E-Commerce Web Application

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Abstract— Electronic Trade is the method of cooperating through PC frameworks. For extending the use of online business in making countries, the B2B electronic business is completed for upgrading access to overall markets for firms in making countries. For making country progress in the field of electronic business is fundamental. On opposite, E-business was at first inherent 1990's for RDBMS databases, as the innovation got overhauled, NoSQL databases become possibly the most important factor. However, here Web application is being planned in that way where no slacking of capacity and speed happens. In this manner, arrangement of NoSQL databases gives the high precision in getting comes about and looking at information. Additionally, Business retailers who need to offer their items over the web, use to give money to E-Trade providers. Because of this, their fluctuated items are being shown to the clients.

Keywords— web based business, internet business, e-commerce business

I. INTRODUCTION

Web-based business is the movement of purchasing or offering of items and administrations on the web or over the web. Electronic business draws on advances, for example, portable trade, electronic assets exchange, production network administration, Internet advertising, online exchange preparing, electronic information exchange (EDI), stock administration frameworks, and mechanized information accumulation frameworks. Web-based business markets are developing at perceptible rates. The online market is relied upon to develop by 56% out of 2015– 2020. Customary markets are just expected 2% development amid a similar time. Physical retailers are battling a result of online retailer's capacity to offer lower costs and higher productivity.
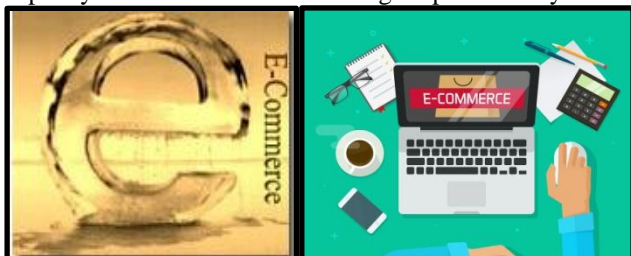

Fig. 1:: E-commerce Logo   Fig. 2:: E-commerce

The purpose of this paper is to review the impact of e-commerce on Indian Commerce that has been published in top business and management journals, with the aim of knowing what are the most influential papers, what are the issues that have received the most attention, which are the main findings or what more needs to be done in terms of research. Also, what source of researchers and solutions are to be implemented as a solution. [1]

Organization of the paper is as follows, Section I contains the introduction of e-commerce , Section II contains the Related work, Section III contains the Methodology that includes Bootstrap Theme and CodeIgniter theme, Section IV contain the Database and Security that include MongoDB and MD5 algorithm, Section V contains the Results and Discussions, Section VI describes Conclusion of paper, Section VII contains the Acknowledgement and Section VIII concludes References.

II. RELATED WORK

On a Database note, initially, most of the websites were based on RDBMS that stores data in following sizes like kilobytes, megabytes, gigabytes, terabytes and so on. Further note, processing speed and accuracy is getting pathetic and computation of output is slow.[2]

Further, When the estimated record is analyzed, websites with RDBMS database, that stores data in Terabytes while the websites with NoSQL database, that stores data in the form of Petabytes. The time will come when the amount of data exceeds the limit, as a result, website (RDBMS) will compute the false output or garbage value, resulting in

slower processing. Whereas in websites(NoSQL) database will give the proper output as it stores data in petabytes, resulting in the high processing of data. Due to this, websites with NoSQL databases are used, that is the advantage over RDBMS websites.

Objectives ::

- The project focuses on storing a large number of files in a database.
  - As the excess of storage happens, the database performs the auto-sharding technique that replicates the data horizontally.
- Also, aims to be used as the highest web application for buying and selling the products.
- Protected and secure instalment alternatives and instrument for producing trust among clients and working up their certainty for the specific site.
- Boundless changes without utilitarian challenges for tending to regularly change business necessities.
- Also, in such an application various schemes have been implemented i.e. Encryption in the password, Number of Attempts in logging the account.
- Also, the Web Application is multi-lingual i.e. more than one language, with the number of themes.
- Safe and secure payment options, a mechanism for generating trust among customers and building up their confidence for the particular application website while using it.
- Highly-Qualified made a design with value-added features and Technologies for gaining, retaining and entertaining customers on the site.[3]

III. METHODOLOGY

Various methodology is being used to showcase the E-commerce Web Application project ::

Bootstrap Theme ::

Bootstrap is a free and open-source front-end library for planning sites and web applications. It contains HTML and CSS-based outline formats for typography, frames, catches, route and other interface segments, and also discretionary JavaScript augmentations. Dissimilar to numerous web structures, it frets about front-end improvement as it were. [4]

