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Laundry Management System

J. Senthil Murugan; A. Midhula; V. Parkavi; S. Priyadharshini; V. Piyadharsini

Department of Computer Science and Engineering

UG Student, Vel Tech High Tech Dr Rangarajan Dr Sakunthala Engineering College Avadi, Chennai - 600062

ABSTRACT:

In this paper, we present a laundry management system is an innovative software application to simplify the daily routine of a washing clothes. In this hectic lifestyle we don't have enough time to do all our household works. So, to minimize them we have introduced the laundry management system, which will play an important role in everyone's daily routine. It has many features that allow the users to create an account, make an order, customize the orders and to make payment. It acts as a common platform for both customers and renders. To make this application user friendly we have used html, css, and javascript as a frontend tools, mongodb, nodejs etc. as a backend tools. In this application customer can choose their delivery time and pickup time according their convenience.

KEYWORDS: laundry, customer, renders, html, css, javascript

Introduction:

People nowadays do not have enough time to do all their household works. The working women suffer a lot to do their household work. To overcome these problems this software application will play important role in everyone's life. This laundry management system act as a common platform to the customers to place their orders. This application is mainly used to minimize the customer's burden. This application basically involves washing clothes, ironing, dry cleaning etc. Here customer can create an account by entering their personal details, if the customer has already created their account; they can login with their unique username and password. The customer will get to know about all the laundry shops that are located in the nearby area, and they can book at any laundry store. 2 After login they can see the home page with many options that have unique characteristics. To place an order they have to select the multiples of clothes, and also feed their details about delivery address, delivery timing or pickup timing, contact number etc. At last customer can make a payment by choosing the mode of payment. This application will act as a user friendly interface to the user by the used frontend tools and backend tools like html, css, javascript, nodejs, mongo dB etc.

Literature Review:

ONLINE LAUNDRY MANAGEMENT SYSTEM :This topic represents about the online laundry management system (OLMS). This system usually has the details and records of customers clothing and the clothes in relation to their owners. In this digital world of technology, this process will be used to reduce manual work. This existing technology in our endemic environment requires different paper forms, with the data processing spread all over the laundry management framework. So, the business plan is low-ebb. A symbolic part of the laundry management system involves the desired effect of management and the timely improvement of data. The main aim of this topic is to improve the reputation of the appliance and the proposed laundry management system by addressing some of the important issues in the laundry management system domain

DESIGN AND IMPLEMENTATION OF A LAUNDRY MANAGEMENT SYSTEM :We are able to pay for the planning and implementation of a laundry management system (LMS). In general, laundry businesses have several challenges while trying to maintain track of the garments of their clients. The biggest issue that causes consumers or users to get dissatisfied and start complaining about the laundry management system is this one. The laundry management system's objective is to severely punish laundry company management, improving their effectiveness and problem-free operation. 3 Its objectives are to synthesise data, combine data, and reduce divergence. In this, the users and employees responsible for the registration of the laundry management system use the Net computer programming language and SQL database application.

LAUNDRY AGGREGATION SYSTEM An arbitrator who mediates disputes between a consumer and a laundromat is known as a laundry collector. As an illustration, consider Swiggy or Zomato, which are food aggregators that don't own their own lodging or dining establishments but formerly served as a mediator between a restaurant and a consumer. In addition, we'll aim to make these materials available through the washing system. The consumer will be connected to us via the application or website. The development of a laundry aggregator service dubbed "Laundry Mate," which serves as a go-between for customers and launderettes, is the system's main goal.

Existing System:

Currently, important information in laundry applications is managed and maintained manually. The existing system has extensive paper forms, data warehouses, and infrastructure for managing washing companies. One corporation and its customer are the sole players on the other system. The software was created using PHP and MySQL, which are quite sluggish when compared to other cutting-edge languages.

Proposed System:

This application is designed as a platform for both the customer and laundry attendant not as private application specially used for their own company e.g. Laundrex. The customer can select their delivery time based on their availability (Hometime-10.00 am to 5.00 pm, officetime-5.00 pm to 9.00 pm). The customer details can be stored securely by providing one time password (OTP) whenever they login. The main goal of the laundry management system is to simplify the users operation. If this system to be fast we must reduce the registration process and make more convenient.

