

# OILOPEDIA: FARM BASED E-COMMERCE

Dalia Jose - 19BCE2024  
Vaishnavi Sabarish - 20BCE2230  
Ishita Kumari - 20BCE2648  
Jhananithaa B - 20BKT0062

---

## Abstract

In covid 19 e-commerce [15] is one of the developing mediums to sell products to consumers. "Oilopedia" is an e-commerce website that mainly focuses on selling cooking oil products. In our day-to-day life, we are mostly getting adulterated cooking oil which is bad for our health so the main motivation behind this website is to provide quality cooking oil to the consumer [11] from the farmland and help the consumers to know more about the usage of our cooking oil.

**Keywords:** E-commerce, cooking oil, website, front-end, back-end.

---

## 1 Introduction

Cooking oil is one of the most essential ingredients for our health. If our cooking oil is not good then it brings an unpleasant taste to our food and causes some health issue. Since there is a huge demand for cooking oil in India, "Oilopedia" is planning to sell quality cooking oil [14] to the consumer like coconut oil, walnut oil, sunflower seed oil, and many more. We will collect the quality oil seeds from the farmers and extract the oil from the seeds and then sell the quality cooking oil to the consumer's doorsteps. Our Main Objective is to sell quality cooking oil [3] and would like to showcase more information about the oils like medicinal uses and magnificence of the oils on our website. The E-Commerce website must be responsive and also need to take minimum time to load which is our first priority. We have added the best pictures to our website which will give a better experience for the customers. Another important thing is online payment, so we designed it in such a way that it will be smooth and secure. On the whole, we ensure that the customer will have a better experience while using this website.

## 2 Literature survey

| S.No | Title of the paper                                    | Journal Name  | Year of Publication | Findings of the research work   | Limitations  | Future work   |
|------|---|---|---------------------|---|--|---|
| 1    | Design and implementation of online grocery store [1] | International Journal of Technical Research and Application                           | 2016                | In this paper, they developed an online grocery store with better user experience design and providing a secure payment.  | In this website they are allowing multiple vendors to sell products. If they allow multiple vendors then customers might get confused to choose the products from the vendors. If the products were under single banner name, then the customer can purchase the products without confusion. | The future work may involves enhancing this website more user friendly according to the trends. |
| 2    | The future of E-commerce in India [2]                 | International Research Journal of Modernization in Engineering Technology and Science | May 2021            | This research will explain how commerce has currently advanced in the dawn of technology explaining the current state and challenges of systems, their architecture, modernization, and the innovation of cyber systems in eCommerce. | Since it is a case study on E-Commerce in India there is no limitations to it.   | E-commerce systems are the driver of future software development.                               |

|   |   |   |            |  |  |   |
|---|---|---|------------|--|--|---|
| 3 | E-Commerce Portal: Grocery Delivery [3] | International Journal for Modern Trends in Science and Technology                     | June 2021  | Purpose of this project was to develop an E-commerce grocery products portal so that everyone can get their daily needs items easily without visiting the shops. | Lack of system security and reliability.   | Enhance the growth in the E-sale of Grocery in every part of the country. Due to lockdown imposed in many parts of the country this portal will help maximum customers to get their daily needs. This website will create jobs in many sectors such as deliver partners, product service and product development. |
| 4 | Multi-vendor ecommerce website [5]      | International Research Journal of Modernization in Engineering Technology and Science | March 2021 | This is an e-commerce website for farmers to ease their work in agriculture by providing a simple online platform using the latest technologies.                 | Commission fee to the owner of the marketplace. The buyer needs to pay a small part of the revenue to the marketplace whenever a purchase is made, the commission is not applicable when sellers sell from their own app. Control over the selling cost. | With the rising use of media applications the prospect of ecommerce shopping expansion is intensifying day-by-day.  |

