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Organic Foods Online Selling Web Application

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ABSTRACT

Organic food products and other organic ingredients are grown without the use of pesticides, synthetic fertilizers, sewage sludge, or ionizing radiation. Conventional fruits and vegetables are often sprayed with pesticides. When you buy such fruits and vegetables, these stubborn chemicals remain on the food. The second big difference between conventional and organic food is that many conventional foods are genetically modified or contain genetically modified organisms. Organic food is not easily available in the market. There are only some particular shops where organic food is available. E-commerce is a process of doing business through a computer network. Online shopping is a form of electronic shopping where the buyer is directly online to the seller's computer usually via the internet. To overcome the difficulty of organic food shopping. We have proposed the best online organic store which provides organic foods by just sitting at home and follows E-commerce mode of shopping. This system has two modules namely, Admin and Customers. Admin has authority to add organic food list on the website, view products uploaded, view customers and view the customer's order. Customers can register and login using credentials. Customers have authority to view products, desire products and can add to cart and do payment for it, they can view their previous order history and also can track their order.

SYNOPSIS

organic food, fresh or processed food produced by organic farming methods. Organic food is grown without the use of synthetic chemicals, such as human-made pesticides and fertilizers, and does not contain genetically modified organisms (GMOs). Organic foods include fresh produce, meats, and dairy products as well as processed foods such as crackers, drinks, and frozen meals.

The frontend of this project is Angular 8, HTML/CSS, typescript and the backend is Java spring boot and Database in postgre SQL which makes it easy for creating and generating code. Windows10 is used as an Operating System and hosting the web application in Expo.

CHAPTER 1

INTRODUCTION

1.1 ABOUT THE PROJECT

Nowadays, along with the phenomenal development of technology and the internet, ecommerce businesses are becoming predominant of the market. Even though the business models may vary, game changers like Amazon, Ebay, Alibaba, Uber are setting the whole new consumer habits and facilitating online shopping activities.

Organic farmers must avoid using man-made fertilizers, pesticides or growth regulators and livestock feed additives. In other words, building systemic farming that results in better life quality is the ultimate goal. Below are some conventional methods in organic farming

1.1. MODULE DESCRIPTION:

- LOGIN,REGISTRATION
- ADMIN LOGIN
 - **Login:** Admin can login in his personal account using id and password.
 - **Add Organic Food:** Admin can add Organic food.
 - **View Product:** Admin can also add organic food products.
 - **View User:** Admin can view all information about the user.
 - **View Users order:** Admin can view users order.
- SUB CATEGORY PAGE
- USER LOGIN
 - **View Products:** Users can view products.
 - **Add products to cart:** Users can add products to the cart.
 - **View Order history:** Users can view their previously purchased history.
 - **Track order:** User can track his order.

2. SYSTEM SPECIFICATION

2.1 HARDWARE SPECIFICATION

- System : INTEL
- Hard Disk : 500 GB.
- Monitor resolution : 1024 x 768 or higher
- Keyboard : 108 keys
- Mouse : Logitech.
- Ram : 8 GB.

2.2 SOFTWARE SPECIFICATION

- Operating system : Windows or Linux.
- Software Tools : VS Code
- Front End : JavaScript,HTML,CSS
- Database : MySql
- Back End : php

2.2 ABOUT THE SOFTWARE

PHP:

PHP started out as a small open source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.

- PHP is a recursive acronym for "PHP: Hypertext Preprocessor".
- PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites.
- It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.
- PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object architectures (COM and CORBA), making n-tier development a possibility for the first time.
- PHP is forgiving: PHP language tries to be as forgiving as possible.
- PHP Syntax is C-Like.

HTML:

HTML is an acronym which stands for Hyper Text Markup Language which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Web page.

HyperText: HyperText simply means "Text within Text." A text has a link within it, is a hypertext. Whenever you click on a link which brings you to a new webpage, you have clicked on a hypertext. HyperText is a way to link two or more web pages (HTML documents) with each other.

Markup language: A markup language is a computer language that is used to apply layout and formatting conventions to a text document. Markup language makes text more interactive and dynamic. It can turn text into images, tables, links, etc.

