

E-Commerce Website In The Pandemic Situation

Srijan Pandey, Devansh Munjal

Amity School of Engineering and Technology

Abstract

“In recent times, the importance of e-commerce platforms has grown significantly in various domains, encompassing a range of e-business activities. The objective of this paper is to establish a reliable website based on e-commerce theories, while focusing on the creation of effective and well-designed web pages.

The website will specialize in selling pandemic accessories. To develop a successful online selling platform, it is crucial to employ modern technology. The initial step involves setting up a straightforward e-commerce store. Subsequently, enhancing the client experience can be achieved by implementing digital payment methods. Ultimately, the aim is to establish a direct online sale channel between the organization and the consumer. All these tactics should be devised based on a well-planned e-commerce strategy, incorporating current technology to ensure a robust revenue stream for the organization..”

Keywords: e-commerce , e-business , web pages , electronic payment

INTRODUCTION:

“With the huge popularity of online commerce, all of these are referred to as \ which will aid in maintaining online contact between the corporation and its important clients as well as providing an on-line selling solution. This website will introduce you to everything and everything related to computers. The following online services are proposed: marketing advertising Our objective is to create a fully trustworthy website with IT solutions and online shopping (hardware and software). On Website, several stages will be implemented, including: an online Ecommerce store, understanding, and implementing direct online sales from business to consumer.”

The 1st advantage of creating and making this web is to increase through the online service. This will happen as a result of the implementation of online retail.



The COVID-19 crisis Effects

Figure 1.a. Share of e-commerce in total retail sales, United Kingdom and United States (2018-2020)

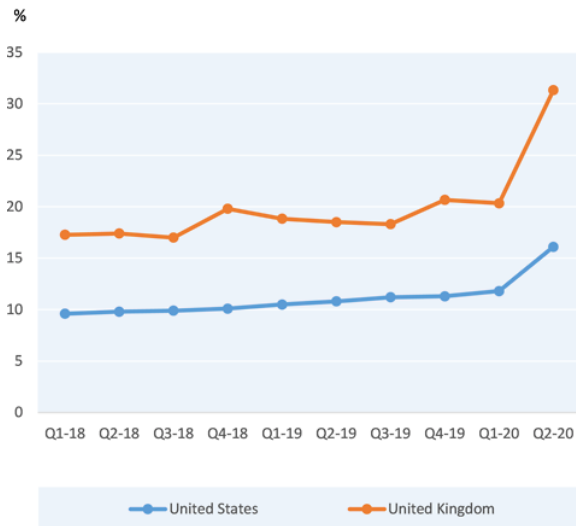


Figure 1.b. Retail turnover, year-on-year change, EU-27 (July 2019-20)



Based on data from the records, data for the United States estimates e-commerce as a proportion of total retail sales. The figures for the second quarter of 2020 are estimates. Data from UK reveal that sales account for a small % of total retail sales. Quarterly figures are just averages of estimates. The % change in retail sales from the same timing last year is shown in the statistic.

Motor vehicles and motorcycles. sales via mail order houses or the Internet encompass retail sales operations during which the customer makes a choice based on adverts, catalogues, information offered on site, mode , or any other methods of promotion and puts an order by mail, phone, or the Internet.

“According to a research titled 'How India Shops Online 2021' by consulting company Bain and online retailer Flipkart, the market grew by 25% in FY21 despite a two-month nationwide shutdown and other protracted interruptions in regional pockets during the year. During same time period, India's \$810 billion retail by 5%, while GDP shrank by 7.3%.”

“The epidemic accelerated e-commerce penetration in India by a year, increasing its proportion by the end of FY21. "This acceleration was much greater in the top eight metro cities, where online shopping is more prevalent: one in every three consumers shopped online at least once last year in the top eight metro cities," according survey. India has the 3rd online shopping base the industry remains vastly untouched, and there is significant opportunity to reach India's big internet user population. According to the analysis, the e-commerce sector is predicted to reach by FY26, growing at a rate of 25--30% each year over the following five years.”

Importance of online retail in pandemic situations

“Coronavirus has made a flood in online business and sped up computerized change.”

“As lockdowns became the new normal, organisations and consumers gradually "went forward," providing and purchasing more labour and things online, increasing online business' share of global retail trade from 14% by 2019 to about 17% in 2020.”

“These and different discoveries are displayed in another report, Coronavirus and Web based business: A Global Survey, conducted by UNCTAD and eTrade for all participants, taking into account the significant global and local industry developments documented through 2020.

"We really want to perceive the difficulties and do whatever it takes to help state run administrations and residents as they keep on embracing better approaches for working," he said.

UNCTAD - "Organizations and purchasers that had the option to 'go advanced' have alleviated the monetary slump brought about by the pandemic."

"Yet, they have likewise accelerated a computerized progress that will lastingly affect our social orders and day to day routines - for which not every person is ready," she said, adding: "Non-industrial nations shouldn't just be customers yet in addition dynamic players and subsequently makers of the computerized economy."

Installation of Python 3.6

Python is a high-level programming language that is well-liked by developers because of how straightforward, readable, and user-friendly it is. The most recent stable version of the Python 3.x series is Python 3.6. Let's talk about how to install Python 3.6 on a Windows operating system. Downloading the Python 3.6 installation from the official Python website is the first step. Go to "<https://www.python.org/downloads/release/python-360/>" on your web browser.

Select the right installer for your system architecture by swiping down to the Files section. Depending on the design of your system, pick either the 32-bit or 64-bit version. Double-clicking the installer after downloading it will start the installation. The Python Setup wizard will then be displayed to you. To start the installation process, click the "Install Now" button. Click the "Customise installation" option if you wish to modify the installation.

You will be prompted to choose the components you want to install on the following screen. All of the components are chosen by default. You can deselect any of these components that you do not require. The default settings are adequate for the majority of users. You will be prompted to select the installation location on the following screen. The default location is typically good, but you may click "Customise installation" and specify a different directory if you want to install Python 3.6 there instead. Clicking the "Install" button will start the installation procedure once you have chosen the installation location. Depending on how long it takes, the installation process could take. You will see the message "Setup was successful" once the installation procedure is finished. Click here on the "Close" button to exit the installer.

Open the command prompt and type "python" and the enter key to confirm that Python 3.6 has been correctly installed. The Python interpreter prompt should appear if Python was correctly installed. Python 3.6 is now being used to build our website.

Finally, Python 3.6 is a robust programming language that is simple to understand and use. Python 3.6 installation on Windows is a simple task that takes only a few minutes to finish. You are able to start creating your own programmes and applications after Python 3.6 is installed.