|   |   |   |          |   |  |  |
|---|---|---|----------|---|--|--|
| 5 | Multi vendor e-commerce website for farmers [4] | Research Square                                 | May 2021 | This analysis confirms that E-commerce will help the farmers in a way that they achieve some profits for their hard work. The study we made has predicted that the development and transformation of E-commerce is a creative way of controlling and market access for smallholders. We will develop a system that is easy and simple to use by every rural farmer. | Commission fee to the owner of the marketplace. The buyer needs to pay a small part of the revenue to the marketplace whenever a purchase is made, the commission is not applicable when sellers sell from their own app. Control over the selling cost. | We will develop a system that is easy and simple to use by every rural farmer. The project we are doing will provide maximum earnings to the farmers who do not get profits due to the wholesalers who quote their price for the crops. All these unique technologies, advanced software solutions and network reforms will help the farmers grow more and more and we strive for a better future for farmers. |
| 6 | Mern stack web development [7]                  | Annals of the Romanian Society for Cell Biology | May 2021 | This paper was basic idea one MERN architecture. The MERN architecture allows you to easily construct a 3-tier architecture (frontend, backend, database) entirely using JavaScript and JSON.   | Large-scale power, because angular is a framework it has features that makes it easier to attach third party libraries. Very large applications will require these third party in order to effectively power them.                                       | As these technologies are growing day by day the future scope seems bright for a couple of years.  |

|   |   |  |          |  |  |   |
|---|---|--|----------|--|--|---|
| 7 | An e-commerce website based chatbot [6] | International Journal of Computer Science and Information Technologies | 2015     | This paper describes an ecommerce website with chatbot. This chatbot helps to address the customer queries quickly.  | Though this chatbot converse with the user in a simple language some people might be comfortable with their own mother tongue. Some people might not be good at English so if they didn't ask their query in a proper way there might be a possibility of getting solution which is not relevant to their query. | The future work may be using the customer desired language in the chatbot and may use voice communication method. |
| 8 | Nature store [8]                        | SSRN   | May 2021 | The main objective of this paper is to sell grocery products through online. This website is easy to search and buy products. Besides that, this paper explains about the existing grocery website features. | The existing problem in grocery ecommerce platform is maintenance and also in order improve the ecommerce further we need research more into customer perception and feedbacks about the online services.  | The future work may be focusing more on customer centricity and meeting up the demands of the customer            |

|    |  |   |            |  |  |  |
|----|--|---|------------|--|--|--|
| 9  | E-commerce web application by using mern technology [9]        | International Journal for Modern Trends in Science and Technology | June 2021  | This web application is a fully pledged working web application right from the login authentication, admin authorization, add items to cart, using payment gateway. The web application is easy for them to access and without any effort categories can be created and products can be added by them. | Personal details in hands of website owners with no proper security protections.   | It will be very helpful for the small-scale industries without selling to wholesales, large retails mediators they can directly sell to the customer by saving money for both. |
| 10 | Design of optimized e-commerce website using web assembly [10] | Indian Journal of Science and Technology                          | March 2019 | The purpose of this paper is to design an e-commerce website with new technologies like web assembly (wasm) which will provide a better user experience design.  | Web assembly language may contain a better features but when comparing to javascript, javascript will play a better role in developing an application. | The future work may be the user can buy the products payment integrated and mail integrated. Besides that, they can also improve the performance of the applications.          |

|    |   |  |            |   |   |   |
|----|---|--|------------|---|---|---|
| 11 | Online organic agriculture product selling [11]                     | International Journal of Recent Advances in Multidisciplinary Topics | April 2021 | The method for an Online organic product selling system is based on the farmer's farm product for directly marketed in the market. In that research of methodology of agricultural product based on agriculture farming products.                 | Time consuming. Poor Product Compatibility, Packaging and Distribution  | Online Organic agriculture product supports to sustain economic condition of farmer better system and cycles. It also enhances and sustains the health of soil, human, animals, plants, and planet. |
| 12 | Big buy (e-commerce website) by using frontend web development [12] | International Journal of modern Trends in science and technology     | Nov 2021   | The purpose of this paper is to explain the importance and limitations of ecommerce website and to sell an electronic product through ecommerce website. They developed the website using front-end technologies and gave user friendly features. | The limitations of an ecommerce website are sometimes it takes long time to deliver a product, user won't have the same experience of buying products in a physical store, security and the capacity to control the website traffic is the most important limitations of an ecommerce website | The future work may involves developing which may overcome some of the limitations like having minimum loading time and establish a secure payment and so on.                                       |

|    |   |  |          |   |   |  |
|----|---|--|----------|---|---|--|
| 13 | Online shopping system [13]   | International Research Journal of Engineering and Technology (IRJET) | Dec 2019 | This system can be implemented to any shop in the vicinity or to multinational branded shops having retail outlet chains. The system endorses a facility to accept the orders 24*7 and a home delivery system which can make customers pleased. | Time consuming, Risk taking in a non-controlled environment, Possible conflict with user, Incomplete project can be a major issue, Group conflicts. | Due to the convenience of gadgets and easy internet access has lead people to Online Shopping.   |
| 14 | Geram bazar, a mobile application and website interface e-commerce [14] | IEEE   | May 2021 | This system will be more like an old dad where a customer as a son would be introduced to products that are pure, high graded and fresh apart from other varieties of specific products.  | Inconvenience and poor user experience in using mobile applications. Unavailability of Offline services.  | The goal of 'Geram Bazar' is to guarantee that each one of the customers far and wide can order and track their package with extremely organized manner. |
| 15 | impact of covid 19 on e-commerce [15]                                   | Journal of Interdisciplinary Cycle Research                          | Feb 2021 | This paper studies about how covid 19 impacts e-commerce business and change in demand and buying behaviour of consumer all of a sudden.  | Since this is a case study research paper, there is no limitations to it.   | As this paper was a study on impact of covid 19, there is no specific future work to this.   |



### 3 Proposed Work

In this paper we proposed an idea of selling a cooking oil to the customer via e-commerce platform. The website which we developed is user friendly and the customer will have great experience on the website.

We developed an e-commerce website that sells quality cooking oil to the customer. The oilseeds will be collected from the farmers, later the oil will be extracted, and then it will be sold under a single name which is the “Oilopedia” website. Two sites has been created one is for user and other is for admin. From Figure.2 In this website we have also improved the product searching process. we gave the product description with detailed information so when the customer search for any product with the product name or with their problem, then it will go through the description to find the keyword match, if the keyword matches then it will be displayed on the screen. From Figure.1 The products will be updated in the backend by the admin which will be stored in the database. The updated products will be visible to the customer so the customer can able to log in and purchase the products which will be updated in a database. In order to develop this website, we used HTML, CSS, Javascript, PHP, and MySQL.

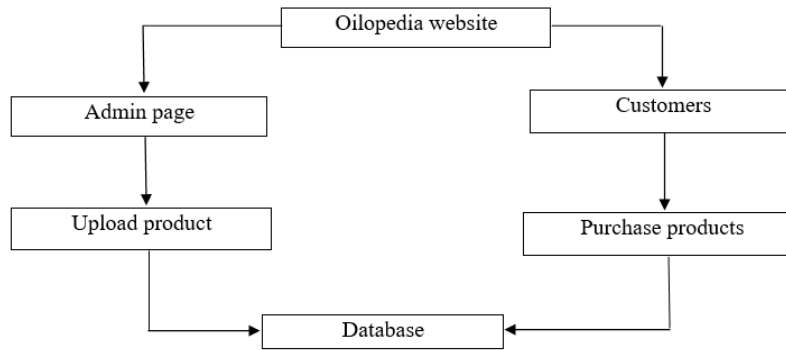


Figure 1: Architecture Diagram

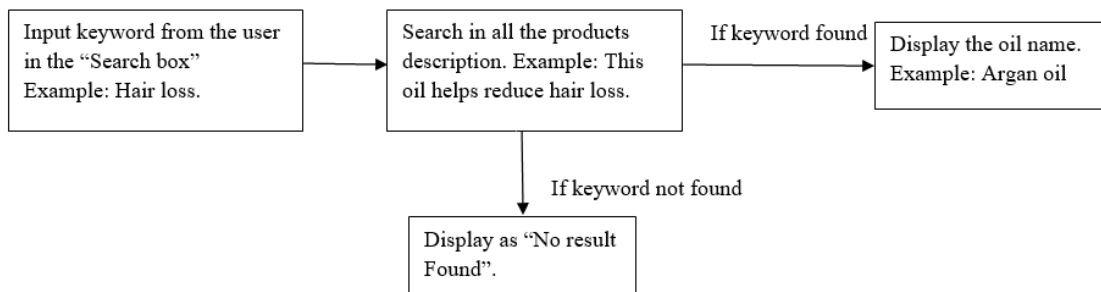


Figure 2: Product Searching Process

We have developed an "Oilopedia" e-commerce website using HTML, CSS, Javascript, PHP and MySQL with better user experience. This website will help the customer to get good quality of different categories of oils and the users can also search products based on their problems.