Web Page: A web page is a document which is commonly written in HTML and translated by a web browser. A web page can be identified by entering an URL. A Web page can be of the static or dynamic type. With the help of HTML only, we can create static web pages.

CSS:



CSS stands for Cascading Style Sheets. It is the language for describing the presentation of Web pages, including colors, layout, and fonts, thus making our web pages presentable to the users.

CSS is designed to make style sheets for the web. It is independent of HTML and can be used with any XML-based markup language. Now let's try to break the acronym:



- Cascading: Falling of Styles
- Style: Adding designs/Styling our HTML tags
- Sheets: Writing our style in different documents

JAVASCRIPT:

JavaScript (js) is a light-weight object-oriented programming language which is used by several websites for scripting the webpages. It is an interpreted, full-fledged programming language that enables dynamic interactivity on websites when applied to an HTML document. It was introduced in the year 1995 for adding programs to the webpages in the Netscape Navigator browser. Since then, it has been adopted by all other graphical web browsers. With JavaScript, users can build modern web applications to interact directly without reloading the page every time. The traditional website uses js to provide several forms of interactivity and simplicity.

MYSQL:

MySQL is a freely available open-source Relational Database Management System (RDBMS) that uses Structured Query Language (**SQL**). MySQL is used for developing various web-based software applications. **MySQL** is a required part of almost every open source **PHP** application. MySQL is the most secure and reliable database management system used in popular web applications like Word Press, Drupal, Joomla, Facebook, and Twitter. It provides data security and support for transactional processing (Example: eCommerce business that involves frequent money transfers). It is based on the structured query language which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT, and UPDATE can be used here.

MySQL can be used for a variety of applications but is most commonly found on Web servers. A website that uses MySQL may include Web pages that access information from a database. These pages are often referred to as "dynamic," meaning the content of each page is generated from a database as the page loads. Websites that use dynamic Web pages are often referred to as database-driven websites.

Many database-driven websites that use MySQL also use a Web scripting language like PHP to access information from the database. MySQL commands can be incorporated into the PHP code, allowing part or all of a Web page to be generated from database information. Because both MySQL and PHP

3. SYSTEM STUDY

3.1 EXISTING SYSTEM

- In the existing application there will be only Food products selling websites but they are not selling organically cultivated food products.

Disadvantage:

- There are no organically cultivated products.
- There is a gap in security systems for the user.
- There will not be a user-friendly manner.

3.2. PROPOSED SYSTEM

- The proposed solution, an organic food ecommerce website, called GREEN, was found to be totally applicable in the future, because it was updated and can address the problems of both customers and sellers.
- Mainly, this project contains Organic food products.

- Eventually, there was a mutual interest among consumers and organic businesses in this topic: 92% of the participants in the survey considered using this platform, while on the sellers' side, both interviewed businesses were willing to join GREEN..
- In the study, the potential aspects of the project were exposed, and some challenges were identified. Some answers, indeed, exceeded the expectations and could provide an insider's point of view and invaluable suggestions. As a result of the evaluations, the value proposition canvas and the business model canvas of GREEN were successfully established.

Advantage:

- It will resolve the problem of both the seller and consumer.
- There will be a user-friendly manner.

4. SYSTEM DESIGN

4.1 DATA FLOW DIAGRAM

A data flow diagram is a graphical tool used to describe and analyze movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processing, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. The development of DFD'S is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level

The idea behind the explosion of a process into more processes is that understanding at one level of detail is exploded into greater detail at the next level. This is done until further explosion is necessary and an adequate amount of detail is described for analysts to understand the process.