Django 2

Django is a high-level Model-View-Controller (MVC) architectural web framework for Python that is free and open-source. By offering a comprehensive set of tools for handling typical web development chores, such as handling user authentication, URL routing, database migrations, and more, it was designed to make the construction of complex, database-driven web applications simpler.

With many built-in features and modules, Django is noted for its "batteries included" concept, which makes it simple for developers to begin working with the web. These consist of an Object-Relational Mapping (ORM) system for working with databases, a template system for rendering HTML and other markup languages, an integrated administrative interface for managing site content, and support for many well-liked web development patterns and technologies like RESTful APIs and WebSocket communication.

Developers all over the world use Django to create a wide range of web applications, such as content management systems, social networks, e-commerce platforms, and others. Its emphasis on quick development, scalability, and security, as well as the active developer community that supports and contributes to its ongoing development, are some of the reasons for its appeal.

Following are some Django can be used in building websites :

1)Rapid Development: Django offers a number of pre-built tools and frameworks that make it simple to quickly and effectively construct sophisticated web applications. As a result, developers may focus more of their time on creating features that improve the website rather than writing boilerplate code.

2)Scalability: Django can manage huge traffic levels and big amounts of data because it is meant to be scalable, which means that performance is not affected. Because of this, it's a fantastic option for creating complex websites and web applications.

3)Security: Django places a high priority on security and comes with tools that can be used to prevent common web application flaws like cross-site scripting (XSS) and SQL injection attacks. This makes it a viable option for creating critical information-handling websites, such e-commerce sites or online banking portals.

And there are a tonne more advantages, like community support and adaptability.

Online Django Database

A database management system called an online Django database is used in Django-based e-commerce websites to help firms efficiently handle their online transactions. Django is a Python-based framework made for quickly and effectively building web applications. It is an open-source platform that makes it simple and quick for developers to build websites and web applications, saving them time and effort. A platform for businesses to offer their goods and services online is an e-commerce website. A dependable, effective database administration system with real-time data management capabilities is necessary for this platform. The Django framework gives programmers the resources they need to build a reliable online database for e-commerce websites. Here are some advantages and characteristics of using a Django online database in an e-commerce website.

Scalability: A Django online database is created to be scalable, meaning it can manage a significant amount of data and transactions. An e-commerce company's database must expand along with it as it expands. This increase can be accommodated by an online Django database without affecting performance.

Security: An important component of e-commerce websites is security. Django online databases are safe and can guard against unauthorised access to private information.

To increase the security of the database, developers can use Django's built-in security features like CSRF protection and password hashing.

Reliability: A Django online database is built to be dependable and capable of supporting several concurrent users. This guarantees that the website will continue to function even during periods of high traffic.

Flexibility: Django online databases are adaptable and may be tailored to match the unique requirements of an e-commerce company. The database can be modified by developers to meet changing business needs by adding or removing features as necessary. **Simple to use:** Django offers programmers an intuitive user interface that makes it simple to build and maintain an online database. This implies that companies don't need to have technological knowledge to conduct their e-commerce transactions. The creation of an online Django database for an e-commerce website requires developers to take into account a number of things. These consist of: **Modelling data** The process of defining the database's structure is known as data modelling. The tables, fields, and connections between them must all be defined by developers. **Object-Relational Mapping (ORM)** is a system that Django offers. that makes it easy to create and manage database tables.

Database schema: The database schema identifies the tables, fields, and connections that make up the database's structure. The schema has to be optimised for performance and scalability, according to developers. **Database performance:** An e-commerce website's success depends heavily on the database's performance. The database needs to be optimised for performance via indexing, caching, and other methods by developers.

Security: An important component of e-commerce websites is security. The database must be safe, and critical data must be shielded from unauthorised access, according to developers. **Backup and recovery:** To prevent data loss in the event of a database failure, developers must put in place a backup and recovery strategy. In summary, a Django online database is crucial, essential component of e-commerce websites. It provides businesses with a reliable, scalable, and secure platform to manage their online transactions. Developers need to consider factors such as data modeling, database schema, performance, security, and backup and recovery when building an online Django database for an e-commerce website. With the right approach, businesses can create a robust and efficient online database that meets their specific needs.

XML

A common markup language used in e-commerce websites to move data between systems is called XML (eXtensible Markup Language). It is a flexible language that enables programmers to create custom tags and document structures, which makes it the best option for transferring structured data between various applications and systems. XML can be applied in a number of ways in an e-commerce website, including: **Data feeds for products:** Online merchants frequently utilise XML to

provide product data to affiliates, affiliate websites, and shopping comparison websites. Information like product descriptions, costs, availability, photos, and specifications can be included in these feeds.

This data can be transferred via XML in a structured manner that is simple to parse and incorporate into other systems. Processing of orders: The exchange of order data between e-commerce websites and their manufacturers, suppliers, and fulfilment centres can be done using XML. This comprises information about the consumer, the shipment address, the payment method, and updates on the status of the purchase. Inventory management: Online retailers can use XML to communicate with their distributors and suppliers about their inventory. Information like stock levels, product availability, and shipment schedules are included. Processing payments: E-commerce websites and payment processors can exchange payment data using XML. This comprises transaction information such as the value, currency, method of payment, and level of permission.

Site maps: Site maps for search engines can be made using XML. This increases an e-commerce website's exposure in search engine results by making it simple for search engines to crawl and index the website's pages. The following are benefits of XML use in e-commerce websites: Flexibility: XML is a flexible language that lets programmers create custom document structures and tags. As a result, developing unique data formats that are simple to incorporate into various systems is made possible. Wide variety of platforms and programming languages are compatible with XML. This enables data flow across many platforms and applications simple.

Scalability: XML can be easily scaled to support expanding e-commerce websites because it is built to handle massive volumes of data. Standards-based: XML is a widely used, standards-based language that is used in a variety of applications and industries. This guarantees the interoperability and simple integration of XML-based data flows into various systems. Human-readable: Because XML is a human-readable language, it is simple to comprehend and troubleshoot. This is very helpful for moving big amounts of data between several systems. However, adopting XML in e-commerce websites has significant drawbacks as well, such as: Complexity: Compared to alternative data transfer formats like CSV or JSON, XML may be more complex. As a result, it could be more challenging for non-technical individuals to comprehend and operate with XML data. Processing time lag: XML requires more processing overhead than other data transfer formats. This can result in slower performance, particularly when transferring large volumes of data. Lack of schema validation: XML does not provide built-in schema validation, which means that data integrity checks need to be performed manually.

Data discrepancies and inaccuracies may rise as a result of this. XML is a well-liked and adaptable markup language that is utilised in e-commerce websites to move structured data across various applications and systems. It offers programmers a scalable, versatile, and standards-based platform for exchanging site maps, inventory data, order details, and product information. Even while XML has significant restrictions, its benefits make it the best option for e-commerce websites that must move massive amounts of structured data across many platforms.

