



A Responsive E-Commerce Website Using PHP Framework

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ABSTRACT

In the modern era, as technologies are getting advance, the work related to them are also getting advance. Today's business is totally dependent on the internet and to run a business we need the help of the internet so that it can grow at bulkier expanse. Everyday humongous amount of data and personal information has been transmitted and retrieved. With the brisk development of internet technology in contemporary years, online business is gradually rampant. Web users are very demanding and they foresee web services to be easily and quickly accessible from other places around the world all the time, whenever they need it.

Web users always need quick and rapid responses. With the broadening trend of the internet, it turns out to be an essential part of our life. Website development is a process that takes time and if done by the basic language it takes more time which is not compatible with this fast and developing world of technologies. So to overcome these problems related to web development frameworks are developed. Frameworks are used so that we can create websites conveniently. This system generalizes the concept of e-commerce website with a framework. What parameters we have to look upon so that we can prepare a website without any Hassel.

This system also concludes what advantages did PHP framework had on other frameworks, and how it is different to work on Framework. Electronic commerce as the name suggests electronic means through digital instruments or through the World Wide Web and commerce suggest the business so it combined means business through the World Wide Web which is on gravitate. Frameworks are on go, as there is no need to write whole code.

Keywords: PHP, electronic-commerce, PHP frameworks, My SQL Database, CSS.

1. INTRODUCTION

Computer plays an important role in our daily life. Anything we want we can get only in one mouse click. Speed, reliability and accuracy of the computer make it a powerful tool for different purposes. A very important and basic need of today's modern business world is the quick availability and processing of information using computer. One can easily get the type of required information within a fraction of a second.

The project that I have taken is also in this category which is used in our daily life whenever we want to purchase some items we can easily get them at our home. E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business. The terms e-commerce and e-business are often used interchangeably. The term e-tail is also sometimes used in reference to the transactional processes for online shopping.

2. REVIEW OF LITERATURE

Keyword search on -E-Commerce adoption in India -e-business in India -E-Commerce and India and -e-business and India in various databases like EBSCO, ProQuest, and Emerald Management Xtra found the following E-Commerce/e-business research articles done in Indian context. They give us ideas about work and ideas that various people explored during their research on different areas of Ecommerce.

Raven et al compared India and China's approaches in adoption of e-business. Based on the literature Survey and secondary data, the study analyzed various factors influencing the growth of businesses in the two countries. The factors examined include government policy and focus, existing efficient routing approach used here is Localized Power-Efficient Data Aggregation Protocols (LPEDAPs) which is robust and localized. This is based on powerful localized structure, local minimum spanning tree (LMST). The actual routing tree is constructed over this topology.

There is also a solution involved for route maintenance procedures that will be executed when a sensor node fails or a new node is added to the network. HTML consists of a series of short codes typed into a text-file by the site author — these are the tags. The text is then saved as a html file, and viewed through a browser, like Internet Explorer or Netscape Navigator. This is needed for layout of a web page. CSS: Stands for "Cascading Style

Sheet." Cascading style sheets are used to format the layout of Web pages. JavaScript is a client-side scripting language, which means the source code is processed by the client's web browser rather than on the web server. This means JavaScript functions can run after a webpage has loaded without communicating with the server. JavaScript coding is also included in this project. Now that the theoretical foundations of the project have been laid, it's time to start putting them to work.

[1] **Neha Yadav, Dharmveer Singh Rajpoot Shri Krishna Dhakad, 978-1-7281-0899-5/19/\$31.00 ©2019 IEEE. LARAVEL: A PHP Framework for E-Commerce Website 2019**, this paper generalizes the concept of e-commerce website with a framework. What parameters we have to look upon so that we can prepare a website without any Hassel. This research paper also concludes what advantages did Laravel had on other frameworks, and how it is different to work on Framework. Electronic commerce as the name suggests electronic means through digital instruments or through the World Wide Web and commerce suggest the business so it combined means business through the World Wide Web which is on gravitate. LARAVEL is a free open source PHP framework. Frameworks are on go, as there is no need to write whole code.

[2] **Aaftab Aalam1, Shivansh Mishra2, Satyam Sharma3, Richa Gupta4 Study & Development of E-Commerce Website International Research Journal of Engineering and Technology (IRJET) May 2020**, This research paper provides insight into the development of e-commerce of website. While understanding the nitty gritty of its different aspects with special emphasis on B2C e-commerce. Which has shown tremendous growth in the recent years because of increased consumer awareness, investor trust and technological proliferation.

[3] **Elham Mohammed Thabit AbdAlameer1, Building and Developing E-commerce Website, Volume 3 Issue 9, September 2014**, This document suggested to build and develop up full reliable website with IT solutions, online retail computer products (hardware and software) based on the theories and using the current technology. As a first stage was setting up online ecommerce store with easy-to-use. Then the second stage was to improve the customer experience.

[4] **Gaurav Jha, Anita R, "Ecommerce In PHP and MySQL (Online Shopping Store)"** "Department of Computer Science and Engineering SRM Institute of Science and Technology University, International Journal of Advanced Research Trends in Engineering and Technology (IJARTET) Vol. 5, Special Issue 1, January 2018, In this paper everyone is done from scratch and coded everything by hand, but this requires solid knowledge of HTML, PHP, MySQL, and other programming languages. To shorten the learning curve, one might want to invest in web design software like Adobe Dreamweaver or Microsoft expression Web but choice notepad++ as Text editor for project

[5] **1prof. More r.s., 2sneha mane, 3khuteja shaikh, 4jyoti masha. 1Asst. Prof. Computer Science & Engineering, A.G.P.I.T., Solapur 2, 3,4Students, Computer Science & Engineering, A.G.P.I.T., Solapur ,NATIONAL CONFERENCE ON INNOVATIVE TRENDS IN ENGINEERING & TECHNOLOGY – NITET-18 16-17th March 2018 NOVATEUR PUBLICATIONS International Journal Of Innovations in Engineering Research And Technology [IJERT]**, The project objective is to deliver the online shopping application. This project is an attempt to provide the advantages of online shopping to customers of a real shop. It helps buying the products in the shop anywhere through internet by using a web site.

3. SYSTEM ARCHITECTURE

System Overview

Our purpose in this project is to replace the existing manual searching of online products with an automated process. We want to develop a web-based search engine for different most popular e-commerce websites operating in India.

The proposed search engine takes the product name from the shopper and searches its availability on different e-commerce sites. It uses the Web Scrapping technique to extract the product details such as the Manufacturer, Price and Payment method, etc.

The search engine then consolidates this information and displays the result to the user. As a start, we are going to consider only 4 to 5 e-commerce which is to be included in the search.

Ecommerce system is a computerized, online solution to the various problems faced by the Product buyer and seller wishing to outsource their software development work to a Provider at an economical cost, thus achieving high performance, accuracy, reliability and high speed of data retrieval. In this system, there is a registration process each for the Product buyer and seller. The Administrator of the site verifies the Provider after his registration and if satisfied, assigns him a user name and password. Our site can be used by anyone who is searching for Products whether he/she is first time visiting our site. Our site also provides some discounted Products as same u get on any shop.

E-commerce website design is the method of shaping the coding, modules in HTML, CSS3, JavaScript and Bootstraps for designs, interfaces and information for a system to satisfy mere needs.

System Module Description:

- Coding (PHP, HTML, CSS3, JavaScript, Bootstraps)
- Seller
- Customer
- Management
- Delivery

DATABASE

Database & Information Systems could be a database employed in a way of life, a database could be a collection of processed information associated with a selected subject or purpose. Allow us to consider an enterprise, like delivery agents, that features a great deal of knowledge kept for long periods of your time in a very computer. This data might include information about passengers, locations, flights, airlines, and personnel, for instance. Typical relationships that may be represented include bookings, location (which passengers to which location?), and order (which order to which location?). These forms of data stored more or less permanently in a very computer is termed a database.

CUSTOMER

Customer features a wider choice not from his town or country but also around the globe unless there are import restrictions. Customized or personalized product and repair. for example if some lady wants a bra of actual size, her size are often measured through internet and stored and he or she are supplied bra of her requirement. In case of purchase, one isn't required to travel from store to store to determine the products to gather their details, prices etc. Sitting reception he gets all the desired information which too in no time without spending much time. There is absolute flexibility of your time, place and distance is not any hurdle; one can open the positioning any time day or night to urge details, there's no problem of shops/stores opening/closing hours. Websites are often opened any time. In physical sales place and distance is additionally a controversy which is not any problem in e-commerce because one can see sites everywhere the planet without moving out of the house. Goods are available at cheaper price because there are lot of economies of space, rent, interest to the vendor further, he manages with much lesser number of outlets and price of promoting is reduced. A part of these savings is passed on to consumers and so, he gets the products cheaper than from conventional shops/departmental stores, grocers etc. It helps to globalize retail trading. One should buy things without geographical boundaries.

MANAGEMENT

One of the more important themes that permeate this paper is that the incontrovertible fact that knowledge management is synonymous with change: adaptation and evolution. It's assumed that at the start the system operates on principles extracted from human experts that represent their view of the population of the potential customers. It also incorporates variety of theoretical laws that are proposed as high-level abstractions of the economic reality. One among these theories claims that it's almost impossible to make an accurate model of commerce (and therefore also e-commerce) reality based only on theory and knowledge extracted from human experts. The system should be adjusted to the cater to real-life customers, who may behave differently than the idea predicted. Additionally, because the time goes by, clients' interests and desires change because of their aging moreover as because of the changes within the environment (e.g. bell bottom jeans were popular once). To be ready to successfully add the constantly changing world, the system should be adaptive. Since knowledge management could be a process of continually adjusting knowledge through its application and thru collection of additional data and extracting knowledge from it and incorporating it into the system, with the goal to constantly improve the prevailing model(s) of reality and effectiveness of the operation of the system, its knowledge management that's the premise for system adaptively.

DELIVERY

Delivery demands of e-commerce world, where all sellers and delivery partners need functional, efficiently and extensive infrastructure. In addition transport and logistics networks that combine new technologies, multimodal transport operations and compliance with trade rules. Barriers to the availability of international transport and logistics services do remain. These relate both to plug access – including limitations on operating in an exceedingly country; the necessity to partner with a domestic supplier; restrictions associated with foreign equity in transport services; restrictions on sabotage operations; domestic monopolies – and to the domestic regulatory environment .A more open environment could improve efficient access to global networks for home-grown small businesses. Competition between service suppliers can reduce prices and lift the standard of services offered. A facilitative regulatory environment can rapidly increase these trends and makes the business case for operating in smaller or more remote markets that way more appealing.

PAYMENT SYSTEM

Payment is that the integral process within the mercantile process, electronic payment system is that the integral a part of electronic commerce. Thanks to the emergence of electronic commerce has created new financial needs through which new payment systems are created while traditional payment systems cannot be ready to fulfill its needs. As an example new payment systems are of the forms like auctions between individuals; 1/2s online leads to looking for new payment systems meaning peer to look payment methods that enables individuals to create payments through their emails. By recognizing these needs for all interested parties.

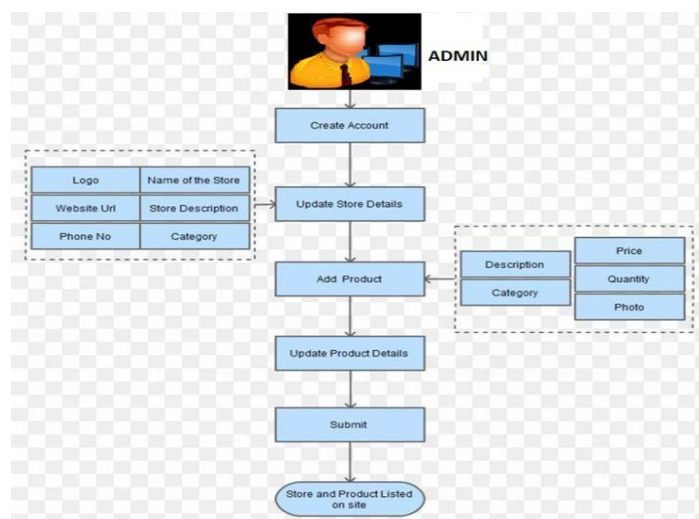


Figure 1: System Overview Admin Side

4.METHODOLOGY & ALGORITHM

METHODOLOGY

The main purpose of this project is to reduce the manual work.

Functions: A Customer can browse through the shops and choose products to place in a virtual shopping cart. The shopping cart details can be viewed and items can be removed from the cart. To proceed with the purchase, the customer is prompted to login. Also, the customer can modify personal profile information (such as phone number and shipping address) stored by the application. The customer can also view the status of any previous orders, and cancel any order that has not been shipped yet.

We have Following Main Modules Used In this Project

- Admin Panel
- Login/Sign Up
- Magnify product image
- Product Cart
- Google Captcha
- Checkout using PayPal
- Add, Edit, Remove and View Products
- User Management
- View daily/monthly sales

ALGORITHMIC STRATEGY

This E-commerce responsive website should prepare a development a security plan to insure information integrity to both parties (customer and vendor) by using the following techniques:

Encryption: For protecting the data and to ensure the safe arrival, data converts into the code by the sender and then decoded by their receiver.

An encryption algorithm is the method used to transform data into cipher text. An algorithm will use the encryption key in order to alter the data in a predictable way, so that even though the encrypted data will appear random, it can be turned back into plaintext by using the decryption key.

Digital Signature: a digital signature is used to identify of Authenticates sender of the message and to check that don't occur any modify in the message, insure that the message in safe.

Trusted Third Parties: an authentication, confidentiality, integrity.

Network Security: prevent the entry of outsiders to the local network (LAN), and do not allow entering the prohibited data to local network.

TOOLS AND TECHNIQUES

a. Php

Hypertext Preprocessor (or simply PHP) is a server-side scripting language designed for Web development, but also used as a general-purpose programming language. It was originally created by Rasmus Lerdorf in 1994,] the PHP reference implementation is now produced by The PHP Group.

PHP originally stood for Personal Home Page, but it now stands for the recursive acronym PHP: Hypertext Preprocessor. PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

b. Xampp

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), Maria DB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

c. MySQL

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workbench is available on Windows, Linux and Mac OS X.

d. HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.[4] Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

e. Bootstrap

Bootstrap is a free and open-source front-end framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself with front-end development only.

f. Sublime text

Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and functions can be added by users with plugins, typically community-built and maintained under free-software licenses.

g. Git hub

GitHub is a web-based hosting service for version control using Git. It is mostly used for computer code. It offers all of the distributed version control and source code management (SCM) functionality of Git as well as adding its own features. It provides access control and several collaboration features such as bug tracking, feature requests, task management, and wikis for every project. GitHub offers plans for both private repositories and free accounts which are commonly used to host open-source software projects.

h. Java Script

JavaScript often abbreviated as JS, is a high-level, interpreted programming language. It is a language which is also characterized as dynamic, weakly typed, prototype-based and multi-paradigm. Alongside HTML and CSS, JavaScript is one of the three core technologies of the World Wide Web. JavaScript enables interactive web pages and thus is an essential part of web applications. The vast majority of websites use it, and all major web browsers have a dedicated JavaScript engine to execute it.

i. Css

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate css file, and reduce complexity and repetition in the structural content.

5. RESULT AND DISCUSSION

PHP Laravel framework is the most popular framework among all the PHP frameworks. A database is also an important part of any project database is the backbone of an e-commerce website as we store data in a database. A structured set of data stored is called data structure.

Laravel supports four databases-

- MySQL
- Postgres
- SQLite
- SQL Server

The query of the database can be used using raw SQL, fluent query builder and the Eloquent ORM. To connect the database we configure the database in the config/database.php file and create the database with structure in MySQL. According to this paper ,laravel has medium reusability score as compared to cake PHP and Codeigniter,In loading, data laravel performs well as compare to others . Laravel performs the best for Read/write files. In Laravel code generation is done CLI (code line interface) UI whereas, in codIgniter, Phalcon and Zend framework doesn't support CLI. Laravel supports Eloquent ORM and codeIgniter supports Active Record whereas Phalcon and zend don't support any ORM .

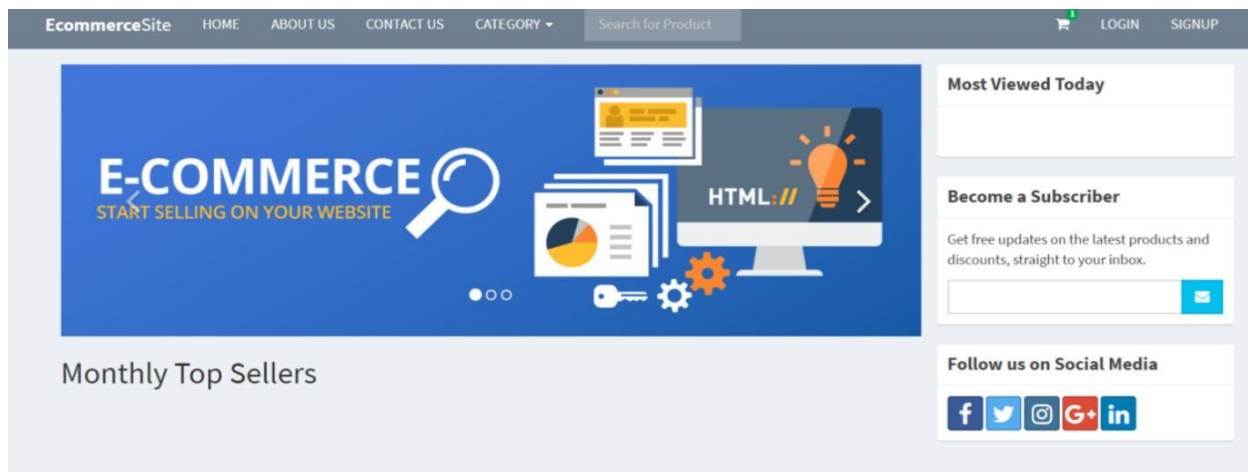
Cache storage of Laravel is far better than other frameworks. Dependency injection container is present with auto wiring in laravel but not in other frameworks. Command schedulers allow us to fluently define the command schedule. It provides a unified API across a variety of different queue back ends. Most importantly it allows us to transfer our database from one platform to another without any hustle.

It also includes a simple way to seed the database with seed classes. This feature of Laravel makes it different and efficient from other PHP frameworks. It is the most efficient Framework to work on.

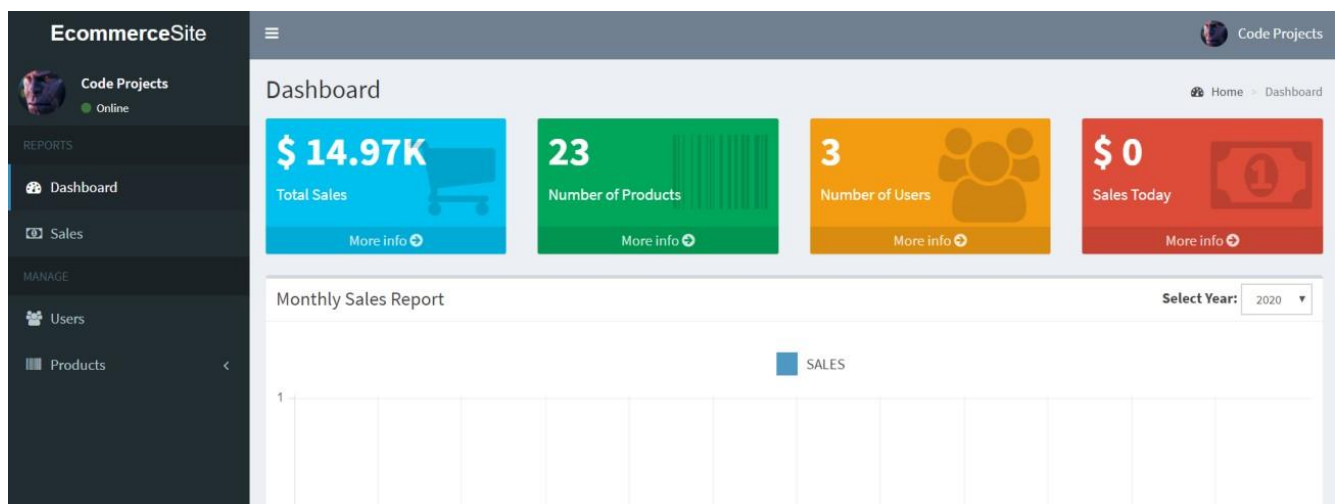
Laravel it is easy to make website as it doesn't required typing of code from scratch what we do in plain PHP. But in Laravel most of the work is done just we had to make changes according to our business requirement. But in the other framework like codeIgniter there are not such inbuilt libraries to make our website more fruitful

Output And Screenshots

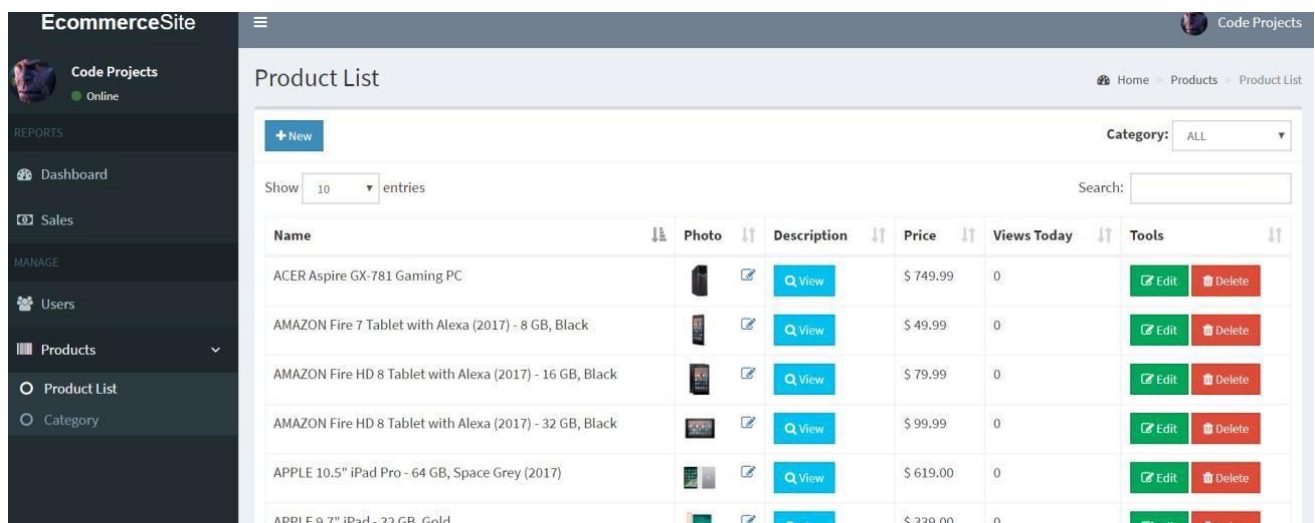
- Home Page



- Admin page



- Product List



6. BENEFITS

•Faster buying process

Customers can spend less time shopping for what they want. They can easily browse through many items at a time and buy what they like. When online, customers can find items that are available in physical stores far away from them or not found in their locality.

•Store and product listing creation

A product listing is what the customer sees when they search for an item. This is one advantage in ecommerce meant for the seller. This online business plus point is that you can personalize your product listing after creating them.

•Cost reduction

One of the biggest advantages of ecommerce to business that keep sellers interested in online selling is cost reduction. Many sellers have to pay lots to maintain their physical store. They may need to pay extra upfront costs like rent, repairs, store design, inventory etc. In many cases, even after investing in services, stock, maintenance and workforce, sellers don't receive desired profits and ROI.

•Affordable advertising and marketing

Sellers don't have to spend a lot of money to promote their items. The world of ecommerce has several affordable, quick ways to market online. Ecommerce marketplaces are visual channels – and sellers can really show off their product.

•Flexibility for customers

An important advantage of ecommerce to business is that sellers can provide flexibility to customers. One highlight is that the product and services are ready 24x7. The result is that seller can offer his item any place, any time.

7. CONCLUSION & FUTURE SCOPE

To conclude the description about the project: The project, developed using PHP and MySQL is based on the requirement specification of the user and the analysis of the existing system, with flexibility for future enhancement. The expanded functionality of today's software requires an appropriate approach towards software development. This ecommerce software is designed E-commerce site project is developed using PHP, CSS, Bootstrap, and JavaScript.

Talking about the project, it has all the required essential features. This project has a user side where he/she can view product category and add products to cart and proceed for checkout whereas from administration side he/she can view sales, number of product, users, daily sales report, add product and categories. The user can also leave comments on each product if he/she wants. In this project, all the main functions are performed from the Admin side User Friendly.

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