EUROPEAN UNIVERSITY OF LEFKE

FACULTY OF ENGINEERING

Graduation Project I

E-commerce for Coffeehouse

Lutfi KATLAV

170089

My project is about e-commerce for coffeehouse, which has been increasing rapidly recently and it is much more profitable sales platform than physical commerce. The main idea is to sell the products more widely, not to rent the shop, not to hire staff to work in the shop, and the biggest factor is that people find the virtual shop easier to buy and more practical than the physical shop.

The customer, who wants to buy the product, can find the product he/she is looking for in seconds and add it to the shopping cart easily, and can get the desired product, from time to time with special discounts only for the online without wasting time and energy. The aim is to sell more products and increase the profit rate, as well as to create a brand that is known in the city, region, country or even worldwide.

Supervisor

Vesile Evrim

Publish Date

09.01.2022

Table Of Contents

1.Introduction

The first e-commerce was made by Pizza Hut in 1994. Thus, Pizza Hut became the "first company to do e-commerce" by selling pizza over the internet. E commerce is not only for the business to costumers(B2C) but there is e commerce between business to business(B2B) trade aswell. And e commerce is being used by all type of companies e.g. grocery markets, flower shops, hunting shops, galleries and so on. It is because in order to compete globally and to be in market(1). Also during the COVID-19 most of the physical shops couldn't open their shops but internet sales has increased by 30% (April 2020) (2).

As an example of similar projects that I want to build is an organization that sells sports supplements they built a web site that all the products that customer wants to buy, other brands that sells various clothing items, foods etc. Today we can find anything that is exist in physical stores we can find them on online too.

1.1 Problem definition

My project's goal is to reach more people, not giving rent, not hiring staff, as a result increasing profit and become more widely known. Users may not want to buy products directly from physical stores and waste time, so it will be more useful for users if they want to buy online, also they may just want to know the price of a product to compare with it's subtitutes. Working logic is simply users will sign-in/log-in and adds a product that user desires in their shopping cart and finally they can order the product to their addresses.

A major problems with e commerce are security and privacy which recently the food site called "YemekSepeti" has been hacked and most of the customer's information has been stolen. The one of the solution for the security problem is Encryption and Transaction Security and the other one is Firewalls, also enhanced internet protocols(3).

Example-Problems :

- Website maintenance issues.
- Long delivery times.
- Insufficient product informations.
- Insufficient customer services communication.
- Lack of desired product on website than physical store.
- Product return processes.
- Wrong delivery of the requested product.
- Problems such as taxation, security, consumer protection.

1.2 Goals

- Easy to Use: User only need to sign-in and add a product to chart.

- Efficient Design: User will find the product easily that he/she wants to buy.

- Saves Time: User can buy desired product in a seconds and customer can see if the product is in stock, if product is not in stock and customers doesn't know beforehand they can waste time to go to physical shops.

- Comparison: User can compare the prices of substitutes online.

- More Variety: Since there are more varieties online, they can find the product they want more easily.

- Sufficient Information: Customer can find detailed description of the product.

- Reduces Cost for Provider: Seller may reduce the physical shops and staffs.

- Reduces Cost for Customer: Customer does not pay transportation costs.

- Reaches Larger Customer Base: Because it is online, seller can reach more people to sell products not only in provider's areas but also in larger areas.

- Customer Will Be More Conscious: Customer will be able to see other reviews made by other customers and can make a better decision whether they want to buy or not.

So, with reaching more customer and reduce cost of physical shops and staffs, the main goal here is to increase profit and more known by people.

2. Literature Survey

Similar projects categorize different types of products in different tabs, you can search name of the product in the search box, register, log-in/log-out, wishlist, shop cart, most popular products, low to high price, high to low price, payment methods, stock information, product information, custom settings(if it is customable), rating, reviews about products. If user wants to delete his/her account there will be an option for that and also there will be account information. These features will be same as my project.

Compare1 : I will add admin account and there will be an option for admin panel to add product with details such as; price, name, quantity and image. And also there will be a button to delete product and see orders which is paid by customers.

Compare2: I will make the design better than the similar projects and also I will add a contact us page to answer any queries from customer and help them via e-mail.

Compare3: There will be a rating system which is customer can review after they buy that product and can give stars 1 to 5 and also add a comment about it if they want to but a customer can make a comment only once.

Compare4 : I will add sandbox PayPal API which is a virtual testing environment for the payment method. After a customer login, choose a product, goes to shopping cart, click on continue, select payment method and click on payment.

3. Background Information

In order to do this project with MongoDB, Express, React and Node(MERN), HTML/CSS/JavaScript should be known as fundamental.

3.1 Required software

- **React.js**

  React is a JavaScript library for rendering UI components, I will use React because it is most powerful and popular library for JavaScript.

- **Visual Studio Code :**

  Good Code editor to work on a project.

- **MongoDB :**

  MongoDB for NoSQL database for storing products and customers datas.

- **Node.js :**

  Server side JavaScript.

- **Express.js :**

  It is a web application framework for Node.js, I will use Express to ease my work on listening request on a port.

3.2 Other software

- **AdobePhotoshop :**For design icons.
- **Git :** Used for repository.

4. Modules

4.1 Components

Every page will be designed and serve to user with different components.

4.1.1   Home

There will be popular products and highlighted products to be featured.

4.1.2   Categories

There will be different product for each category with their definition if customer clicks on it.

4.1.3   Register/Log-in

Customer will create a profile in that page.

4.1.4   Admin Panel

Admin will be able to add a new product, delete a product, see the orders.

4.2 Functionality

There will be functionality for adding a product to wishlist/shopping cart, registering, log-in/log-off, add/delete item, make a review, give stars, make payment, order product.

4.3 Storing Data

Customer information and product information will be stored in database.

5. Risk Analysis

- I may not be able to learn and implement all of the technologies that I want to use.
- I may not be able to finish my project on time.
- I may not be able to design the way I want to think of.
- I may not be able to add functionality that I want to implement.
- The project may not be as professional as I want to think of.
- In case of some of the bugs, I may not be able to solve them.
- Customer's privacy and security may not be secured 100%.
- Returned products by customer may not be acceptable.
- Shipment may go to the wrong address.
- Custommer service may not be able to solve customer's problem.
- Payment by customer may not work as supposed to be.
- Maintanance may be too long.
- The site may not work properly in high traffic.

6. Ethics

- Responsibility is to hold the decisions that business made and act according to that decisions. The idea is the accept the duties(4).

- Accountability is businesses have to take account on the consequences of the actions, individual or the whole organization. "Systems and institutions in which it is impossible to find out who took what action are inherently incapable of ethicalanalysis or ethical action" (Grewal & Shivani 2012) (4).

- Liability is widen the meaning of the responsibility and accountability, it is related with political regulations(4).

7. Conclusion

7.1 Benefits

a. Benefits to users :

1. Customer saves time.

2. Comparison with subtitutes to find the one with better price.

3. See the reviews to decide whether customer wants to buy or not.

4. More Variety.

5. Special discount only for online.

6. Saves money to not going with transportation.

b. Benefits to me :

1. I will learn how to use advance React efficiently with this project.

2. I will learn MongoDB in advance.

3. I will learn Node in advance.

4. I will learn Express in advance.

5. I will learn how to combine React,MongoDB, Node and Express together.

6. I will improve the project and want to make an offer to local shops who wants a website like I made.

Why did I choose this project?

I choosed this project because I want to master on web development and want a career on this area, so I thought after graduation this project would be a good reference and practice for me, also I will be pleased to learn and implement all of them in one project.

7.2 Future Works

Definetelly I will work on this project after graduation. I will improve the design, functionality and UIX more. Also I'm thinking of selling this project to local shops that has no website and consider a website that sell their products online.

8. References

[1]https://www.westga.edu/~bquest/2011/ecommerce11.pdf

[2]https://www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-covid-19-3a2b78e8/

[3]https://dergipark.org.tr/en/download/article-file/1123318

[4] https://www.theseus.fi/bitstream/handle/10024/119487/Final%20Thesis-KhanhNguyen.pdf?sequence=1&isAllowed=y