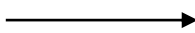
DFD SYMBOLS

In the DFD, there are four symbols

- A rectangle defines a source(originator) or destination of system data
- An arrow identifies data flow. It is the pipeline through which the information flows
- A circle or a bubble represents a process that transforms incoming data flow into outgoing data flows.
- An open rectangle is a data store, data at rest or a temporary repository of data



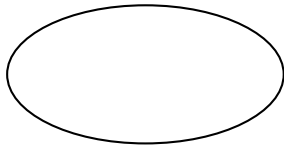
Source or Destination of data



Data flow



Data Store



Process

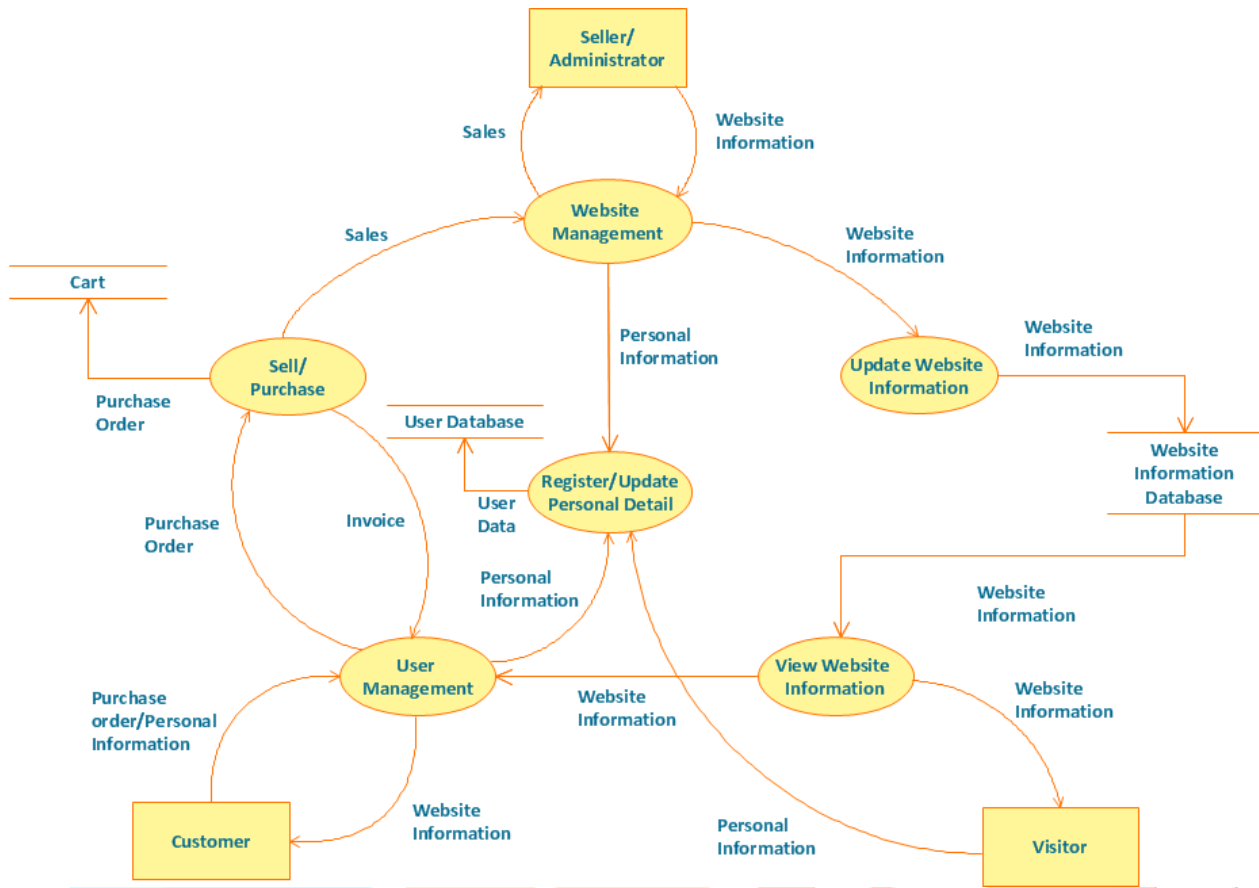
SALIENT FEATURES OF DFD'S:

- The DFD shows flow of data, not of control loops and decisions are controlled considerations that do not appear on a DFD.
- The DFD does not indicate the time factor involved in any process whether the data flow takes place daily, weekly, monthly or yearly.