Bootstrap is modular and consists of a series of Fewer stylesheets that implement the various components of the toolkit. These stylesheets are generally compiled into a bundle and included in web pages, but individual components can be included or removed. Bootstrap provides a number of configuration variables that control things such as color and padding of various components. [5]
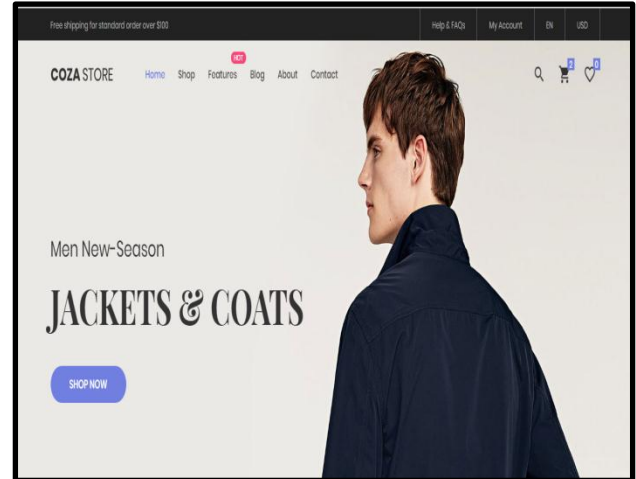

Fig. displays the Admin Bootstrap Template

CodeIgniter Theme ::

CodeIgniter is an open-source programming fast improvement web structure, for use in building dynamic sites with PHP.

CodeIgniter is in exactly in light of the prominent model–view–controller (MVC) advancement design. While controller classes are an important piece of improvement under CodeIgniter, models and perspectives are optional.

Codeigniter can be additionally altered to utilize Progressive Model View Controller (HMVC) which enables designers to keep up secluded gathering of Controller, Models and View masterminded in a sub-index arrange. [6]

CodeIgniter is regularly noted for its speed when contrasted with other PHP frameworks. In a basic interpretation of PHP structures, by and large, taking note of that he preferred CodeIgniter "on the grounds that it is quicker, lighter and the minimum like a framework." [7]
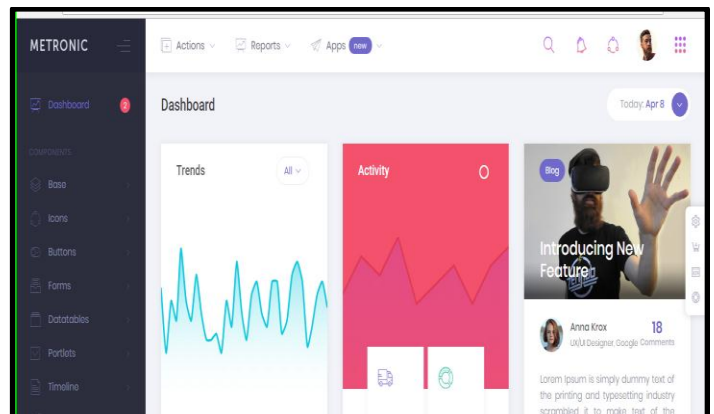

Fig. displays the Admin Dashboard Template
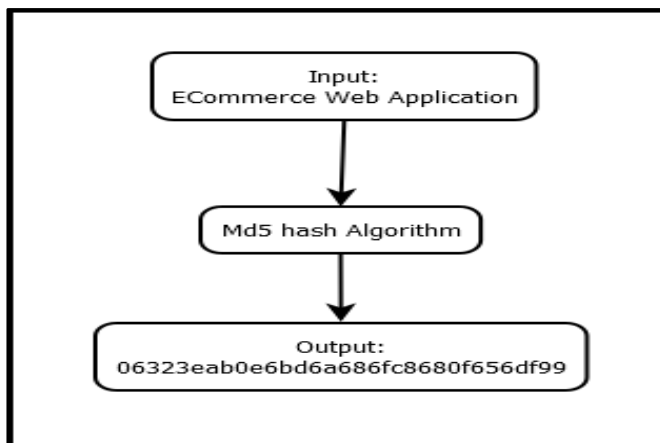
IV. DATABASE AND SECURITY

There are various database here we have choose mongodb

for our application

Mongodb::

MongoDB is a NoSQL database that can store a large amount of data and able to process it fast. MongoDB can store data in the form of key value. It can handle an unstructured data. [8]

Security::

For providing a security to our database we choose the Md5 algorithm. Md5 is the one-way hashing function The objective of any message process work is to create digests that seem, by all accounts, to be arbitrary. To be considered cryptographically secure, the hash capacity should meet two necessities: to start with, that it is incomprehensible for an assailant to produce a message coordinating a particular hash esteem; and second, that it is unimaginable for an aggressor to make two messages that create a similar hash esteem. [9]

```
Input:
ECommerce Web Application

        ↓

Md5 hash Algorithm

        ↓

Output:
06323eab0e6bd6a686fc8680f656df99
```

V. RESULTS AND DISCUSSIONS

E-commerce shows the various functionalities that stands apart from other web applications::

- ➢ Encryption Scheme
  - ○ i.e. password of particular user is being encrypted at the backend.
- ➢ Number of password attempts while login the page.
- ➢ Multilingual property
  - ○ i.e. it has more than one language property, that provides the versatility.
- ➢ Also provides more than one themes that work on the same basis.
- ➢ Though the Business retailers, those who want to sell their own products pay the levied amount to the retailers that take a permit from the admin, that may further be shown or displayed to the customers.

