An Analysis of How to Prevent Payment Transaction in E-Commerce Website

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Abstract - This paper is based on who develop the ecommerce website and use the payment transaction because when developer develop the website used the different - different payment gate way. And when user come to this site and purchase some items and pay the item's cost through the payment gateway. And this site owner gets the money through the payment gateway but sometimes cheater cheat this method then loss of money to the website owner. Then how to predict this method.This paper is based on prevention from cheater. And how to secure your ecommerce website when developer develop this site.

Keywords- Gateway, inspect elements, e-commerce, coder, debit/ credit card, business, secure, hashes, transactions.

I. INTRODUCTION

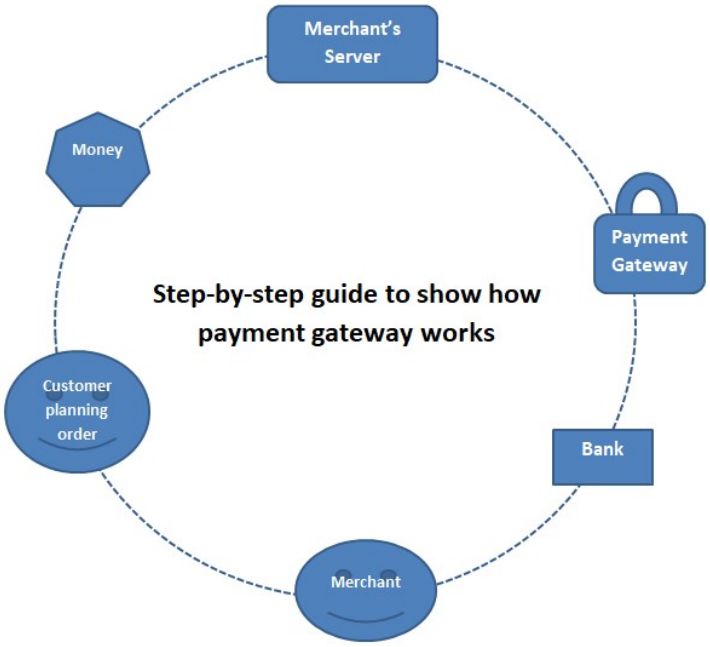
Most of the ecommerce website design according to client's needs. It enables you to offer a single, integrated solution for point of sale and payment processing which can be offered to merchants as a substitution of the present payment gateway. To ensure that merchants do not compromise with their current provider, your payment gateway must be secure to lessen the risk of charge backs, and have a more extensive scope of alternatives for making payments. It even offers focused expenses, end-to-end client support, faster settlement, and excellent reporting. [1]. If you are thinking that the online payment gateway is just about facilitating your customers to pay you then you might be wrong! We have been empowering businesses with Ecommerce Website Development solutions for more than a decade. [2]

II. WHAT IS A PAYMENT GATEWAY?

A payment gateway is a merchant service provided by an e-commerce application service provider that authorizes credit card or direct payments processing for e-businesses, online retailers, bricks and clicks, or traditional brick and mortar [3].The payment gateway may be provided by a bank to its customers, but can be provided by a specialized financial service provider as a separate service, such as a payment service provider.

A payment gateway facilitates a payment transaction by the transfer of information between a payment portal (such as a website, mobile phone or interactive voice response service) and the front end processor or acquiring bank. In other word a payment gateway is an e-commerce application that uses secure internet connection to process, verify and accept or decline credit card processing or direct payments on behalf of e-commerce merchants. To ensure that the transaction info passes securely between the shopper and the merchant, payment gateways encrypt sensitive information such as credit card numbers.

As online shopping involves anonymity as well as distance, payment gateway provider utilizes advanced verification and encryption technologies to ensure legitimate transactions between payment portals and the front end processor or acquiring bank [1].



Steps arehow payment gateway works

- A customer places an order on website
- The web browser of the customer encrypts the information that has to be sent to the merchant's web server via the SSL
- The transaction information is then forwarded to the payment gateway by the e-commerce merchant. This connection is also SSL encrypted.
- The payment gateway in turn forwards the transaction details to the payment processor that is used by the e-commerce owner's acquiring bank.
- The transaction information is now forwarded to the card association (e.g. MasterCard or Visa) by the payment processor.
- The entire process in this step takes almost 2-3 seconds.
- The bank that has issued the credit card receives the authorization request and sends back a response code to the processor. The response code not only determines the fate of payment (i.e. approved or declined) but also defines the reason of transaction failure (such as insufficient funds).
- The processor receives the response code and forwards it to the payment gateway.
- The payment gateway then forwards the received response code to the e-commerce site where it is interpreted as a relevant response and relayed back to the cardholder and e-commerce owner.
- The e-commerce owner then submits all the approved authorizations, in a "batch", to their acquiring bank for settlement via their processor.

All of the approved funds are then deposited to the e-commerce owner's nominated account by the acquiring bank [8].

Most of the software company used payment gateways are

- Braintree
- PayU
- Paypal
- Skrill
- Stripe
- Blue Snap etc.

According to the client requirement ecommerce website usethis type of payment gateway.