Level-0

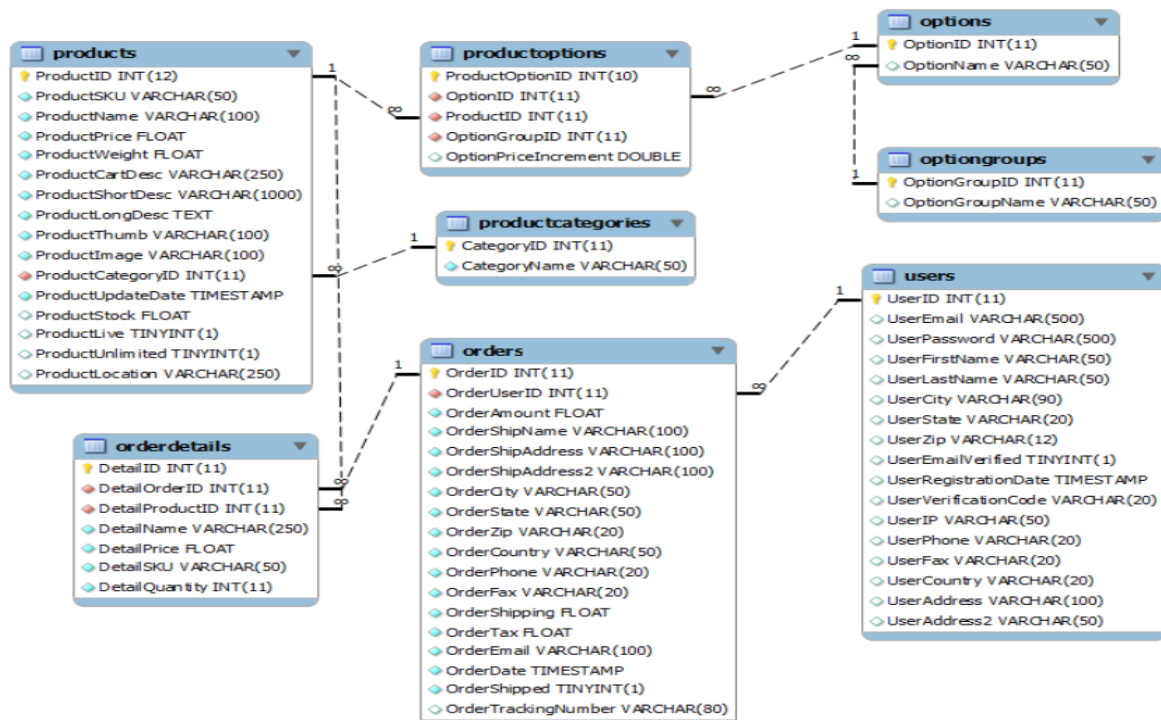


Level - 1



4.2. DATABASE DESIGN - MySQL

MySQL is a powerful, open source object-relational database system with over 30 years of active development that has earned it a strong reputation for reliability, feature robustness, and performance.



Data Types:

Primitives: Integer, Numeric, String, Boolean

- Structured: Date/Time, Array, Range / Multirange, UUID
- Document: JSON/JSONB, XML, Key-value (Hstore)
- Geometry: Point, Line, Circle, Polygon
- Customizations: Composite, Custom Types

Data Integrity:

UNIQUE, NOT NULL

- Primary Keys
- Foreign Keys
- Exclusion Constraints
- Explicit Locks, Advisory Locks

Concurrency, Performance:

Indexing: B-tree, Multicolumn, Expressions, Partial

- Advanced Indexing: GiST, SP-Gist, KNN Gist, GIN, BRIN, Covering indexes, Bloom filters
- Sophisticated query planner / optimizer, index-only scans, multicolumn statistics
- Transactions, Nested Transactions (via savepoints)
- Multi-Version concurrency Control (MVCC)
- Parallelization of read queries and building B-tree indexes
- Table partitioning
- All transaction isolation levels defined in the SQL standard, including Serializable
- Just-in-time (JIT) compilation of expressions

