused companies should improve this aspect of search engine optimization in process called external link building and internal link architecture. Web centered companies should always try to get links from web pages with the higher Page Rank (PR) or from web pages with a PR rating at least four. Page Rank is a scale between 0 and 10 used by Google to determine the importance of websites according to the number and quality of inbound links and external links (back links). Incoming or external links to website should always come in natural textual form, rather than in graphic form (Banner adds images etc.). Google and other search engines does index or evaluate image links, but without textual links web companies won't increase website rank or popularity. The Domain name maturity, Internal link structure, URL structure, Bounce rate etc. factors are very important for good ranking position in the search engine.

3.3.3 Off Page optimization

This is the technique for making back links. Back links are normally termed as link back from other website to our

website. Back links are important for SEO because search engine algorithms give credit, if any website has large number of back links. As well as back links increase, website popularity will increase.

4.2 Authentication Process

Fig 4.3 OTP SMS

Fig-3.2 Search Engine Optimization Process

4. RESULT

4.1 User Process

Fig -4.1 product listing in user site
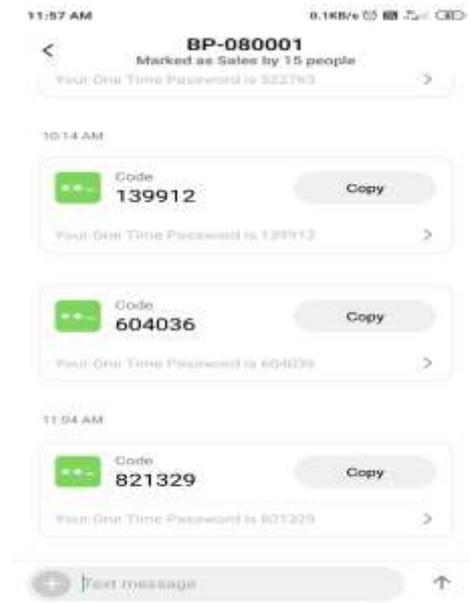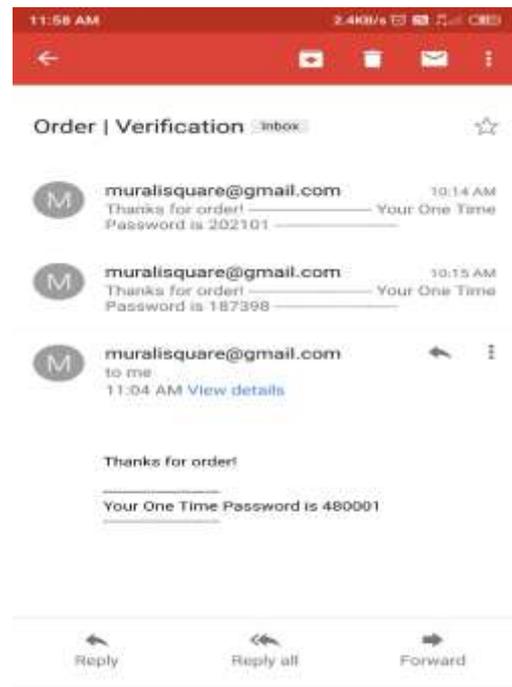
Fig 4.4 E-Mail OTP

Fig -4.2 payment process
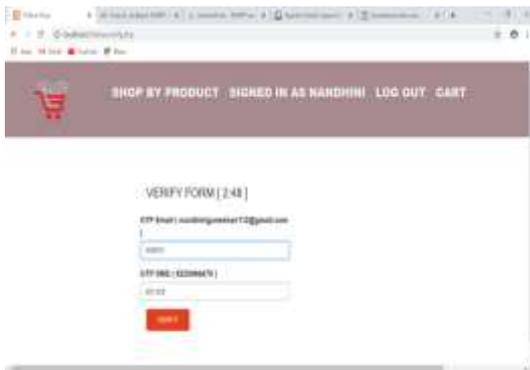
Fig-4.5 verification process in user site

## 4.3 Admin Process
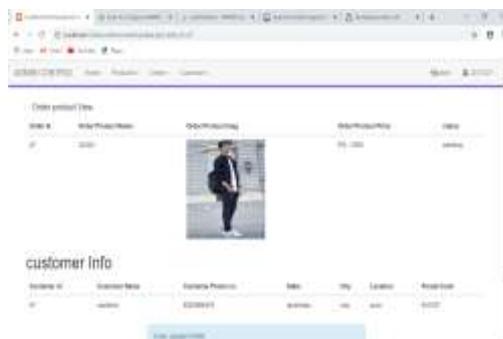
Fig 4.6 Order Status
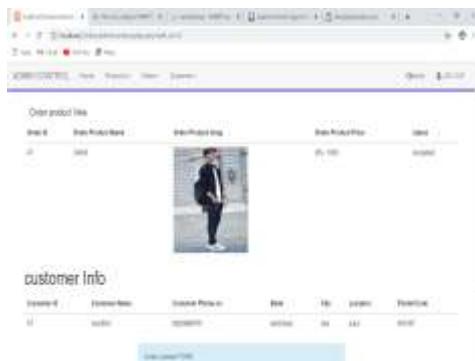
**Fig -4.7** Order Accepted Status
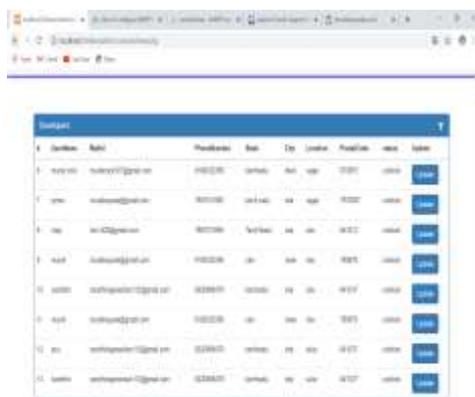
Fig -4.8 User Information

5. CONCLUSION

Here we have proposed a security ass transaction time. We know that during e-commerce transaction, the security threat get increased. In this we make e-commerce system more secure and prevent the website from unauthentic operations. Thus we have implemented successfully with OTP verification using SMS and Email messages.

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