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Building a fully functional E-commerce web application using Django

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Abstract:

In today's fast-changing business environment, it's extremely important to be able to respond to client needs in the most effective and timely manner. If your customers wish to see your business online and have instant access to your products or services. E-commerce is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming commonplace. These types of online shops have become part of our daily lives. It helps organizations to reduce the cost to create process, distribute, retrieve and manage the paper-based information by digitalizing the information. The general purpose of E-Commerce store where products can be bought from the comfort of home through the Inter.

Keywords: E-commerce, customers, web application.

1.Introduction

Today modern Web applications have grown into complex distributed applications. The worldwide expansion of the internet has considerably contributed to the change of trade and store exchanges. Thus, today modern web applications have grown into complex distributed applications. E-commerce (electronic commerce or EC) 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, business-to- consumer, consumer-to-consumer or consumer-to-business. Electronic commerce (e-commerce) is a fairly new idea, and it is very common practice nowadays for businesses to conduct trade over the Internet. It additionally makes the use of regular technological maintenance to ensure the smooth working of online store sites, monetary exchanges, just as everything to do with giving and delivering items. It can simply be defined as purchasing and additionally selling items through the internet and is ordinarily associated with online shopping In our platform, the users can view various products, if they wish to buy any then they have to register and then login to add that product inside their cart. The users or customers can also read the reviews about a product posted by other users before buying it. The users can add how many products he/she wants to their shopping cart. Then the users are able to set the quantity of each added product inside the cart. Finally, while checkout the users can give their address and the mode of payment and place the respective order. Then the admin can see the customer details with his/her order details and the address where the order should be delivered.

Existing System

E-commerce is growing pretty fast, however, there is no standardization for payment system, resulting unreliability of online payment. There is still another problem following setting up an online store with the web site, the problem of marketing may arise. Another issue, to control the trustworthiness of the web site, all shop owners have to register their profiles to the web site, thus it will assure that there is no fraud in online trading on the web site. As the result, the web site will retain its reputation in the market. With this strict rule, the web site can control the quality and trust of its customers. This is very important issue for such a large web site.

Proposed System

The web site, designed as an online shopping center, is separated into two parts: back end and front-end parts. This part provides facility for each store owner to edit and modify information in his own store. Providing validation check for member and store identification, the back-end system can securely protect users' proprietary information. In addition, all page views employ session variables to deter manually defined variables by users. Applying user friendly approach, and focusing on web programming inexperience, the user can effortlessly manage his back-end information. Inside the back end, users can control and view all store information. Besides that, using content management design, the back-end part encompasses with these modules: admin panel, home, register, login, product view, cart, checkout, change password, contact us and track order.

3. IMPLEMENTATIONS

In this page, all the products are displayed on the home screen with the image, name and price of the products. Two buttons are also created, one is for adding the item inside the cart and the other is to view the product. If the customers are not logged in then they are not able to add the item inside their cart. They can just see all the products. On the add to cart button, login to add the item will be written. The customers can directly search for the product that they want on the search option given on the navigation bar.

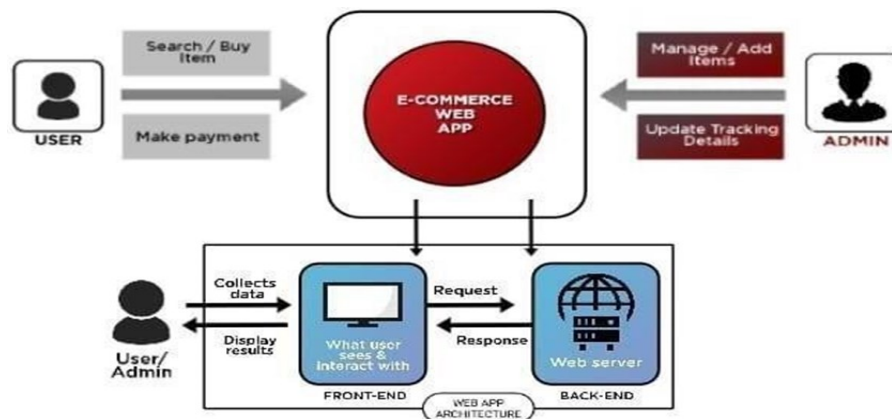


Figure: System Architecture

Product View page:

After clicking on the view button, the customers can view the specific product with their key features and reviews. After reading the key features and the reviews about the product, the customer can buy the product by clicking on the add to cart button. The customer who has brought that specific product can write their review about the product which the other customer is able to read

Contact Us page:

The customers can ask their queries or can contact us by filling a small form. There are two different forms one for the logged in users and others who haven't registered themselves but want to contact us.

If the user is a logged in user, then the user just, have to write the message directly else the user needs to first give his name, email and phone before contacting.

Django work

- To truly appreciate Django, you will need to peek under the hood and see the various moving parts inside. This can be both enlightening and overwhelming. The numbered paths are as follows:
- The browser sends the request (essentially, a string of bytes) to the web server.
- The web server hands over the request to a WSGI server (say, u WSGI) or directly serves a file (say, a CSS file) from the filesystem.
- Unlike a web server, WSGI servers can run Python applications. The request populates a Python dictionary called environ and, optionally, passes through several layers of middleware, ultimately reaching your Django application.
- The selected view typically does one or more of the following things: It Talks to a database via the models. It Renders HTML or any other formatted response using templates. It Returns a plain text response (not shown). It Raises an exception.
- The Http Response object gets rendered into a string, as it leaves the Django application.
- A beautifully rendered web page is seen in your user's browser.