Security:

Authentication: GSSAPI, SSPI, LDAP, SCRAM-SHA-256, Certificate, and more

- Robust access-control system
- Column and row-level security
- Multi-factor authentication with certificates and an additional method

Extensibility:

Stored functions and procedures

- Procedural Languages: PL/PGSQL, Perl, Python (and many more)
- SQL/JSON path expressions
- Foreign data wrappers: connect to other databases or streams with a standard SQL interface

Internationalization, Text Search:

- Support for international character sets, e.g. through ICU collations
- Case-insensitive and accent-insensitive collations
- Full-text search

4.3 INPUT DESIGN

Input design is the process of converting an external user oriented description of input system into a machine oriented format. The source document is prepared for the input of data in order to make the entry accurate and impact the source document was prepared. The data elements were sent out in a system in which the data entry operator would easily follow.

- To produce a cost effective method.
- To get the highest level of accuracy.
- To ensure that the input is acceptable and understandable by the people who are using it.
- With the above objectives the major activities that were done during the input design
- The data is collected from its source.
- Data is converted to the mobile acceptable form.
- The converted data was verified.

4.4 OUTPUT DESIGN:

Output design is a process that involves designing necessary output that have to be given to various users according to their requirements. Efficient, intelligible output design will improve the system relationship with the user and help indecision making. Since the reports are directly required by the management for taking decisions and to draw conclusions, they must be designed with almost care to the user. The options for the output and report are given in the system menu. When designing output, system analyst must accomplish the following ;

- Determine the information to present.
- Arrange the present of information acceptable format.
- Determine how to distribute the output.

5. SYSTEM TESTING AND IMPLEMENTATION

WINDOWS OPERATING SYSTEM:

"Windows" redirects here. For the part of a building, see the window. For other uses, see Windows (disambiguation).

Microsoft Windows is a series of graphical interface operating systems developed, marketed, and sold by Microsoft.

Microsoft introduced an operating environment named Windows on November 20, 1985 as a graphical operating system shell for MS-DOS in response to the growing interest in graphical user interfaces (GUI).

Microsoft Windows came to dominate the world's personal computer market with over 90% market share, overtaking Mac OS, which had been introduced in 1984.

Windows XP

Windows XP would also introduce a redesigned user interface (including an updated Start menu and a "task-oriented" Windows Explorer), streamlined multimedia and networking features, Internet Explorer 6, integration with Microsoft's .NET Passport services, modes to help provide compatibility with software designed for previous versions of Windows, and Remote Assistance functionality. Windows XP was now marketed in two main editions: the "Home" edition was targeted towards consumers, while the "Professional" edition was targeted towards business environments and power users, and included additional security and networking features.

Home and Professional were later accompanied by the "Media Centre" edition (designed for home theatre PCs, with an emphasis on support for DVD playback, TV tuner cards, DVR functionality, and remote controls), and the "Tablet PC" edition (designed for mobile devices meeting its specifications for a tablet computer, with support for stylus pen input and additional pen-enabled applications).

Mainstream support for Windows XP ended on April 14, 2009. Extended support will continue until April 8, 2014.

After Windows 2000, Microsoft also changed its release schedules for server operating systems; the server counterpart of Windows XP, Windows Server 2003, was released in April 2003. It was followed in December 2005 by Windows Server

Windows Vista, 7 and 8

Windows Vista was released on November 30, 2006 for volume licensing and January 30, 2007 for consumers. It contained a number of new features from a redesigned shell and user interface to significant technical changes, with a particular focus on security features. It was available in a number of different editions, and has been subject to some criticism. Vista's server counterpart, Windows Server 2008 was released in early 2008.

On July 22, 2009, Windows 7 and Windows Server 2008 R2 were released as RTM (release to manufacturing) while the former was released to the public 3 months later on October 22, 2009. Unlike its predecessor, Windows Vista, which introduced a large number of new features, Windows 7 was intended to be a more focused, incremental upgrade to the Windows line, with the goal of being compatible with applications and hardware with which Windows Vista was already compatible. Windows 7 has multi-touch support, a redesigned Windows shell with an updated taskbar, a home networking system called Home Group, and performance improvements.