A. Why is it important?

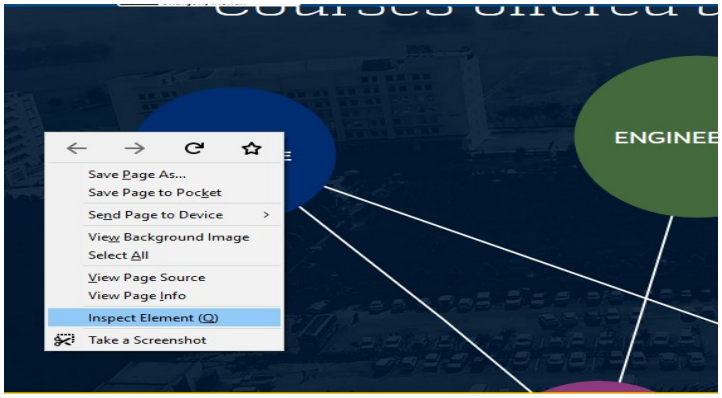
In this time credit card or debit card fraud so increase. Payment way can be help mitigate this and ensure that data of buyers are encrypted and secure and in way reduce fraud. It is highly crucial to diminish fraud but if you try too hard then it you could end up losing business. This is because if you as an e-commerce business owner reject too many sales conforming to stringent fraud rules then few legitimate transactions also might get rejected.Payment Card

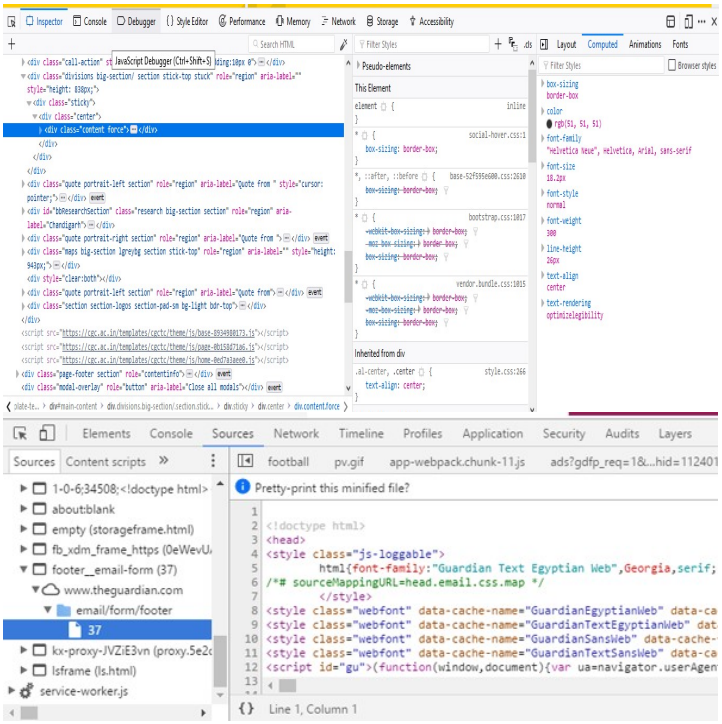
Industry Data Security Standard is even more comprehensive and demands lot of validation requirements and easy to integrate with different alternative payments.
Sometime e-commerce website development company (developer) skip the some important code and the payment method feel unsecure. Because payment gate way only follow checkout page amount and this amount use during the payment. But this problem is not related to payment gateway this problem is related to code because coder forgets some method during the development. Most of the unauthorized user use this method[15].

III. Inspect Element: How to Temporarily Edit Any Webpage and Implement Prevent Payment Transaction

If you want to make changes to design then you can use Inspect Tool to see the source code of your website and the CSS rules applied to it.To enable it right click and from the pop-up menu select Inspect Element.Or, you could use it to change anything you want on the page.
There are two main ways to open the Inspector:

- Choose *Tools>Web Developer>Inspector* from the Menu Bar or the equivalent keyboard shortcut.
- Right-click an element on a web page and select *Inspect Element*.





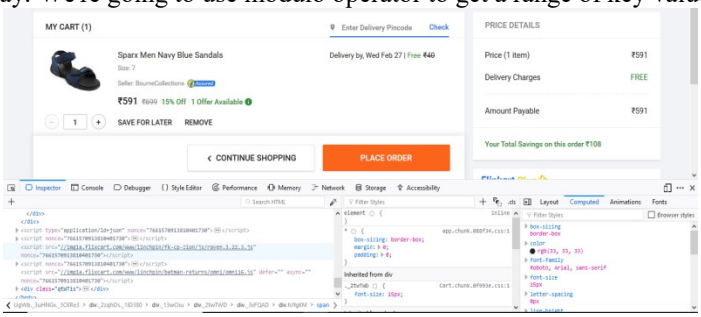
During the e-commerce website use inspect element, when user use the checkout page and go to payment page then unauthorized user use inspect element and change the payment price and then use the payment method. If payment successfully accept which unauthorized user changed it means developer forget the code and your e-commerce

website not secure. Lots of loss in business because owner understand my website is does not have any fault maybe some problem in a payment gate way. This type of problem very common when come inspect element. So how to protect this type of problem?

First of all developer use the secure payment id. This id is encrypted form no one change / decrypt this id. Most of the developer use the hash technique.

Hash is a data structure which stores data in an associative manner. In a hash table, data is stored in an array format, where each data value has its own unique index value. Access of data becomes very fast if we know the index of the desired data.

Thus, it becomes a data structure in which insertion and search operations are very fast irrespective of the size of the data. Hash Table uses an array as a storage medium and uses hash technique to generate an index where an element is to be inserted or is to be located from.in other word Hashing is a technique to convert a range of key values into a range of indexes of an array. We're going to use modulo operator to get a range of key values.



andunauthorized user change the key value through inspect element then payment according to the value gets the payment gateway. Using the debit or credit card payment gate accept the successfully payment. This type of problems facing this ecommerce industry. Then introduce the hash technique and reduce this type of problem. When developer develop the code in between developer use the code checks and re-verify the payment through database received or transaction payment are same or not or used the database transaction check and also used the hash technique. No one can change the during the payment because its change to time to time. So this type of method use then reduce the fraud [12] [13] [14] [15].

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