Software Requirements:**FRONTEND TOOLS :**

There are three core web development technologies like Hypertext Markup language (HTML), Cascading style sheets (CSS), and JavaScript are used to build engaging and visually appealing websites. To give a full web browsing experience, each language serves a different function and cooperates with the others webpages.

1. **HTML (Hypertext Markup Language):** HTML is the industry-standard markup language used to build the structure and content of web pages. Each of its elements, including as headers, paragraphs, pictures, links, tables, and forms, is represented by a collection of tags that identify the various webpage elements. HTML provides the fundamental organisation and appearance of a webpage, but it cannot be changed or made interactive.
2. **CSS (Cascading Style Sheets):** CSS is a design language that is used to control the presentation and presence of HTML elements on a website. It permits you to describe colours, fonts, layouts, etc. CSS runs by choosing HTML elements using properties and values. By dividing the content (HTML) from the discourse (CSS), you can simply upgrade the visual style of a website without alternating the underlying HTML structure. Modern web development is based on these three technologies: HTML, CSS, and JavaScript. They can be efficiently combined by developers to provide aesthetically pleasing, interactive, and dynamic websites.
3. **JAVASCRIPT:** JavaScript is a dynamic programming language that gives web pages behaviour and interactivity. You may design interactive elements like form validation, dynamic content updates, animations, and much more. JavaScript has the ability to alter a webpage's HTML and CSS, react to user input and clicks, and asynchronously communicate with servers to retrieve or deliver data. A function that modifies a paragraph's text colour when a button is clicked is defined in JavaScript. By using its ID, it chooses the paragraph element and changes its CSS style.

BACKEND TOOLS:

1. **MEAN STACK:** An outline The MEAN Stack is a very well-known structure for web development that is made up of four basic technologies: Angular, Express.js, Node.js, and MongoDB. The short form "Actually imply" is gotten from the first of every innovation.
2. **MONGO DB:** MongoDB is a no-SQL database system that stores data in an adaptable and JSON-like binary format called BSON (binary JSON). It is designed to effectively manage a sizable amount of structured, semi-structured, and unstructured data. The adaptability, better performance, and usability of MongoDB make it simple to integrate the MEAN stack. Applications including content management systems, real-time analytics, social networking sites, e-commerce, and others use MongoDB. It is a popular choice among developers looking for a scalable and adaptable database solution because of its flexible data schema, scalability, and usability.
3. **EXPRESS.JS:** A versatile and compact Node.js web application framework is Express.js. It provides middleware support, template engines, routing, and tools for building web applications and APIs. Express.js makes it easier to create server-side apps and communicate with front-end components. It is renowned for being flexible and easy to use. It enables engineers to directly handle several aspects of web development, such as steering, middleware, demand management, and executive reaction. Building web apps is simplified by the addition of strong features and utilities to Node.js as a layer.
4. **ANGULAR:** The development of dynamic single-page web applications (SPAs) was the primary motivation behind Google's creation of the robust JavaScript framework known as Angular. It includes all the features and tools you need to create interactive user interfaces. Rakish adheres to the Model-View-Regulator (MVC) architectural style, enabling engineers to successfully organise their code and separate concerns.
5. **NODE.JS:** The V8 JavaScript engine in Chrome serves as the foundation for the Node.js JavaScript runtime. Due to its ability to run JavaScript code on the server-side, the MEAN stack enables developers to utilise a single language. Due to its event-driven, non-blocking I/O system, Node.js makes it simple to create scalable, real-time applications. The open-source runtime environment Node.js enables developers to execute

JavaScript code on the server side. It was created using the Chrome V8 JavaScript engine, which provides a speedy and efficient runtime for JavaScript code execution.

Modules Required:

There are four types of modules were introduced.

1. Authentication Module
2. Dashboard Module
3. Booking Module
4. Payment Module

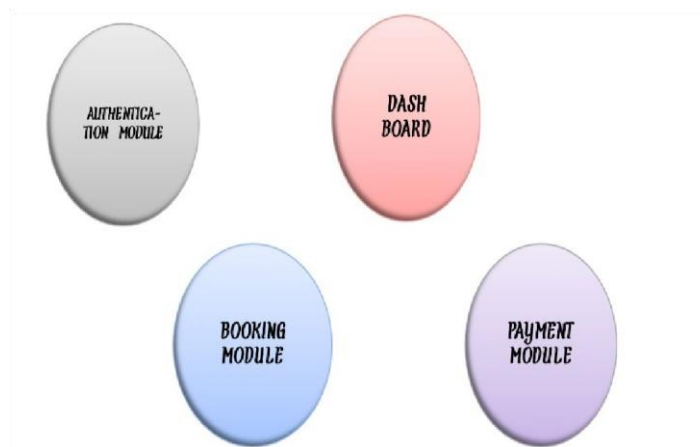


FIGURE 1: TYPES OF MODULES

AUTHENTICACATION MODULE:

Authentication module plays an important in identifying the customer's identity. In this module, user can create an account by creating username and password. Whenever the user wants to use this application, they can login with their username and password. If the user forgot the password they change it by clicking forgot password. Every user should provide with the unique username and password. This module verifies the user identity for accessing the application. Due to this validation, it can prevent any unauthorized access for the system.

DASH BOARD MODULE:

Dashboard is a kind of user interface, where user can fetch the information about the disparate topic. This module is presented to the user, after the successful login process. This dashboard consists of several information, different type of options where each option has unique characteristic. The main purpose of this dashboard is to provide the complex data into simplified manner. So, the user can easily grasp the information or status.

BOOKING MODULE:

A software element or application that enables users to schedule appointments or reservations for different services, activities, or resources is known as a booking module. In this module the user can check the availability of resources. The users can also customize their booking by changing the delivery time, pickup time, number. of. Clothes, address, mobile number etc. this may include cancelation of orders, rescheduling the delivery.

PAYMENT MODULE:

This module payment module is introduced to ease the transaction process between the users and renders. This payment module act as a platform for paying money to renders, admin collect the transaction detail. It will encrypt and secure the customers details while the payment process.

Results:

This operation of the proposed system includes the registration of the users name, address, mobile number, DOB. In this system user can login, after the verification process, the users are redirected to the home page. In the home page users are provided with different types of options. If the user wants to book their order for laundry, they have to select the multiples of clothes and confirm their order. To book their order they should schedule the delivery time, pickup time and do the payment process



FIGURE 1: LOGIN PAGE



FIGURE 2: HOME PAGE

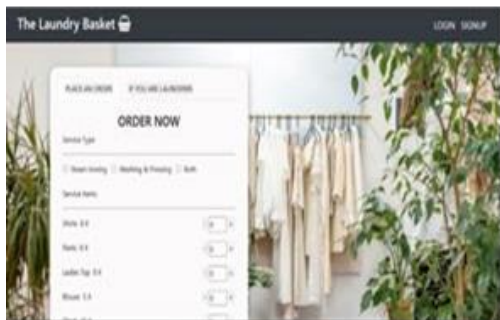


FIGURE 3: ORDER PAGE



FIGURE 4: PAYMENT PAGE

Conclusion:

This study was conducted on a mobile application that was primarily created for laundry-related purposes. This programme will function everywhere and not only in one particular location. This application's primary goal is to aid individuals who live outside of their homes as well as the jobless washermen who have fewer employment. Customers may identify their local dry cleaners, track their orders, and order in advance with the app.

In recent times, the evolution of technology has become more convenient to business operate. Every consumer should get satisfaction over consuming the services of this web application. In this hectic lifestyle we all need a third hand which eases our work load.

Further Scope:

The laundry management system may see a number of advancements and enhancements in the future. Research has been proposed to introduce the blockchain idea for secure payment transmission in order to further improve security system.

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