Windows 8, the successor to Windows 7, was released generally on October 28, 2012. A number of significant changes were made on Windows 8, including the introduction of a user interface based around Microsoft's Metro design language with optimizations for touch-based devices such as tablets and all-in-one PCs. Windows Store service for software distribution, and a new variant known as Windows RT for use on devices that utilize the ARM architecture. An update to Windows 8, called Windows 8.1, was released on October 17, 2013, and includes features such as new live tile sizes, deeper SkyDrive integration, and many other revisions.

JavaScript:

JavaScript (JS) is a lightweight, interpreted, or just-in-time compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, many non-browser environments also use it, such as Node.js, Apache CouchDB and Adobe Acrobat. JavaScript is a prototype-based, multi-paradigm, single-threaded, dynamic language, supporting object-oriented, imperative, and declarative (e.g. functional programming) styles. Read more about JavaScript.

This section is dedicated to the JavaScript language itself, and not the parts that are specific to Web pages or other host environments. For information about API specifics to Web pages, please see Web APIs and DOM.

The standards for JavaScript are the ECMAScript Language Specification (ECMA-262) and the ECMAScript Internationalization API specification (ECMA-402). The JavaScript documentation throughout MDN is based on the latest draft versions of ECMA-262 and ECMA-402. And in cases where some proposals for new ECMAScript features have already been implemented in browsers, documentation and examples in MDN articles may use some of those new features.

Do not confuse JavaScript with the Java programming language. Both "Java" and "JavaScript" are trademarks or registered trademarks of Oracle in the U.S. and other countries. However, the two programming languages have very different syntax, semantics, and use.

Written in JavaScript—rendered with native code:

React primitives render to native platform UI, meaning your app uses the same native platform APIs other apps do.

Many platforms, one React. Create platform-specific versions of components so a single codebase can share code across platforms. With React Native, one team can maintain two platforms and share a common technology—React.

5.2 TESTING

5.2.1 UNIT TESTING

Unit testing is the testing of an individual unit or group of related units. The purpose of unit testing is to determine the correct working of the individual modules. It involves a precise definition of test cases, testing criteria and management of test cases.

TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/FAIL
Enter into the application.	Check whether it enters or not.	It should enter.	It enters successfully.	Pass

5.2.2.1 Unit Testing

5.2.2 INTEGRATION TESTING

Integration testing is testing in which a group of components are combined to produce output. Also the interaction between software and hardware is tested in integration testing if software and hardware components have any relation.

TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/FAIL
Enter into a module	Check whether it works correctly and generates output or not.	It should generate a correct output.	Output generated successfully.	Pass

5.2.3.1 Integration Testing

5.2.3 WHITE BOX TESTING

White-box testing is a testing technique that makes into account the internal mechanism of a system. It is also called structural testing and glass box testing. This testing is used for verification.

TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/FAIL
All modules.	Check whether all modules work properly or not.	It should work correctly.	It works correctly.	Pass

5.2.4. White Box Testing

5.2.4 BLACK BOX TESTING

Black-box testing is a testing technique that ignores the internal mechanism of the system and focuses on the output generated against any input and execution of the system. It is also called functional testing. Black-box testing is often used for validation.

TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/FAIL
All modules execution and output.	Check whether all modules work properly and generate a correct output or not.	It should work correctly and should produce a correct output.	It works correctly and generates a correct output.	Pass

5.2.5.1 Black Box Testing

5.2.5 SYSTEM TESTING

Testing plays a vital role for the success of this system. System testing makes a logical assumption that if all the parts of the system are correct, the goal will be successfully achieved.

System testing is the stage of implementation that is aimed at assuring that the system works accurately and efficiently.

