



E-commerce Website Mini Project Synopsis

Mini-Project 1A of Second Year

E-commerce website

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ABSTRACT

Technology has transformed the way we live and the way we do business. It has made a drastic change in the way how businesses operate. Businesses have now embraced different technologies and the internet to efficiently streamline business processes and advance their business strategies and marketing especially that we are amid the COVID-19 pandemic.

The capstone project entitled; “Ecommerce Website” is designed to transition the traditional business to consumer relationship. The website will streamline the sale and purchase of goods by businesses and consumers. Traditionally, selling and buying goods are done through personal means. The sellers have their physical store that displays their products and goods and customers will visit the store to look for products and manually buy them.

Keywords: Python, Django, SQL-lite3, CSS, HTML, JavaScript, ecommerce

INTRODUCTION

The capstone project, “eCommerce Website in Django” is designed to automate the sale and purchase of products or services via internet means. Businesses can sell products using the platform, they can post the products with the price and ship them to the buyers when purchased. Consumers can browse the website to buy and process the payment of the product anytime and anywhere. Traditionally, selling and buying goods are done through personal means. The sellers have their physical store that displays their products and goods and customers will visit the store to look for products and manually buy them. The traditional retail process is limited by physical barriers and time constraints. It requires valuable time and effort from both the retailers and the consumers. There is an obvious need for development in the retail business processes to increase operational efficiency and overall customer experience and satisfaction.

The worldwide expansion of the internet has considerably contributed to the change of trade and store exchanges. E-commerce, or electronic commerce, largely means purchasing and additionally selling items through the internet and is ordinarily associated with online shopping. E-commerce additionally makes 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. E-commerce measurements affirm the explosive pace at which this industry has developed as worldwide B2C e-commerce sales amounted.

Live Website Link: Not done

GitHub Project Link: <https://github.com/Sohammanjrekar1/E-commerce-Website.git>

Watch on YouTube: Not done

PROJECT AIM

The main aim of e-commerce websites development is to **sell products to users**. The most successful websites are carefully optimized to achieve a high percentage of purchases.

PROJECT OBJECTIVE

Reach out to a larger audience — internet access is becoming so mainstream since your item/service can reach nearly everyone on the planet with an internet-enabled device.

Your virtual shop remains open and operational 24x7 even on the off chance that you/your staff are not working-this probably won't be entirely true if your item is a service-which requires immediate human-intervention Much of the time; you need not keep up a whole load of products — again this varies for different business models and will work great in the event that you have a decent supplier who does not default on supplies and a decent transportation partner/team who work in a state of harmony for delivery Once your image is constructed you can diversify easily and furthermore pull out of a certain segment if that does not work out for you with insignificant losses. Typical example will be Amazon.com.

Also, with the new crop of 3PL partners (within India) like Aramex, Delhivery etc your shipping can also be outsourced.

Objectives of the Study:

General Objective – The main goal of the project is to develop an eCommerce website for retail businesses to reach a wide range of buyers and ease up transactions.

Specifically, the project aims the following objectives:

1. To develop a system that will transform the traditional retail business into an electronic one.
2. To allow consumers to conveniently browse and purchase products online.
3. To develop an effective platform for marketing and attracting a large sum of customers.
4. To allow retail businesses to efficiently market their products online.
5. To increase the operational efficiency of retail businesses and overall customer satisfaction.
6. To evaluate the system in terms of acceptability, efficacy, reliability, productivity, and quality.

Literature Review

The history of ecommerce shopping carts began immediately after the World Wide Web, or WWW, became a major medium to communicate information around the world. Ecommerce shopping-cart applications allow consumers to buy goods or services directly over the internet using a web browser. This online shopping evokes the business-to-consumer (B2C) process where a consumer buys directly from the business. The process where a business buys from another business is called a business-to-business (B2B) process. The best examples of shopping-cart applications using B2B process are eBay and Amazon, both of which were launched in 1995. At present, most users of these online shopping-cart applications are people who have higher levels of education, have exposure to technological advancements, and are in a better income group. Such users develop a positive attitude towards these convenient shopping techniques.