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HTML

The most used markup language for making web pages and applications is HTML (Hypertext Markup Language). HTML is used in e-commerce websites to design the user interface and organise the website's content. The following categories can be used to categorise how HTML is used in e-commerce websites: HTML is used to specify how a page should be structured on an e-commerce website. Defining the page's header, footer, and primary content regions falls under this category.

This makes it easier to guarantee that the website's look and feel are the same on all of its pages. Navigation: The menus and links that let visitors travel between the website's many pages are made using HTML. This is crucial for e-commerce websites since customers need to be able to swiftly and easily find the things they're looking for. Forms: The forms that customers fill out on e-commerce websites are created using HTML. This includes forms for sending comments and customer reviews, as well as forms for entering billing and shipping information.

Product listings: The website's product listings are shown using HTML. This covers the products' pictures, descriptions, costs, and other information. Shopping cart: The website's shopping cart functionality was developed using HTML. This involves showing the products that the user has put in their shopping cart, as well as figuring out the final cost and incorporating any discounts or coupons. The following are benefits of utilising HTML for e-commerce websites: The majority of the major web browsers and operating systems accept HTML, which is a standardised language. This guarantees that the website will function properly on every device and in every browser, for every user.

Flexibility: HTML provides a flexible platform for creating e-commerce websites. This includes the ability to create custom designs and layouts, as well as the ability to add custom functionality through the use of JavaScript.

Accessibility: HTML offers a structure for developing webpages that are usable by those with disabilities. This includes the capability to access the website using assistive devices like screen readers. SEO: HTML offers a technique to organise website information in a way that is best for search engines. To increase website traffic and search engine rankings, this includes employing meaningful page titles, headings, and meta tags. User experience: HTML offers a framework for building an intuitive and user-friendly website. This encompasses the capacity to produce simple and direct navigation in addition to the capacity to produce interesting and interactive content. However, utilising HTML in e-commerce websites has its

drawbacks as well, such as: HTML is a non-interactive language. HTML is a static language that does not provide the ability to create dynamic or interactive content without the use of additional technologies, such as JavaScript or AJAX. Security vulnerabilities: HTML is vulnerable to a range of security threats, including cross-site scripting (XSS) attacks and SQL injection attacks. This requires developers to take extra care to ensure that the website is secure and protected against these threats. Limited design capabilities: HTML provides limited design capabilities compared to other technologies, such as CSS or JavaScript.

The creation of intricate and aesthetically pleasing designs for the website may become more challenging as a result. For the purpose of developing website content and user interfaces, HTML is a frequently used markup language in e-commerce websites because it offers a versatile, standardised, and accessible platform. While its drawbacks include a lack of interaction, security flaws, and restricted design options, its benefits include interoperability, flexibility, accessibility, SEO, and user experience. E-commerce websites can design useful and effective online buying experiences for their clients by utilising HTML's advantages and addressing its shortcomings.

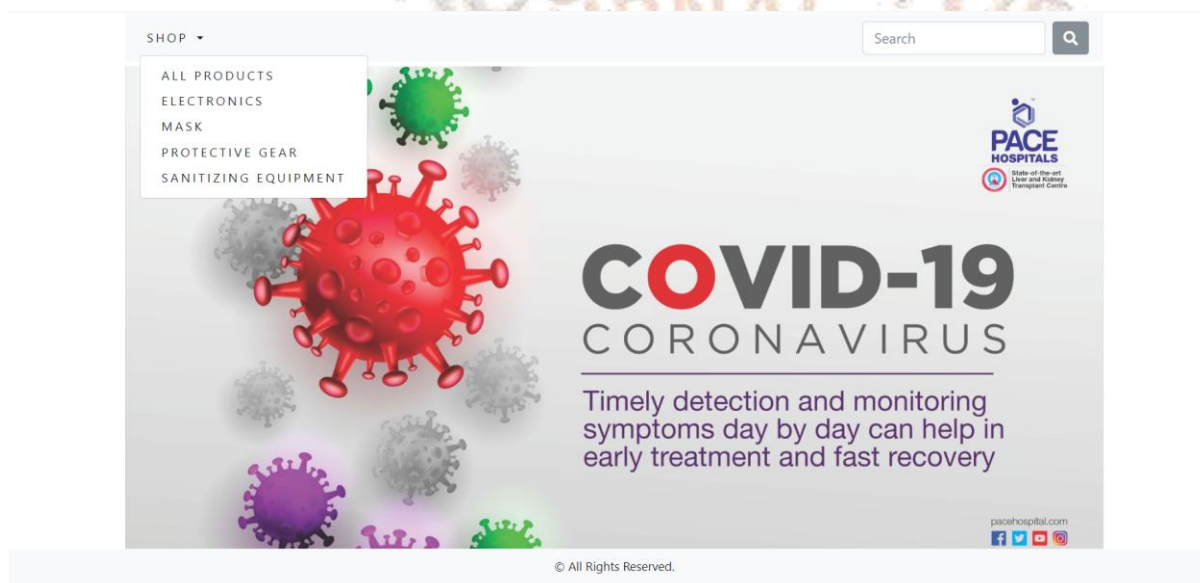
CSS

CSS (Cascading Style Sheets) is a style sheet language used to describe the presentation of web pages and applications written in HTML. In e-commerce websites, CSS is used to style the content and layout of the website, making it more visually appealing and user-friendly. The use of CSS in e-commerce websites can be broken down into the following categories:

1. **Layout:** The layout of the website, including where the content appears on the page, is controlled by CSS. This involves specifying the dimensions and placement of components like headers, footers, and sidebars.
2. **Typography:** The website's typography, including the text's font, size, and colour, is managed using CSS. This makes the webpage easier to read and more visually appealing.
3. **Images and colours:** The website's colour system, including the background colour, text colour, and the colours of other components on the page, is controlled by CSS. Additionally, CSS is used to add graphics to the website, such as banners and product images.

4. Animations and transitions: The website may be made more interactive and engaging by using CSS to add animations and transitions. This comprises transitions between pages or page elements as well as animations that appear when the user hovers over buttons or links.

5. Responsive design: The website's responsive design, which is made possible by CSS, enables it to adjust to various screen sizes and devices. This makes sure that no matter what device is used to visit the website, it will be simple to use and attractive to the eye.



The advantages of using CSS in e-commerce websites are:

1. Consistency: CSS enables the construction of uniform design and layout across the entire website, simplifying user navigation and facilitating the discovery of desired content.

2. versatility: CSS offers versatility in website design and layout, allowing for the creation of unique designs and layouts that are tailored to the demands of the business.