- ➢ Provision of products is being done by sellers that promotes the required discount based on the product being not sold at higher amount.

On coming to a result point of view, E-commerce Web Application consists of Entities ::

- ● Admin
- ● Seller
- ● Customer

Admin ::

- ● Permits the seller to add the products and apply discounts on the same.
- ● View the number of products.
- ● View the number of Sellers.
- ● View the number of Customers.
- ● Also, the number of customers accessing the number of products can be plotted through the graph in admin module.
- ● Though, Admin can also view the number of products add/remove by the sellers plotted through the graph.
- ● Sellers has to take permission from the admin for adding/removing their products so that the products can be verified and the customer can get a valid product.
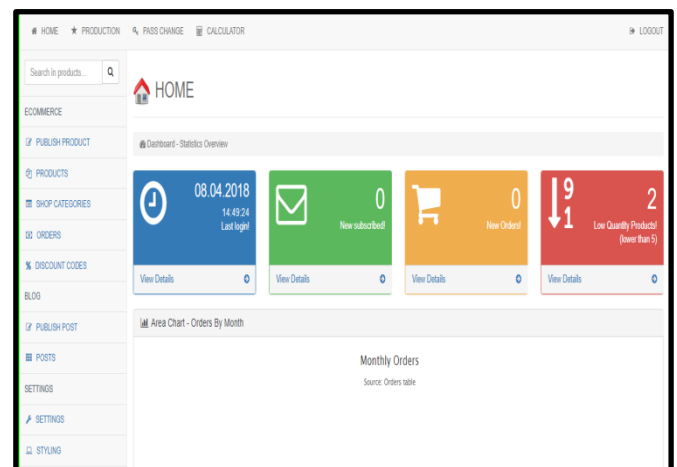

Fig. displays Admin dashboard template

Vendor ::

- ● Seller has a right to add/remove the number of products.
- ● It has a right to provide the levied discounts on various products.
- ● Also, it can read the number of reviews/feedback for many products.

- Encryption scheme is being followed in this module also.
- Seller has to take a permission from the admin for adding/removing the categories/products.
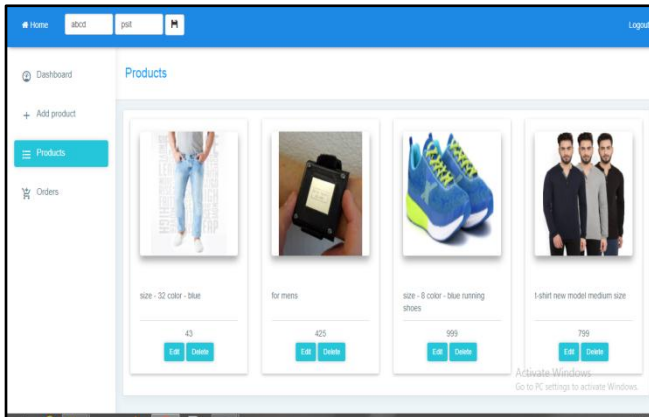- Many sellers sell their different products with different varieties.

Fig. displays the vendor's dashboard template

Customer ::

- Customer can view/buy/order the number of products anytime/anywhere.
- It has a right to give reviews/feedback for the products they buy.
- Also, encryption scheme is being implemented in this module too.
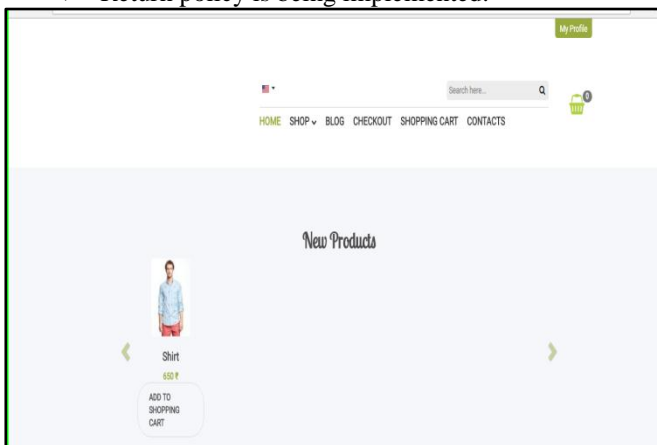- Return policy is being implemented.

Fig. displays the customer's dashboard template

VI. CONCLUSION

- A well built E-commerce web application is being done that incorporates various functionalities that

has a high storage with other modules following the same.

- Also, it contains the modules and pages that acts as a medium of its working.
- Future scope states that as we know that data is being replicated at a higher rate, due to which complexity increases.
- On an update, a high built database is to be used that performs the replication theory concept on the basis of::
  - Velocity
  - Volume
  - Variety
  - Velocity
  - Veracity

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VII. ACKNOWLEDGEMENT

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