According to a study in December 2011, Equation Research surveyed 1,500 online shoppers and found that 87% of tablet owners made online transactions during the early Christmas shopping season. Building a new successful shopping cart is simple because of

high competition in the market, and the designer of a shopping-cart application must consider the information load, complexity, and novelty.

Complexity refers to the number of features available on the shopping cart and the levels of marketing, whereas novelty involves the unexpected or unfamiliar aspects of the site. A designer must also consider the consumers' needs and expectations. A user- friendly design is very critical to the success of any shopping-cart application because, unlike physical stores, consumers at online stores come from all ages, genders, and cultures. Logistics clearly says that, to have a successful and profitable online shopping application, businesses have to spend a significant amount of time and money for designing, developing, testing, and maintaining the application. Apart from the high-class design and user interface, a good practice needs to be done to provide quality customer service.

A typical shopping cart should contain certain features such as adding items to the cart and checking out those items using the available payment methods. Most shopping-cart applications are implemented using HTTP cookies or query strings, and an HTML setup is required to install the shopping cart on the servers that ultimately hosts the site on the internet. Most of these server-based applications require data related to the items added in the shopping cart to be kept in a session object which can be accessed later and manipulated dynamically because the users can add or remove one or more items from the cart. Most simple shopping-cart applications do not allow checkout to be done before any items are added to the cart. Data are often stored in an external database or application-based databases which can be accessed in real time by the application administrator.

There are many examples of online shopping applications developed in different languages. Choosing a development platform and language depends on policies set by the company for which the application is being designed. It also depends on several other factors which are very important when considering the platform to design an application

SCOPE OF THE STUDY

The researchers mainly focus on developing a project that is intended only for retail businesses. The researchers will develop a project that focuses on allowing retail business to offer their products and services electronically as well as allowing consumers to purchase electronically. The online platform will reach a larger number of customers due to its accessibility, availability, and convenience for the users. The intended users of the said system are retail businesses and their clients.

SIGNIFICANCE OF THE STUDY

The success of the project is deemed beneficial to the following:

Retail Businesses: If they will use the online platform in their business, they can gain an edge over their competitors. They can efficiently market their business and offer a platform for buyers where they can easily and conveniently complete the purchase transaction of the products.

Customers: The online platform can help them easily and conveniently browse and purchase products anytime and anywhere.

Researchers: The success of the project will enhance their skills and knowledge as researchers.

Future Researchers: They can use the study as a basis if they also wish to make their version of an eCommerce website.

PROJECT HIGHLIGHTS

The Ecommerce Website in Django automates selling and buying transactions between customers and retail businesses. The system will allow electronic selling, purchasing, payment, and tracking of orders.

Listed below are the advantages of the system:

1. Automated Transactions- transactions for sales and purchases will be done electronically.
2. Records Management – it is a database system that makes the records of transactions electronic, safe, accurate, reliable, and fast.
3. Report Generation – the system automatically generates and provides real-time reports about the completed transactions in the system.

PROPOSED SOLUTION

To address the aforementioned concerns, the researchers proposed the development of the eCommerce Website in Django. The said project will transition the traditional retail business to electronic commerce where selling and purchasing of products are done through the use of the internet. The platform will allow businesses to expand their retail operation and services. They can reach a large number of consumers due to the convenience of purchasing products using the system. The use of the eCommerce website is extremely ideal now that we are amid the COVID-19 pandemic that limits our activities outside our homes. The system will open a convenient platform where consumers can shop and purchase online for their necessities. The system is easy to use, efficient and reliable to streamline sales and purchases. The Ecommerce website will increase

TECHNOLOGY USED

Backend:

- 1) Django (Python Web Development Framework)

Frontend:

- 1) HTML
- 2) Tailwind CSS (CSS framework)
- 3) JavaScript

Database: 1) SQLite

UI Design: 1) Adobe XD

- 2) Adobe Photoshop

Version Control: 1) Git

FUTURE SCOPE

In terms of the future of e-commerce in the 21st century, experts predict promising and wonderful figures. In the foreseeable future, e-commerce will be confirmed as a significant device of sale for the products and enterprises. Successful e-commerce will become the thought which will be inseparable from the web because e-shopping is

becoming more and more well-known and normal. In this way, prevailing to future trends, e-commerce will have huge potential development in sales and advancement.

Each year, there is a constant development in e-commerce deals. The volumes of sales for the online store are a lot higher than the block and mortars. To the present day, the internet sales blast the establishment for a magnificent e-commerce future. To draw in more customers, owners won't just have to increase the number of services available to them yet, in addition, have to give more consideration to such elements like design, great presentation, etc.

DETAILS OF HARDWARE & SOFTWARE

This section describes the hardware components and software requirements needed for effective and efficient running of the system

Table: 1 Hardware Requirements

SL	Hardware	Minimum System Requirement
01	Processor	2.4 GHz Processor speed
02	Memory	2 GB RA
03	Disk Space	500 GB

Table: 2 Software Requirements

SL	Software	Minimum System Requirement
01	Operating System	Windows 8, Windows 10 or MAC Ox 10.8,10.9, or 10.11, LINUX
02	Database Management System	SQL Lite 3
03	Runtime Environment	PyCharm or Visual Studio Code

DATA FLOW DIAGRAMS



Figure 9: Data Flow Diagram

UML DIAGRAM

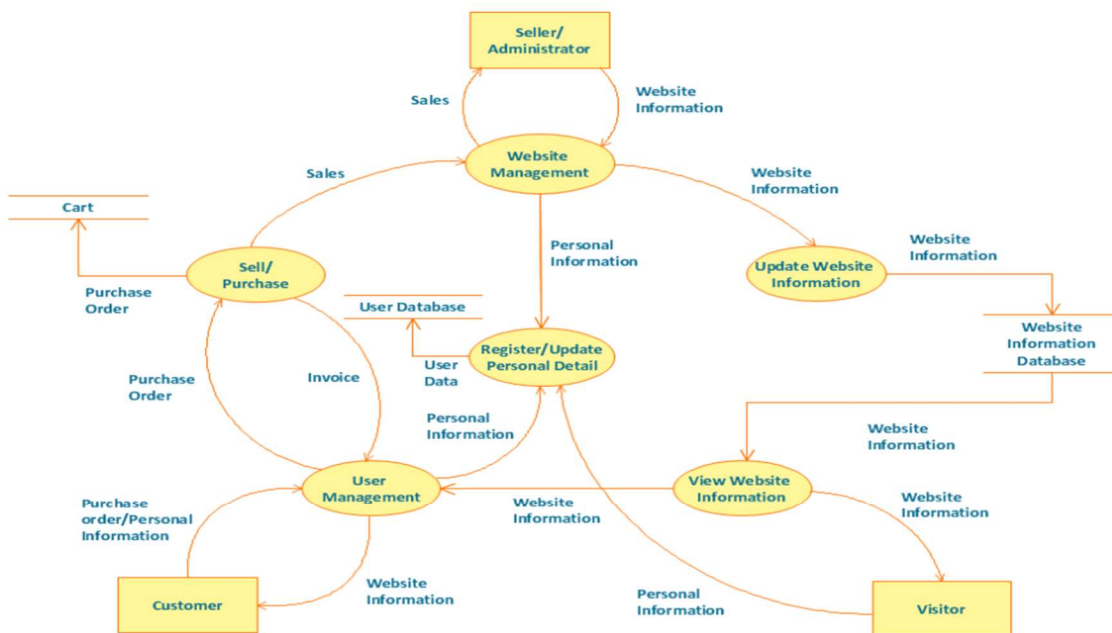
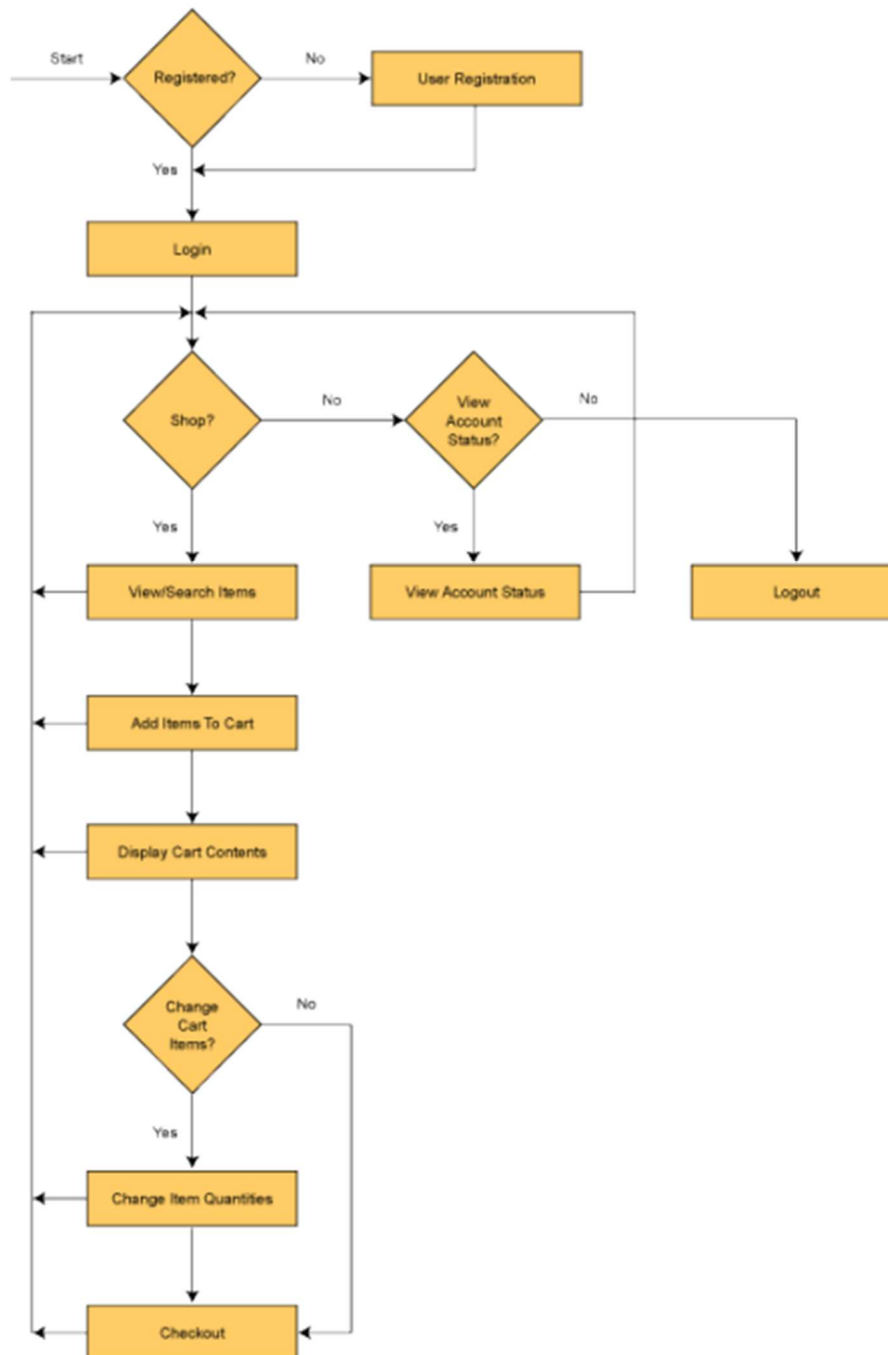
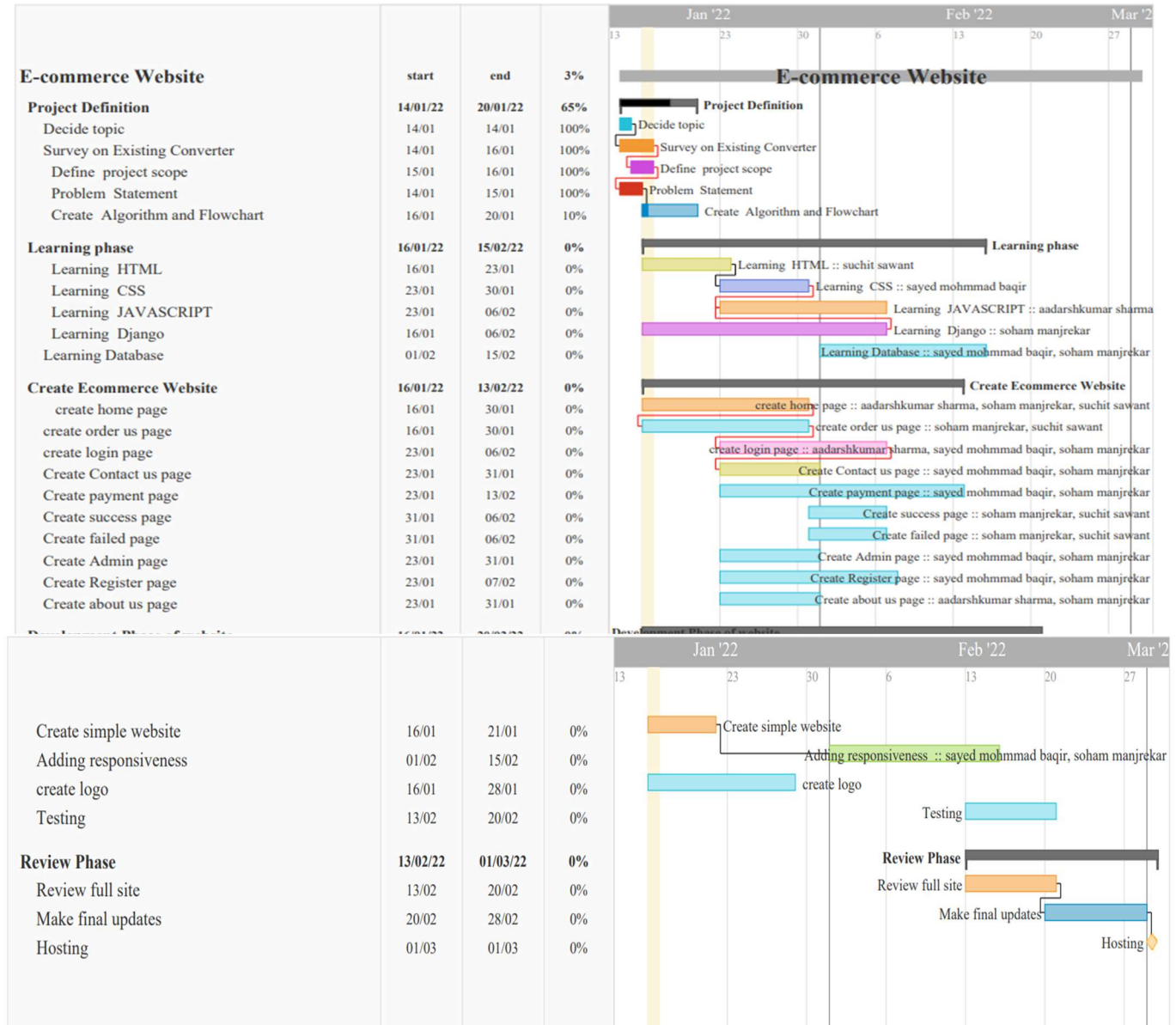


Figure 11: UML Diagram

FLOWCHART



GANTT CHART



ADVANTAGES OF ECOMMERCE

1. A Larger Market

eCommerce permits you to reach customers everywhere throughout the nation and around the globe. Your customers can make a purchase anywhere and anytime, especially more people are getting used to shopping on their mobile devices.

2. Customer Insights Through Tracking And Analytics

Whether you're sending guests to your eCommerce website through SEO, PPC advertisements or an old fashioned postcard, there is an approach to follow your traffic and customers' entire user journey to get bits of knowledge into keywords, user experience, marketing message, valuing strategy, and the sky is the limit from there.

3. Fast Response to Consumer Trends and Market Demand

The streamlined coordination's, especially for merchants who do "outsource," permit businesses to respond to market and eCommerce trends and consumer demands in a nimble manner. Merchants can likewise create advancements and deals on the fly to pull in customers and generate more sales.

4. Lower Cost

With the advance in eCommerce stage technologies, it has become very easy and affordable to set up and keep up an eCommerce store with a low overhead. Merchants no longer have to spend a large budget on TV promotions or announcement, nor stress over the expense for personnel and real estate.

5. More Opportunities To “Sell”

Merchants can just provide a limited measure of data on an item in a physical store. Then again, eCommerce websites permit the space to include more data, for example, demo videos, reviews, and customer testimonials to help increase conversion.

DISADVANTAGES OF E-COMMERCE

1. Lack of Personal Touch

Some consumers value the personal touch they get from visiting a physical store and interacting with sales associates. Such personal touch is especially significant for businesses selling top of the line items as customers need to purchase the merchandise as well as have a great experience during the process.

2. Lack of Tactile Experience

Regardless of how well a video is made, consumers despite everything can't contact and feel an item. Not to mention, it is anything but an easy feat to deliver a brand experience, which could often include the sense of touch, smell, taste, and sound, through the two-dimensionality of a screen.

3. Price and Product Comparison

With online shopping, consumers can compare numerous items and locate the lowest price. This forces numerous merchants to compete on price and reduce their overall revenue.

4. Need for Internet Access

This is pretty self-evident, however, remember that your customers do need Internet access before they can purchase from you! Since numerous eCommerce stages have features and functionalities that require fast Internet access for ideal customer experience, there's a chance you're excluding guests who have moderate connections.

5. Credit Card Fraud

Credit card extortion is a real and developing problem for online businesses. It can lead to chargebacks that result in the loss of revenue, penalties, and a terrible reputation.

CONCLUSION

Online shopping is the new mantra of this age and the people of India are applying this in their lives to a great extent these days. As we progress further, the development rate of online marketing in our nation will leap to the stars. As indicated by a research report — State of e-commerce in India by Commerce for ASSOCHAM, “India's Internet base, is already the third-highest on the planet after China and the US, is developing by nearly 40% every year”. Hence, the rise of online shopping in the Indian subcontinent has been

meteoric in recent years. The number of shopping websites has increased thus has the all outnumber of persons who prefer shopping online.

At long last, it very well may be said that Flipkart has become the face of online business in India. The organization is currently valued at around 1 billion dollars i.e. 5000 crores. More critically, Flipkart has ushered in the e-commerce era in India. This has generated massive interest in the e-commerce sector; people are opening websites to sell anything from shoes to apparels to jewels to infant care items etc. This has helped in creating a lot of openings for work and along these lines helps the Indian Inc. development story also.

REFERENCES

Python Documentation — <https://docs.python.org/3/>

Django Documentation — <https://docs.djangoproject.com/en/3.0/>

Git Documentation — <https://git-scm.com/doc>