TEST CASE NO	TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/FAIL
1.	Testing all the modules in the system.	It tests all the modules in the system whether its is executing in the system or not.	By testing all the modules its is accepted by the system and should execute the result.	It tests all the modules and the system accept all the modules and it produces an expected result	Pass

Table 5.2.1.1 System Testing

6. CONCLUSION

Users can choose the day they want to ship the products and can guarantee the shipment will be on time. Payment methods are diversified, and extra promotion may be applied at this step based on the co-operation of Project and the bank or e-wallet companies.

Users are able to choose good organic products and they are able to lead hygienic life and sellers can directly sell their products without intermediate brokers.

7. FUTURE ENHANCEMENT

In, this web application all the databases are stored in cloud storage, and enlarge the organic products selling quantity, A possible future research direction is to account to explicit task dependencies in the formalization. Additionally the consideration of multiple type of computing in the task schedule is a challenging but important problem and additionally

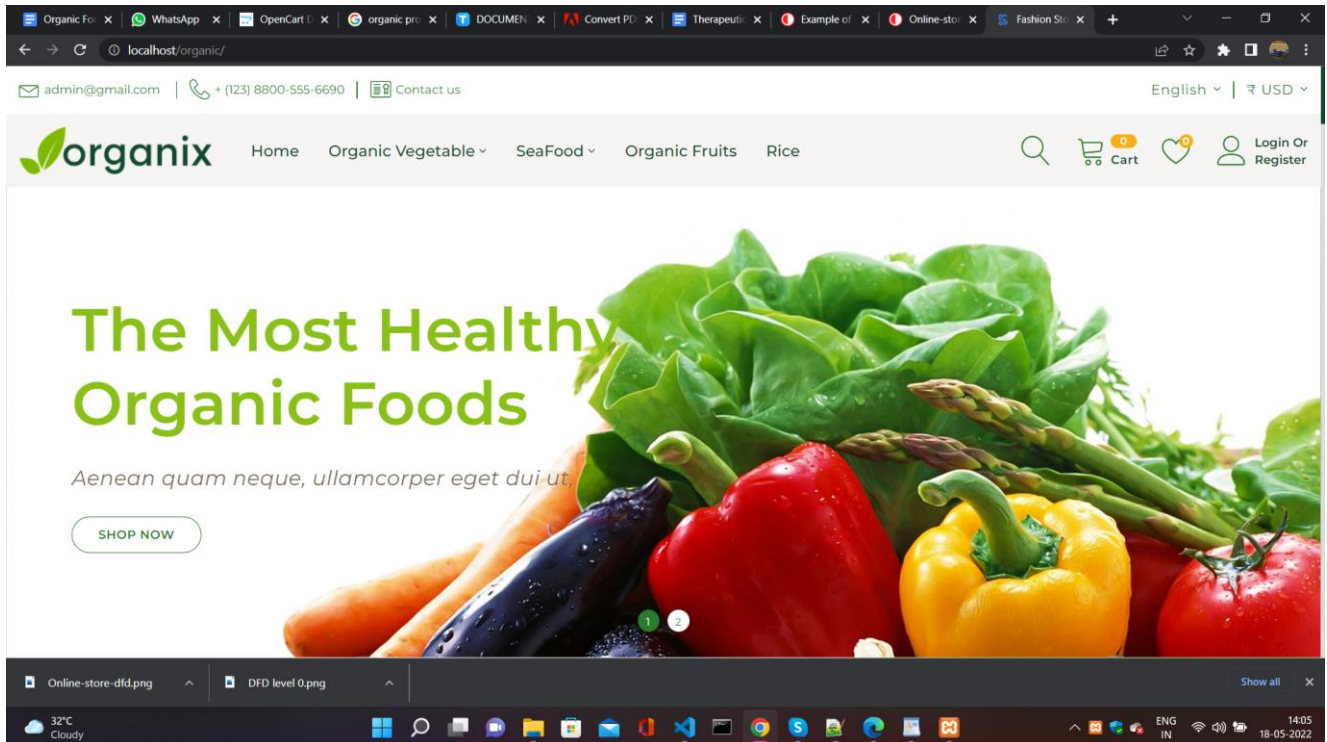
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8. APPENDIX

A.SCREENSHOTS:

HOME PAGE



SUB CATEGORY SCREEN:

