THE ESSENTIALS EXPRESS

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ABSTRACT: The project "THE ESSENTIALS EXPRESS" is used to automate all processes of shopping and ordering required daily need items, which deals with creation, adding items to the cart and confirmation of user details. The project is designed using HTML,CSS,JS as frontend and MySQL Command Line Server 5.5 as backend which works in any browsers. The platform offers users a convenience of shopping from home, with a promise of great savings, free home delivery and no minimum order value. Customers can make multiple payments online with free different payment options that they wish to avail. The paper makes suggestions to promoting such platforms in the country which also saves time and effort of the end users along with providing with privacy and confidentially which makes it a simple and intuitive experience for the users.

INTRODUCTION:

The project enables customers to order groceries online from store. The grocery online store is a huge industry by any of parameters and is growing by leaps and bounds regardless of the challenge.   We all need food for survival so we all go to a grocery to quench this basic human need. A growing trend of online grocery shopping has been seen. A number of reasons can be attributed to this.   From high-pressure jobs to the convenience of Grocery Delivery Application, to distances, long queues at the mall, maintaining work-life balance, etc. you can have any innumerable reasons why people prefer online grocery shopping to buy grocery from brick and mortar stores.

Apparently in our today world things cannot be done organized, accurately and efficiently using file based system so making things globally in a digitized way is a tremendous advantage in especially this type of Online shopping system program.   Just think what if your store does not have an online presence, the chances are you could be losing valuable items you would be requiring from the store. and eventually there will also be a loss of business and customers to that store as well as they don't have an effective online presence.

All products sold at the store are with the same price and advantages as the offline store and are available 24/7 to be ordered online.   The customer who wants to buy the product should be a member.   Store all products entered by sore IT personnel in the database, show products to customers, IT staff and finally process the product (add, remove, update).

LITERATURE SURVEY:

The web has had a significant impact on all aspects of our society, from business, education, government, entertainment sectors, industry, to our personal lives. The main advantages of adopting the web for developing software products include (1) no installation costs, (2) automatic upgrade with new features for all users, (3) universal access from any machine connected to the Internet and (4) being independent of the operating system of clients. On the downside, the use of server and browser technologies make web applications particularly error-prone and challenging to test, causing serious dependability threats. A 2003 study conducted by the Business Internet Group San Francisco (BIG-SF) (BIG SF, 2003) reported that

approximately 70% of websites and web applications contain defects. In addition to financial costs, defects in web applications result in loss of revenue and credibility. The difficulty in testing web applications is many-fold. First, web applications are distributed through a client/server architecture, with (asynchronous) HTTP request/response calls to synchronize the application state. Second, they are heterogeneous, i.e., web applications are developed using different programming languages, for instance, HTML, CSS, JavaScript on the client-side and PHP, MySQL on the server-side. And third, web applications have a dynamic nature; in many scenarios they also possess nondeterministic characteristics. During the past decade, researchers in increasing numbers, have proposed a different techniques for analyzing and testing these dynamic, fast evolving software systems. As the research area matures and the number of related papers increases, it is important to systematically identify, analyze and classify the state-of-the-art and provide an overview of the trends in this specialized field. In this paper, we present a systematic literature review (SLR) of the web application testing (WAT) research domain.

EXISTING SYSTEM:

The conventional way of calculating the sum of all the items bought at a store has always been a matter of human practice. Humans are born to error. With the existing system of calculating the total cost of items bought might become a heavy task. Moreover advertising requires human speech effort. This a lot more easier in the modern world using the code. Errors might arise in storing the information of a customer or the conventional methods cannot store them at all.

LIMITATIONS OF EXISTING SYSTEM:

- This system suitable for only small canteens.
- Online facility is not available.

PROPOSED SYSTEM:

The present system we use in the project allows their users to know what items are available under their Shoppe and in what quantity they are available At the mean time, consumers are also provided with option of purchasing the particular item. If the customer enter the yes option, then they can enter the number of quantity for each product and at the end they will be able to get the bills for the items which they have purchased and finally backup their purchased items from the pickup center.

ADVANTAGES OF PROPOSED SYSTEM:

- Customer does not have to wait in long queues.
- Customer does not need to worry about buying products.
- This software reduces paper work.
- It is easy to handle customer's record and products records for future .
- This software saves the time.
- Information of the customer stores permanently.

IMPLEMENTATION:

1. Introduction

The **Essentials Express** project aims to build an online platform that offers essential services (such as healthcare, education, or shopping) in a streamlined and accessible way. The website combines **HTML**, **CSS**, **JavaScript**, and **SQL** to create a seamless, responsive, and dynamic user experience. The frontend (client-side) is responsible for how the website looks and behaves, while the backend (server-side) manages data storage and processing.

2. System Design and Architecture

The website is designed using a **Client-Server Architecture**:

- The **frontend** is built using **HTML** (for structure), **CSS** (for styling), and **JavaScript** (for dynamic features).
- The **backend** is powered by **SQL** to handle data management, such as storing user information, service details, and transaction records.

The frontend interacts with the backend via an **API** to fetch and update data in real-time. This setup ensures the website can provide dynamic content, such as showing up-to-date service offerings, user interactions, or transaction records.