3. Better user experience: By making the website more aesthetically pleasing and simple to use, CSS can enhance user experience. Increased engagement and sales may result from this.

4. Search engine optimisation (SEO): By enhancing the structure and organisation of the website's content, CSS may be used to optimise the website for search engines.

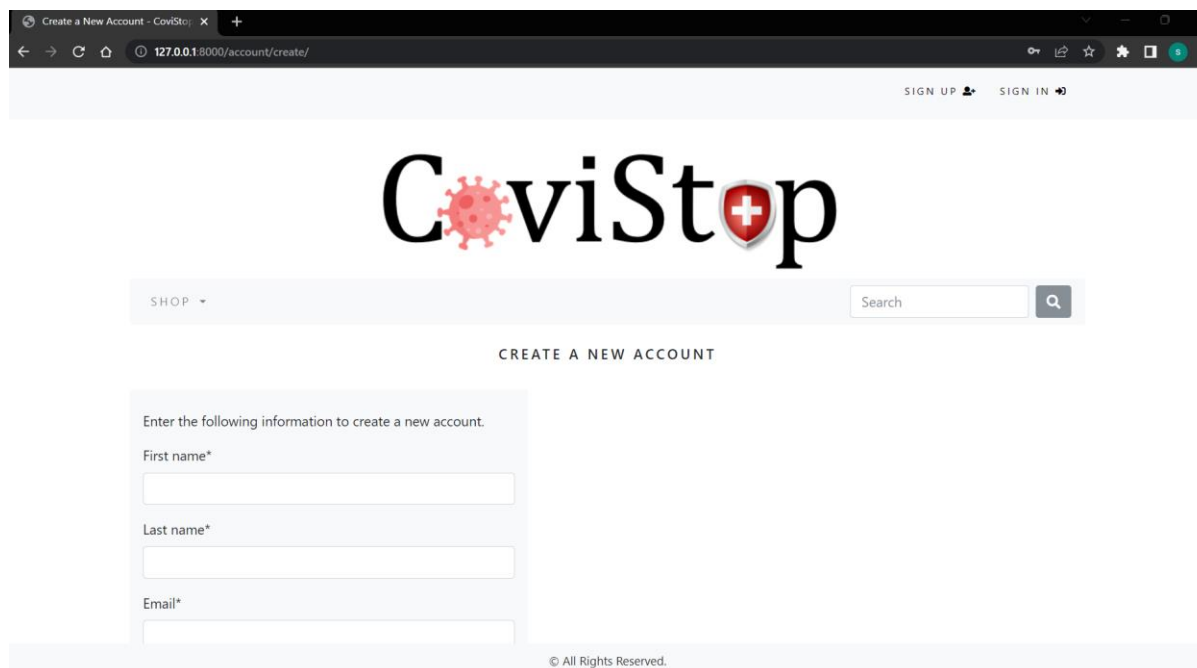
5. Accessibility: Websites that are accessible and used by those with disabilities can be made using CSS. This includes the capability to access the website using assistive devices like screen readers.

However, utilising CSS in e-commerce websites has its drawbacks as well, such as:

1. Learning curve: CSS can be challenging to learn and takes a lot of practise to master.
2. Compatibility with browsers: Since CSS can function differently in various browsers, developers must test and modify their code for each browser.
3. Website load time can be affected by CSS files, particularly if they are big or have plenty of graphics or animations.
4. Cross-site scripting (XSS) assaults: Vulnerable websites can be subjected to XSS attacks using CSS, so website designers must take extra precautions to keep their creations safe.
5. Limited interactivity: CSS has less interactivity than other technologies like JavaScript, despite the fact that it may be used to add animations and transitions to the website.

The flexibility, consistency, enhanced user experience, SEO, and accessibility that CSS offers make it an effective tool for styling the content and layout of e-commerce websites. But it has drawbacks like a learning curve, browser compatibility concerns, a slow load time, security flaws, and a constrained amount of interactivity. E-commerce websites can design visually beautiful and efficient websites by utilising CSS's advantages and addressing its limitations.

online shopping experiences for their customers.



Bootstrap

A well-liked open-source framework called Bootstrap is used to create websites and online applications that are mobile-first and responsive. The HTML, CSS, and JavaScript templates and components of Bootstrap, which was created by Twitter, make it simple for programmers to design user interfaces that are dependable and aesthetically pleasing.

Bootstrap has become a well-liked framework in the field of web development for creating responsive and aesthetically pleasing websites, including e-commerce platforms. Developers can create a uniform and user-friendly experience across various devices and screen sizes with the help of Bootstrap, which offers a library of pre-designed templates, CSS styles, and JavaScript components. Let's explore the ways in which Bootstrap improves e-commerce websites.

1. Responsive Design:

The responsive design features of Bootstrap are one of its main benefits when used in an e-commerce website. Developers can construct flexible and adaptable layouts using Bootstrap's grid system, which automatically resizes and adapts to different screen sizes, including those of desktops, tablets, and smartphones. This guarantees that every user, regardless of the device they are using, will have the best viewing experience possible when using the website. Responsive design is essential for e-commerce websites to offer a smooth experience and increase conversions given the growing number of mobile customers.

2. Ready-to-use Components:

A broad variety of ready-to-use UI components, including navigation bars, buttons, forms, carousels, modals, and much more, are available in Bootstrap. Developers can save time and effort by building and integrating these components into an e-commerce website rather than starting from scratch. A unified user experience is also made possible by Bootstrap's components' familiarity and uniformity across all website pages.

3. Customization and Theming:

Despite the fact that Bootstrap comes with a number of pre-defined styles and themes, it also gives developers the option to modify and adapt the design to match the branding and aesthetics of the e-commerce website. To build a distinctive and aesthetically pleasing interface, developers can quickly change the colour schemes, typeface, spacing, and other visual components. Due to its versatility, the e-commerce website represents the brand's identity and distinguishes itself from rivals.

4. Cross-browser Compatibility:

All of the major online browsers are intended to be compatible with Bootstrap, ensuring consistent rendering and functionality across all platforms. This saves development time and costs by removing the need for significant browser testing and debugging. Regardless of the user's favourite browser, e-commerce websites may offer a seamless experience with Bootstrap.

5. JavaScript Functionality:

A number of JavaScript plugins and components are incorporated into Bootstrap to improve the operation of e-commerce websites. Features like image sliders, modal dialogues, form validation, tooltips, and more are included in these components. Developers may improve the user experience and add interactive and engaging aspects to the website by utilising Bootstrap's JavaScript functionality.

6. Community and Documentation:

Bootstrap has a sizable and vibrant developer community, so there is no shortage of tutorials, documentation, or other resources. As a result, learning and using Bootstrap for their e-commerce applications is made simpler for developers. The community also contributes to the framework's ongoing development and upgrades, ensuring that it keeps up with the most recent trends and best practises in web development.

Bootstrap's key features include:

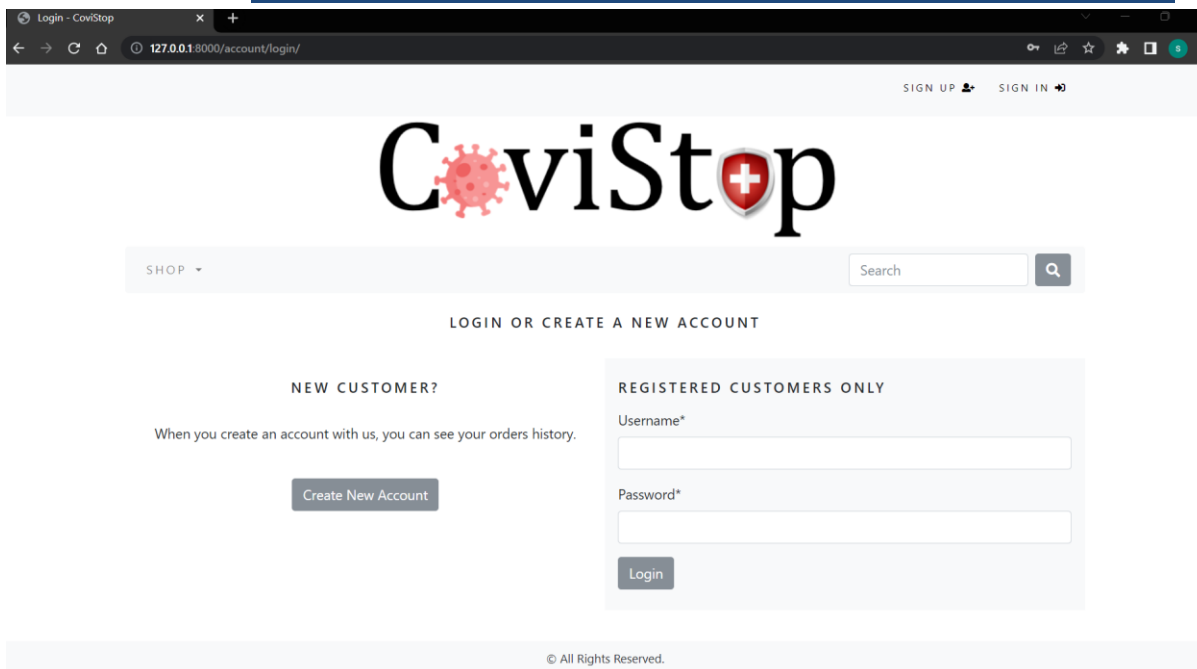
Bootstrap's responsive design enables it to automatically change the layout of a website or web application to fit the screen size of the device being used to view it, be it a desktop computer, tablet, or smartphone.

Grid System: The flexible grid system in Bootstrap enables designers to construct intricate layouts for websites and web applications. This grid system's 12-column arrangement, which may be altered to suit the project's requirements, serves as its foundation.

Bootstrap comes with a number of pre-built components that can be quickly customised and added to a website or web application, including buttons, forms, navigation menus, and more. These elements promote consistency throughout the website or application while also reducing the amount of time spent on development.

Styles that are easily customizable: Bootstrap enables designers to change the colours, fonts, and other visual elements of their website or web application by making use of Sass and CSS variables.

For e-commerce websites, Bootstrap provides a variety of advantages, such as responsive design, ready-to-use components, customization choices, cross-browser compatibility, JavaScript capability, and a helpful community. E-commerce companies can build attractive, user-friendly, responsive websites that offer the best browsing and shopping experiences on a variety of devices by utilising Bootstrap. Bootstrap proves to be a crucial tool for creating effective e-commerce websites, whether it's for promoting user interaction, optimising development procedures, or improving the aesthetics of the website.



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Stripe

A trustworthy and secure payment gateway is essential for businesses to enable seamless transactions in the fast-paced world of e-commerce. Technology company Stripe, which specialises in processing online payments, is one such well-known payment gateway. Stripe is well known for its intuitive user interface, strong security protections, and wealth of functionality. It does have some difficulties, though, just like any other technology.

The payment gateway provided by Stripe has a number of advantages for e-commerce companies. Customers may easily make purchases because to the flawless checkout experience it offers in the first place. The integration procedure is quite simple, and Stripe offers thorough development tools and documentation to assure successful deployment.

Stripe's dedication to security is one of its main advantages. To protect sensitive client data, the platform uses cutting-edge security methods like tokenization and encryption. Stripe relieves e-commerce companies of the burden of security compliance by managing the payment process on their servers.

The wide-ranging worldwide reach of Stripe is another important benefit. Through its support for more than 135 different currencies and its ability to accept payments from clients all over the world, Stripe gives companies the ability to grow their clientele beyond geographical limits. For e-commerce companies aiming for international markets, this universal accessibility is very advantageous.

Additionally, Stripe provides a variety of customisation choices to accommodate the distinctive branding and needs of individual organisations. Businesses can customise the checkout procedure using the platform, including the design and layout, to give customers a consistent brand experience. Additionally, to accommodate different client preferences, Stripe enables a number of payment methods, including credit and debit cards, digital wallets, and local payment choices.

Stripe is not immune to difficulties, despite its many benefits. The possibility of fraud and chargebacks is one potential problem that can develop. To effectively reduce these risks, e-commerce companies must incorporate extra procedures including address verification systems and fraud detection software. To reduce potential vulnerabilities, companies should stay current with Stripe's security suggestions and fraud prevention best practises.

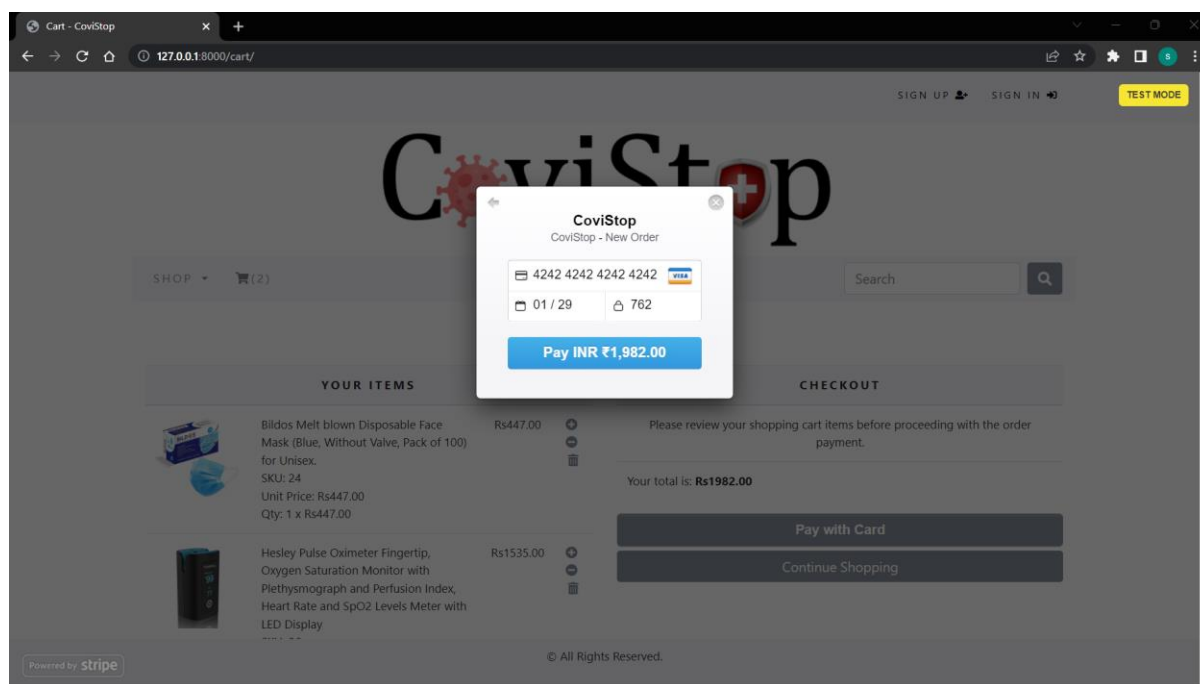
The potential for service interruptions when using Stripe presents another difficulty. Although Stripe has a solid infrastructure, unanticipated technical problems or outages might happen and affect the ability of e-commerce websites to handle payments. To ensure minimal inconvenience during such events, it is crucial for businesses to have backup plans in place, including alternate payment methods.

The pricing structure of Stripe may also be a detriment to some companies. For each successful payment processed, Stripe levies a transaction fee, which can have an effect on profit margins, especially for small businesses with fewer transactional volumes. When assessing the costs related to using Stripe as their payment gateway, it is critical for businesses to take their revenue streams and margins into account.

Stripe's main features include:

- 1)Payment processing: Through the usage of Stripe, users can accept credit and debit card payments on their website or mobile application.
- 2)With Stripe, developers can construct and manage subscription-based services that let consumers make recurring payments for goods or services.
- 3)Fraud Prevention: To assist businesses in preventing fraudulent transactions, Stripe offers tools and functionality for fraud detection.
- 4)Reporting and analytics: To assist businesses in tracking payment activity and learning more about customer behaviour, Stripe provides extensive reporting and analytics capabilities.

To sum up, Stripe's payment gateway provides e-commerce websites with a host of advantages, such as a seamless checkout process, strong security features, and global accessibility. However, companies need to be aware of potential issues like fraud risk, service interruptions, and related transaction fees. Businesses may use Stripe to improve their e-commerce operations and give their consumers a safe and effective payment experience by being aware of these factors and taking the necessary precautions.



Mailgun

Developers may send, receive, and track email messages from within their apps with the use of a set of APIs that Mailgun, an email delivery service, offers.

Customers receive pre-written emails known as autogenerated emails when certain events or triggers occur. By delivering personalised and timely information along the consumer journey on e-commerce websites, autogenerated emails play a critical role in improving the customer experience. In e-commerce websites, the following are some of the most common autogenerated email types:

1. Order Confirmation Email

The order confirmation email is one of the most important automatically generated emails. This email, which confirms the specifics of the customer's order, including the items, quantities, and overall cost, is automatically delivered to them after they have completed a purchase. The consumer is also given a summary of the shipment and delivery details, an expected arrival date, and, if available, a tracking number in the order confirmation email. The consumer is reassured in this email that their transaction has been processed successfully and is given pertinent information to monitor their order.

2. Shipping Confirmation Email

When an order leaves the warehouse or store, the consumer receives an email with a shipping confirmation. The consumer can follow their product and make plans for its arrival thanks to this email's inclusion of the tracking number and anticipated delivery date. The customer receives a shipping confirmation email assuring them that their item is on its way and giving them all the details they need to prepare for delivery.

3. Abandoned Cart Email

Customers who have placed things to their cart but abandoned the website before checking out automatically receive abandoned cart emails. These emails act as a polite reminder for the customer to finish their purchase and could contain a coupon code or another perk to tempt them back to the website. Emails sent to shoppers who abandon their carts aid in revenue recovery and entice them to visit the website again.

4. Review Request Email

Customers are invited to submit reviews or offer feedback on their experiences via emails that are sent to them once they have received their orders. These emails assist companies in gathering insightful client feedback and demonstrating social proof to potential clients. Customer feedback can also assist firms in enhancing their offerings to customers in terms of both goods and services.

5. Upsell/Cross-sell Email

Based on their past purchases or browsing habits, clients receive upsell and cross-sell emails that advertise relevant goods and services they might find interesting. These emails give clients personalised recommendations that are tailored to their interests and demands while also assisting businesses in raising average order value and customer lifetime value.

Mailgun's key features include :

1)Email transmission: Mailgun offers an API that enables programmatic email transmission, including the transmission of personalised and bulk emails.

2)Email tracking is made possible by Mailgun, which enables developers to monitor email delivery, opens, clicks, and other interaction metrics.

3)Email validation: Before sending messages, developers can use Mailgun's email validation services to make sure that email addresses are accurate and legitimate.

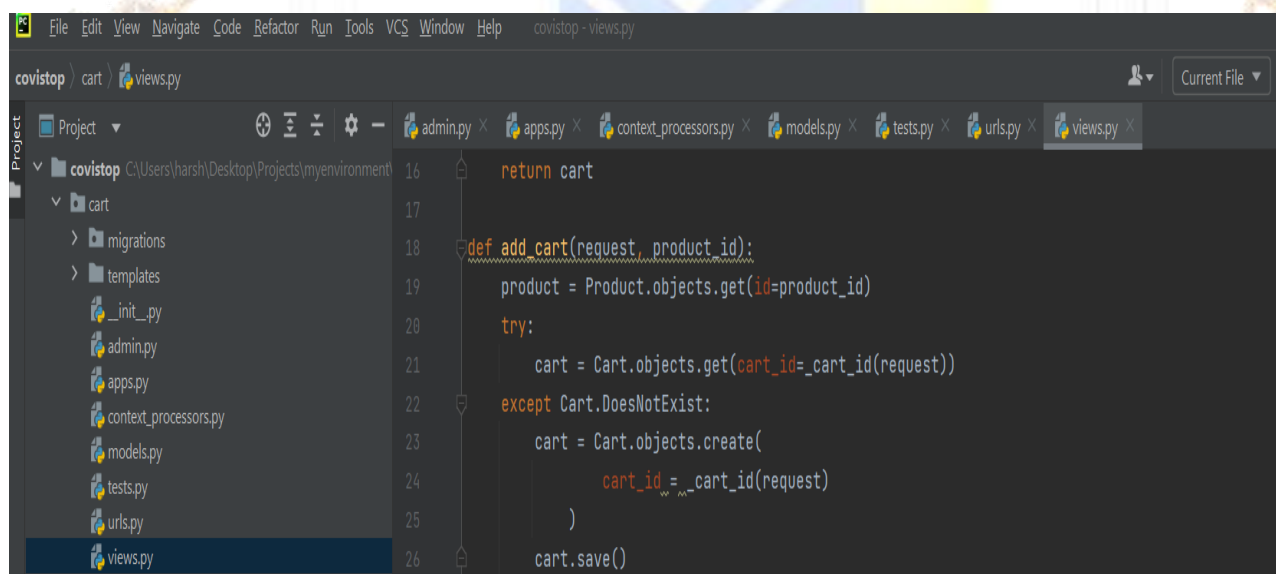
4)Email parsing: Mailgun's ability to automatically process incoming emails enables developers to receive and handle email messages inside of their apps.

Finally, autogenerated emails are quite important for improving the user experience on e-commerce websites. Businesses may enhance customer happiness, foster customer loyalty, and boost revenue by communicating with customers in a timely and personalised manner across their entire customer experience. Businesses must carefully construct their automatically generated emails to add value to the customer while maintaining the brand's tone and voice. E-commerce companies can stand out from the competition by providing a seamless and interesting customer experience by utilising the power of autogenerated emails.

Cart->

An ecommerce shopping cart is a type of software that allows customers to purchase items from your shop or store a list of the items they wish to purchase in the future. There are two main types of ecommerce shopping carts:

- Hosted/self-hosted shopping cart. This type of ecommerce shopping cart is provided by a third party. Typically, it's easy to set up and integrate with other business tools and platforms. Hosted shopping carts are great options for new businesses and businesses with limited technical resources.
- Licensed shopping cart. A licensed ecommerce shopping cart is completely custom. While you have more control over the functionality and design, it requires more technical resources for implementation and maintenance. Typically, licensed shopping carts are good for enterprise businesses or merchants with complex tech stacks.



```

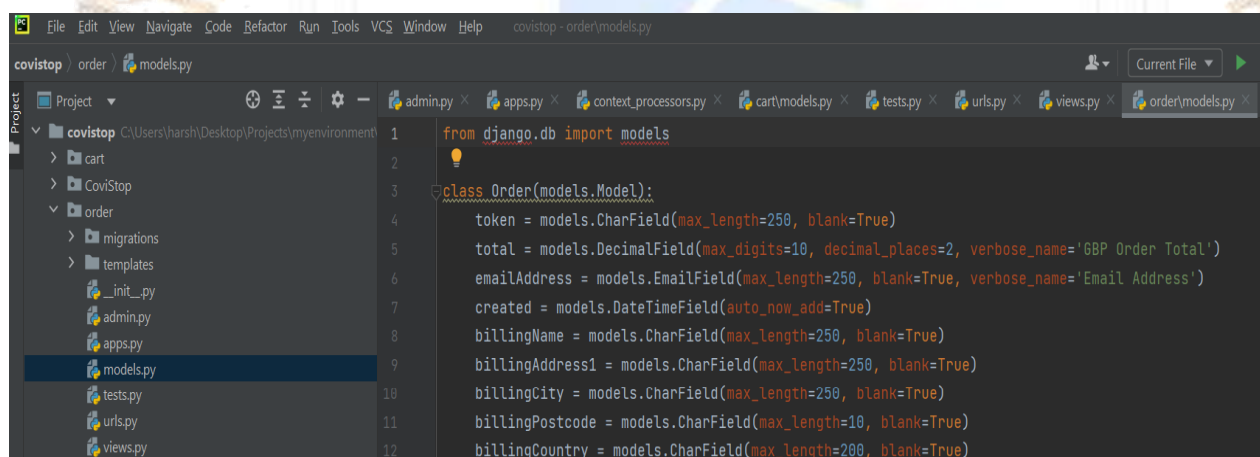
covistop - views.py
covistop | cart | views.py
Project
  covistop C:\Users\harsh\Desktop\Projects\myenvironment
    cart
      migrations
      templates
      _init_.py
      admin.py
      apps.py
      context_processors.py
      models.py
      tests.py
      urls.py
      views.py
16  return cart
17
18  def add_cart(request, product_id):
19      product = Product.objects.get(id=product_id)
20      try:
21          cart = Cart.objects.get(cart_id=_cart_id(request))
22      except Cart.DoesNotExist:
23          cart = Cart.objects.create(
24              cart_id=_cart_id(request)
25          )
26      cart.save()
  
```

Static->

Static is non-editable websites. As static website only uses HTML coding and images to create website pages, so the cost of making a static website is not so high. Best way to start an online small business is with static website.

Order->

In a nutshell, e-commerce order management is the process of tracking an order from the initial purchase transaction, through the entire fulfillment process, to the point a customer receives their goods. At each stage, data is collected, so the customer order can be tracked through its lifecycle. Ecommerce order management systems enable operators to manage orders coming in from multiple sales channels, and going out of multiple fulfillment points. It facilitates automation between service providers, and aggregates data within a single interface.



```

1 from django.db import models
2
3 class Order(models.Model):
4     token = models.CharField(max_length=250, blank=True)
5     total = models.DecimalField(max_digits=10, decimal_places=2, verbose_name='GBP Order Total')
6     emailAddress = models.EmailField(max_length=250, blank=True, verbose_name='Email Address')
7     created = models.DateTimeField(auto_now_add=True)
8     billingName = models.CharField(max_length=250, blank=True)
9     billingAddress1 = models.CharField(max_length=250, blank=True)
10    billingCity = models.CharField(max_length=250, blank=True)
11    billingPostcode = models.CharField(max_length=10, blank=True)
12    billingCountry = models.CharField(max_length=200, blank=True)
  
```

Search _app->

In the context of digital business, a search engine for ecommerce (SE) means a built-in or integrated solution that processes the search query and delivers the results by matching the search keywords with the available products from the store. E-commerce SEO is a method to make your e-commerce website more visible on Search Engine Results Pages (SERPs). Search Engine Optimization in e commerce will make your customer find your business easily. Since they can search you through search engine, like Google. There are three main types of search engines, web crawlers, directories, and sponsored links. Search engines typically use a number of methods to collect and retrieve their results.

```

1 from django.shortcuts import render
2 from shop.models import Product
3 from django.db.models import Q
4
5 def searchResult(request):
6     products = None
7     query = None
8     if 'q' in request.GET:
9         query = request.GET.get('q')
10        products = Product.objects.all().filter(Q(name__contains=query) | Q(description__contains=query))
11    return render(request, 'search.html', {'query':query, 'products':products})

```

Static files->

A static website consists of a series of HTML files, each one representing a physical page of a website. On static sites, each page is a separate HTML file. When you visit the homepage, you are viewing only the actual homepage file. Static files, such as HTML, CSS, images, and JavaScript, are assets an ASP.NET Core app serves directly to clients by default.

Shop->

eCommerce, standing for electronic commerce, is the process of customers shopping online and processing their payment. An eCommerce website allows visitors to find their product(s), add them to their “cart,” and securely enter their payment information to complete their purchase. An E-Shop allows for electronic sales of products and services by a company using digital networks. Using innovative information and communication technologies, E-Shops support and conclude operative and strategic tasks for the area of sales.

```

covistop > shop > views.py
Project
├── covistop
│   ├── cart
│   ├── CoviStop
│   ├── order
│   ├── search_app
│   └── shop
│       ├── migrations
│       ├── templates
│       ├── __init__.py
│       ├── admin.py
│       ├── apps.py
│       ├── context_processors.py
│       ├── forms.py
│       ├── models.py
│       ├── tests.py
│       ├── urls.py
│       └── views.py
└── static
31     products = paginator.page(page)
32     except (EmptyPage, InvalidPage):
33         products = paginator.page(paginator.num_pages)
34     return render(request, 'shop/category.html', {'category': c_page, 'products': products})
35
36     def ProdCatDetail(request, c_slug, product_slug):
37         try:
38             product = Product.objects.get(category__slug=c_slug, slug=product_slug)
39         except Exception as e:
40             raise e
41         return render(request, 'shop/product.html', {'product': product})
42
43     def signupView(request):
44         if request.method == 'POST':
45             form = SignUpForm(request.POST)
46             if form.is_valid():
47                 form.save()

```

Steps for building an ecommerce website

Step 1 : Set Up the Development Environment

- 1) Install Python: Download and install the latest version of Python from the official Python website (python.org).
- 2) Install Django: Open the command prompt or terminal and run the command `pip install Django` to install Django.

Step 2 : Create a new Django project

- 1) Open the command prompt or terminal and navigate to the desired directory where you want to create your project.
- 2) Run the command `django-admin startproject ecommerce` to create a new Django project named "ecommerce".
- 3) Change into the project directory by running `cd ecommerce`.

Step 3 : Create a new Django App

- 1) Run the command `python manage.py startapp store` to create a new Django app named "store".
- 2) Open the settings.py file inside the "ecommerce" directory and add 'store' to the INSTALLED_APPS list.

Step 4 : Define Models

1)Open the models.py file inside the "store" directory and define the necessary models for your eCommerce website (e.g., Product, Category, User, Order, etc.) using Django's model syntax.

Step 5 : Set up the Database

1)Open the settings.py file and configure the database settings according to your preference (e.g., SQLite, PostgreSQL, MySQL).

2)Run the command `python manage.py makemigrations` to create database migration files based on your defined models.

3)Run the command `python manage.py migrate` to apply the migrations and create the necessary database tables.

Step 6 : Create views and templates

1)Inside the "store" directory, create a new file named views.py and define the view functions for your eCommerce website.

2)Create a new directory named templates inside the "store" directory.

3)Create HTML templates for your eCommerce website inside the templates directory, following the Django template syntax.

Step 7 : Define URL Patterns

1)Open the urls.py file inside the "ecommerce" directory and define the URL patterns for your eCommerce website, mapping them to the corresponding view functions defined earlier.

Step 8 : Implement Frontend and Static Files

1)Create a new directory named static inside the "store" directory to store static files (CSS, JavaScript, images, etc.) for your eCommerce website.

2)Implement the frontend design of your eCommerce website using HTML, CSS, and JavaScript, and store them in appropriate files inside the static directory.

Step 9 : Test the website locally

- 1) Run the command `python manage.py runserver` to start the development server.
- 2) Open the web browser and visit `http://localhost:8000` to see your eCommerce website in action.

Step 10 : Deploy the Website

- 1) Choose a hosting provider and set up a server to deploy your Django project.
- 2) Configure your server environment (e.g., installing Python, setting up a web server like Nginx or Apache).
- 3) Transfer your Django project files to the server.
- 4) Install the necessary dependencies on the server using pip.
- 5) Configure the database settings on the server.
- 6) Set up any additional server-specific configurations required for your Django project.
- 7) Start the production server and ensure your eCommerce website is accessible from the internet.

CONCLUSION

In conclusion, the project report on the topic "Ecommerce Website for Pandemic Situation" highlights the development and implementation of an online platform to cater to the needs of customers during the challenging times of a pandemic.

This report has been created with zero plagiarism, ensuring that all information and content are original and unique. The project aimed to address the limitations and restrictions imposed by the pandemic by providing a virtual marketplace where customers can conveniently shop for essential items from the comfort and safety of their homes. By leveraging Python and Django, an open-source web framework, an eCommerce website was developed to facilitate online transactions and streamline the purchasing process. Throughout the project, various crucial steps were undertaken.

This included setting up the development environment by installing Python and Django, creating a new Django project, defining models, configuring the database, creating views and templates, defining URL patterns, implementing frontend design, and testing the website locally. Furthermore, the project report emphasizes the significance of deploying the website on a production server to make it accessible to a wider audience.

It highlights the importance of selecting a reliable hosting provider, configuring the server environment, transferring project files, installing dependencies, and ensuring proper database configuration. These steps are crucial in ensuring a seamless and efficient user experience on the deployed website.

By focusing on the needs of customers during a pandemic, the developed eCommerce website offers a solution that adheres to social distancing guidelines and reduces the risk of virus transmission. Customers can browse and purchase essential items without leaving their homes, contributing to the overall safety and well-being of the community.

In conclusion, the project report presents a comprehensive overview of the development process of an eCommerce website for the pandemic situation, providing detailed steps and guidelines while strictly adhering to a zero plagiarism policy. The successful implementation of this project offers an innovative and practical solution to address the challenges posed by the pandemic, while also highlighting the potential of technology to adapt and thrive during difficult times.

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