## 4 Experimental Result Analysis

In this part we have analysed the different e-commerce website and came up the better solution for our Oilopedia website and we have collected a data set with different categories.

On analysing the current scenario we found that e-commerce website is a developing platform for buying products. By using this platform we would like to sell a quality oils to the consumers like cooking oil, medicinal oil, hair oils, repellent oils, perfumes and multipurpose oils. we have collected around 45 data set which are essential for our daily life.

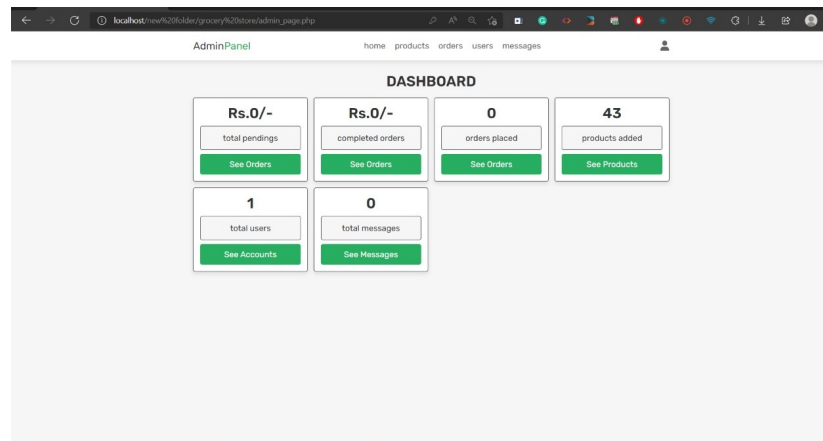


Figure 3: Admin Dashboard:

In admin's dashboard we are tracking the total pending and delivered orders, how many orders been placed, number products been added, total users and messages received from users.

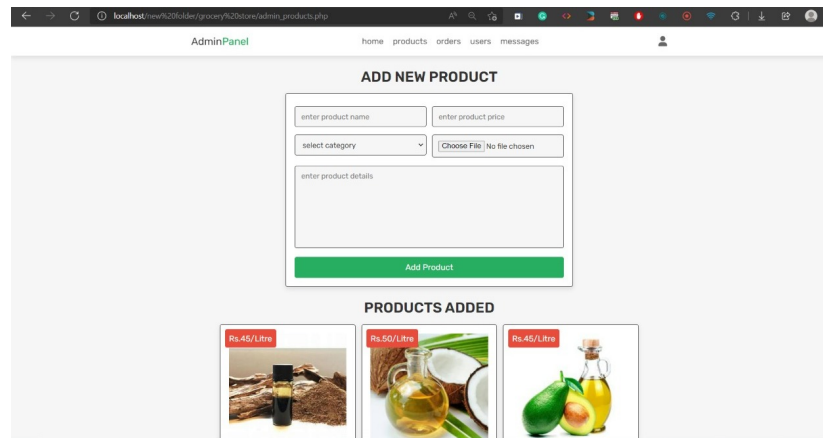


Figure 4: Admin Products adding page:

Products can be added through the admin page which contain name, price, image, category, description of the products

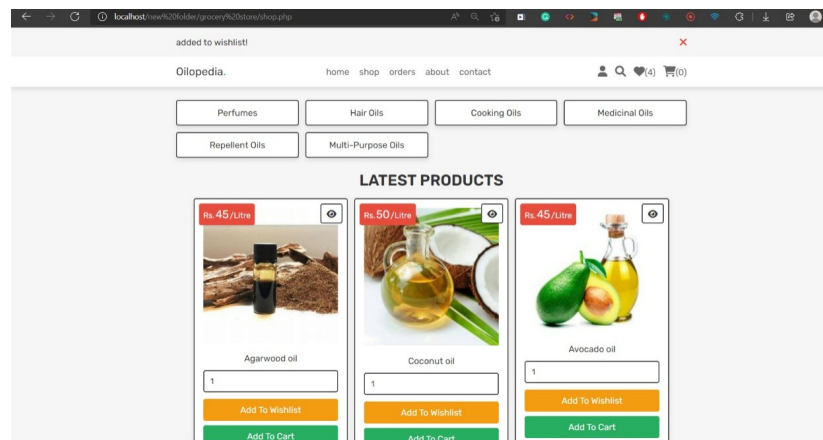


Figure 5: Users Shopping Page:

After adding the products in an admin panel, it will be visible in a users site. It can also be searched by the provided categories.

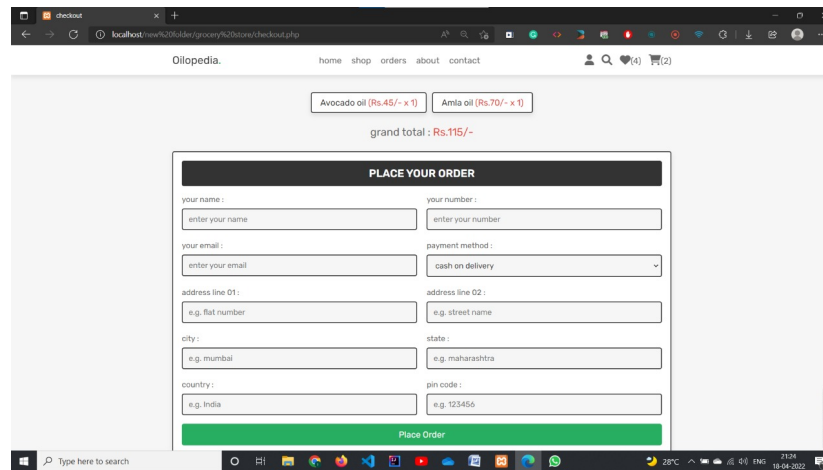


Figure 6: Users Shopping Page:

When the user complete adding the products to cart, it will take the user to the another page where we can provide our information for the product delivery.

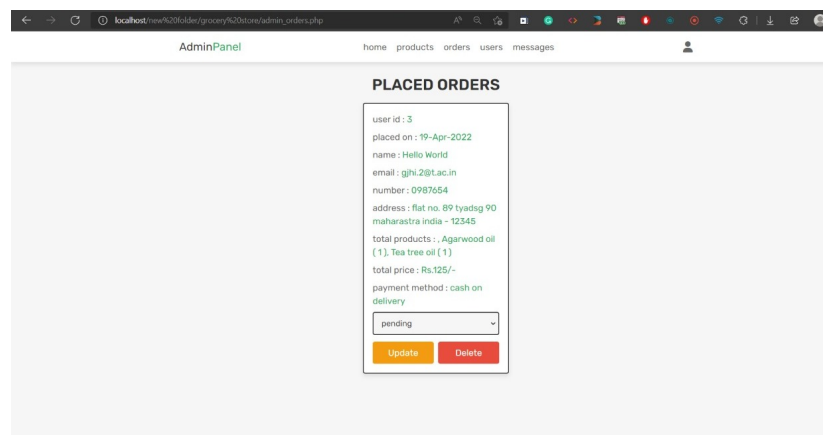


Figure 7: Order details in an Admin Panel:

If the user placed an order then the details will be visible to the Admin and also This page will help the admin to keep track on pending and completed items. In this page once the admin have completed the delivery part they can mark that order status as completed

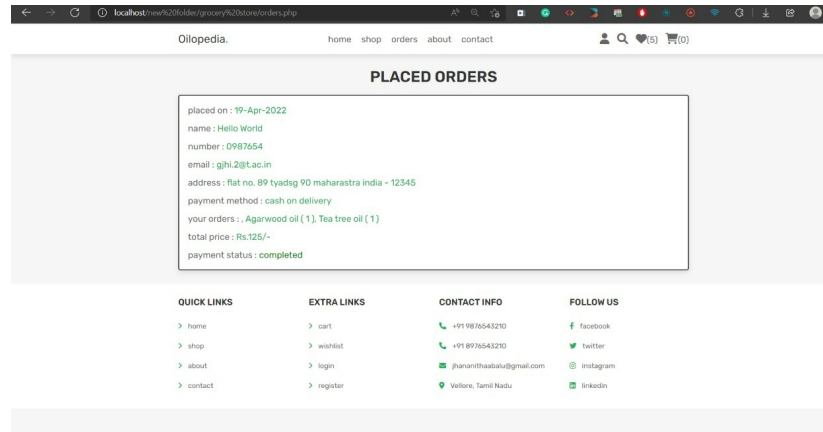


Figure 8: Users Order Status:

In this page Customer can also be able to see the order status, whether it is pending or completed.

We have created the website with user centred design and the data set for different categories of oils have been collected with their uses. This will help the customers to choose the products they need by seeing the categories and the description of the oils.

## 5 Conclusion

In this Project, we have analyzed the challenges in the e-commerce oil business. The website we have developed is very much user friendly, user can easily login to their account and purchase the items by making payments, the payment process is fully secured, after delivery of the item the user will be notified that the item has been delivered successfully. The overall purpose of this project was to develop an E-commerce Oil selling portal so that everyone can get fresh oils easily without visiting the shops. It includes the latest technology such as HTML, CSS, Javascript, PHP and MySQL. This will help in creating a lot of job opportunities and thus it helps the growth of Indian E-commerce.

## References

- [1] Zikra Ansari, Shital Mane, Navinda Ghadge, and Nidhi Sharma. Design and implementation of online grocery store. *International Journal of Technical Research and Applications*, 2016.
- [2] Abhilash Chandra. The future of e-commerce in india. *International Journal of Accounting*, 2021.
- [3] NA Ghodichor, Monali Vijay Ramteke, Yash Rameshwar Agrawal, Vipin Yadav, Vivek Shivprakash Raut, Suyash Shivshankar Ajbale, and Mahadev Saren. E-commerce portal: Grocery delivery. 2021.
- [4] CK Gomathy, Jaswanth Reddy Vulchi, and Venkatesh Pathipati. Multi vendor e-commerce website for farmers. 2021.

- [5] Ms Kamakshi Gupta, Muskan Goel, Sumit Kumar, and Nikhil Rawat. Multi-vendor ecommerce website.
- [6] Siddharth Gupta, Deep Borkar, Chevelyn De Mello, and Saurabh Patil. An e-commerce website based chatbot. *International Journal of Computer Science and Information Technologies*, 6(2):1483–1485, 2015.
- [7] Monika Mehra, Manish Kumar, Anjali Maurya, Charu Sharma, et al. Mern stack web development. *Annals of the Romanian Society for Cell Biology*, 25(6):11756–11761, 2021.
- [8] Meera Mishra, Harshitha P Gowda, Sushmitha Reddy, and Siddharth Sekhar. Nature store. *Sushmitha and Sekhar, Siddharth, Nature Store (May 10, 2021)*, 2021.
- [9] Nagothu Diwakar Naidu, Pentapati Adarsh, Sabharinadh Reddy, Gumpula Raju, Uppu Sai Kiran, Vikash Sharma, Nagothu Diwakar Naidu, Pentapati Adarsh, Sabharinadh Reddy, Gumpula Raju, et al. E-commerce web application by using mern technology. *International Journal for Modern Trends in Science and Technology*, 7:1–5, 2021.
- [10] Madhumitha Ramamurthy, D Abishek, B Logesh, and S Shri Krishna Prasad. Design of optimized e-commerce website using web assembly. *Indian Journal of Science and Technology*, 12(9):1–5, 2019.
- [11] Aayesha Shaikh, Prajakta Solankar, Priti Takik, Monali Maske, and Nayna Randive. Online organic agriculture product selling. *International Journal of Recent Advances in Multidisciplinary Topics*, 2(4):209–210, 2021.
- [12] Avnish Kumar Sharma. Big buy (e-commerce website) by using frontend web development. 2021.
- [13] Shubham Madhukar Sonawane and Shruti Deepak Deshmukh. Online shopping system. *Database*, 6(12), 2019.
- [14] Faria Soroni, Md Amdadul Bari, and Mohammad Monirujjaman Khan. Geram bazar, a mobile application and website interface e-commerce. In *2021 IEEE World AI IoT Congress (AIIoT)*, pages 0077–0080. IEEE, 2021.
- [15] Ms K Susmitha. Impact of covid 19 on e-commerce. *Journal of Interdisciplinary Cycle Research*, 12(9):1161–1165, 2021.