3. Frontend Design (Client-side)

The **frontend** of the website is responsible for what users see and interact with. This includes:

- **HTML (Hypertext Markup Language)**: It provides the basic structure of the website. For instance, there will be sections for the navigation bar, services, contact information, and more.
- **CSS (Cascading Style Sheets)**: It defines the visual styling of the website, including layout, colors, fonts, and responsiveness (ensuring the site works on both desktops and mobile devices).
- **JavaScript**: Adds interactivity. For example, JavaScript will be used to validate forms, dynamically update content (such as loading service information), and handle user actions like button clicks.

Key Features of the Frontend:

- **Responsive Design**: The website will automatically adjust its layout for various screen sizes (desktop, tablet, mobile) using CSS media queries.
- **Interactive Elements**: JavaScript is used for validating forms, providing real-time feedback to users, and updating parts of the page without needing a full page reload (AJAX).
- **User-Friendly Navigation**: The navigation bar allows users to easily navigate between different sections of the website like services, contact info, and about.

4. Backend Design (Server-side)

The **backend** of the project handles the business logic and data management. It communicates with the database to store, update, and retrieve data based on user interactions. The backend consists of:

- **SQL Database**: This stores all essential data, such as user profiles, services offered, transaction records, etc.
  - **Database Schema**: The database is structured into multiple tables, such as:
    - **Users**: Stores user information like their name, email, and password.
    - **Services**: Stores data about the available services like service name, description, and price.
    - **Transactions**: Records user transactions, linking users to the services they select.
- **API (Application Programming Interface)**: This acts as the bridge between the frontend and the backend. It allows the frontend to request data from the database (such as a list of services or user account details) without directly accessing the database.

Key Features of the Backend:

- **Data Persistence**: All user interactions, such as creating an account, submitting transactions, and browsing services, are recorded in the SQL database to ensure data is stored persistently.
- **Dynamic Data Retrieval**: When a user interacts with the website (e.g., clicking on a service to get more details), the backend retrieves data from the database and sends it back to the frontend for display.
- **Security**: Sensitive user data, such as passwords, is typically hashed or encrypted to protect it

from unauthorized access.

5. Interaction Between Frontend and Backend

The frontend interacts with the backend through **AJAX** or **Fetch API**. This allows the website to:

- **Send Requests to the Server**: For example, when a user submits a form, the frontend sends a request to the backend to store that information in the database.
- **Receive Data from the Server**: The backend sends data to the frontend in real-time. For example, when a user requests a list of services, the backend queries the SQL database, retrieves the data, and returns it as a response, which is then displayed on the webpage.

This interaction ensures the website is dynamic. For instance:

- When a user registers an account or makes a purchase, the data is sent to the server and stored in the database.
- When a user requests services or checks their account, the data is fetched from the server without reloading the page.

6. Security Measures

While the paper does not focus on security specifics, it's important to note that:

- **Password Protection**: User passwords should never be stored in plain text.
- **SQL Injection Protection**: SQL queries must be sanitized to prevent malicious users from executing harmful commands on the database.
- **Session Management**: After a user logs in, the server uses sessions or tokens to keep track of the user's authentication status.

7. Conclusion

The **Essentials Express** website integrates modern web technologies (HTML, CSS, JavaScript) with a SQL database backend to create a user-friendly and dynamic platform. By using these technologies together, the project ensures that users have a seamless experience, whether they are browsing services, submitting forms, or interacting with the platform in real-time.

CONCLUSION:

The Essentials Express is developed that fully meets the objectives of the system which it has been developed. The system has reached a steady state where all bugs have been eliminated. The system is operated at a high level of efficiency and all the users associated with the system understanding its advantage. The system solves the problem. It was intended to solve as requirement specification.

FUTURE SCOPE:

- The project has a very vast scope in future. The project can be implemented in future.

- Project can be updated in near future as and when requirement for the same arises, as it is very flexible in terms of expansion.

- With the proposed software of database Space Manager ready and fully functional the client is now able to manage and hence run the entire work in a much better, accurate and error free manner.

- As technology continues to advance, there are several future enhancements that online shopping systems may incorporate to provide a better user experience and streamline the overall shopping process. Some potential future enhancements include:

- Augmented Reality (AR) Shopping: Integration of AR technology that allows customers to virtually try on clothing, visualize furniture in their homes, or see how products look in real-world settings before making a purchase.

- Artificial Intelligence (AI) Personalization: AI-driven recommendation engines that offer more accurate and personalized product suggestions based on individual user preferences, browsing history, and

purchase behavior.

• Voice- Activated Shopping: Integration of voice assistants to enable users to browse, search, and make purchases using voice commands, making the shopping process more convenient.

• Virtual Shopping Assistants: AI-powered chatbots or virtual shopping assistants that provide real-time support and personalized assistance to customers during their shopping journey.

• Drone Delivery Services: Utilizing drones for faster and more efficient delivery of products, especially for last-mile deliveries in urban areas.

• Subscription Services: Offering subscription-based models for products, such as beauty products, groceries, or pet supplies, where customers receive regular shipments based on their preferences.

• Blockchain for Supply Chain Transparency: Implementing blockchain technology to enhance transparency and traceability in the supply chain, assuring customers of product authenticity and ethical sourcing.

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