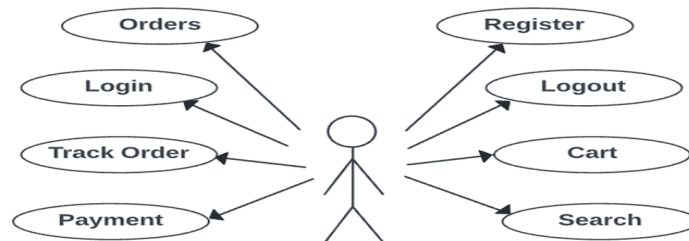


Figure: Customer Side

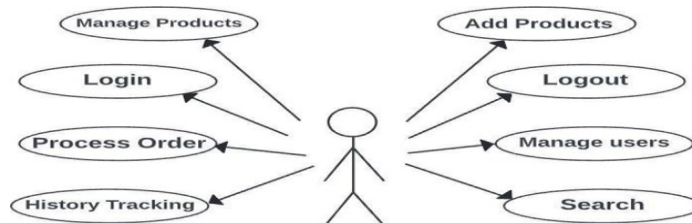


Figure: Admin Side

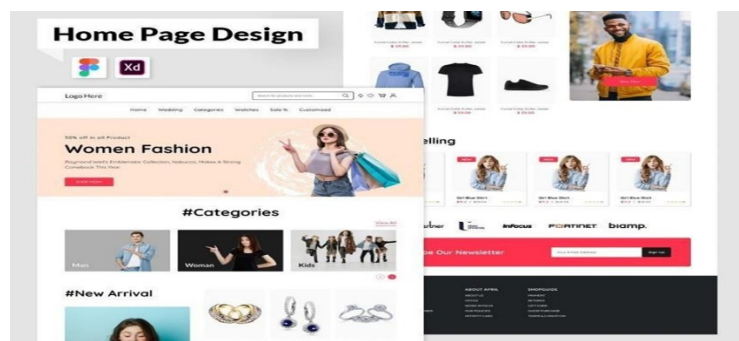


Figure: Home Page

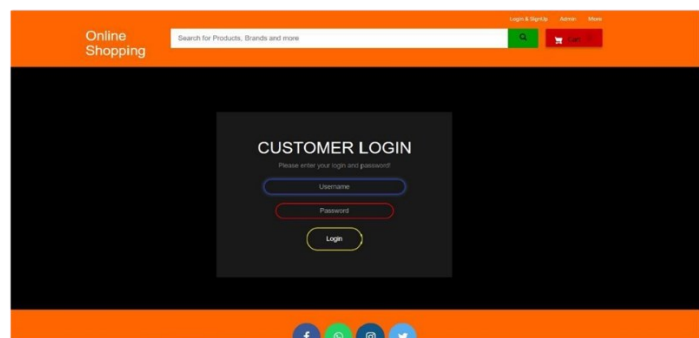


Figure: Login Page

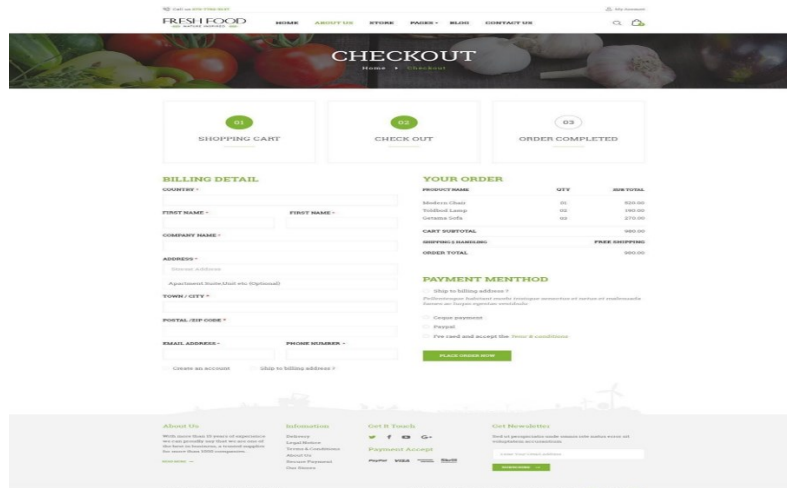


Figure: Viewing Cart and Orders

Conclusion

E-commerce is continuously progressing and is becoming more and more important to business as technology continuous to advance and is something that should be taken advantage of and implemented. This E-commerce platform is designed to provide a web-based application that would make searching, viewing and selection of a product is easier. The user can search for a product interactively and the search engine refine the products available based on the user's input. Then the user can view the full specifications and select the products, the user can see the products in the cart and proceeds to checkout where they enter the address details and select the mode of payment. The administrator can verify the orders. However, the customer can still look at their status of the orders in the Track us page using the order ID. With this platform, more opportunities will be created for profit and advancements for businesses, while creating more options for both the consumers and sellers.

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