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Online Courier Service Management System

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ABSTRACT

It sounds like you have a detailed plan for an online courier service management system project. Such a system can be beneficial for managing customer information, package details, generating reports, and handling billing in a courier business. Having a mobile app with different user roles, such as a master admin and regular users, allows for efficient management of various operations, including agent management, package tracking, billing, and status updates.. Remember to prioritize security measures, such as data encryption, secure APIs, and user authentication, to protect sensitive information and ensure the system's integrity. Overall, developing an online courier service management system with the mentioned features can greatly enhance the efficiency and effectiveness of a courier business

I. INTRODUCTION

The Online Courier Service management system is designed to provide efficient and specialized delivery services for packages, documents, and information. It distinguishes itself from ordinary mail services by offering features such as door-to-door delivery, track and trace technology, fast delivery times, enhanced security measures, package tracking, signature confirmation, and personalized services.

The Mobile Courier Service System takes this concept a step further by enabling all courier transactions to be conducted through a mobile phone. This system allows users to conveniently access courier services anytime, anywhere using their mobile devices. With the mobile app, users can easily initiate package deliveries, track their packages, and receive notifications about the cost and estimated arrival date of their shipments.

II. LITERATURE SURVEY

The history of courier services can be traced back to ancient times when messengers, runners, homing pigeons, and horse riders were employed to deliver messages across long distances. Initially, foot messengers would physically run for miles to fulfill their delivery tasks. Even in the Middle Ages, royal courts had their own messengers, although they were often paid meager wages.

However, the traditional messenger system had its limitations. Each messenger could only serve one user at a time, leading to underutilization of their labor and resources. This inefficiency necessitated the development of more advanced courier services.

In the modern era, courier companies offer distinctive characteristics that distinguish them from traditional delivery services. These features were highlighted in a report by the US-ASEAN Business Council. Key characteristics include door-to-door delivery, seamless transfer across multiple modes of transport, close custodial control using sophisticated information systems to enhance security, and track and trace technology that enables customers to monitor the movement and location of their shipments.

Currently, the largest courier service in the world is the United Parcel Service (UPS), which delivers millions of packages globally each day. Other well-known global examples include Federal Express (FedEx) and DHL, both of which emerged in the early 1970s.

Despite the advancements in the courier industry, there have been challenges related to service delivery, such as increasing costs, time wastage, and poor coordination. Orunga (2012) emphasized the need for messaging services to establish audit trails for deliveries and recommended the adoption of technology to improve service quality. Technology can enhance the accuracy of courier records and facilitate effective time management.

Researchers have explored various technological approaches to improving courier services. For instance, Karlson et al. (2008) focused on electronic file exchange, highlighting the benefits of utilizing mobile phones and PCs for sharing files and URLs. The study also addressed concerns regarding usability, including privacy, reliability, and the speed of package delivery.

Chauhan et al. (2010) proposed an e-courier service as a web application for business-to-business interactions in India. Their concept aimed to provide high-tech courier services, although it was not specifically designed for mobile phone users.

Azeta et al. (2010) identified the lack of mobile facilities for customers to track and lodge complaints in existing express delivery systems. They proposed the Mobile Express Delivery System (EDS), which would enable customers to trace shipments, submit complaints, and conduct financial transactions.

Overall, the courier industry has evolved over time, incorporating advanced technology to improve efficiency, accuracy, and customer satisfaction.

III. PROPOSED SYSTEM

The introduction of a mobile application in courier services significantly enhances the user's participation and overall efficiency. With the mobile app, courier users can easily communicate with both the sender and recipient, seeking directions or redirections if necessary. This direct interaction between the users and the app serves as a pivotal point in the user's involvement in the courier service.

The mobile app proves to be particularly useful for courier agents as well. They can leverage the Google Maps API integrated into the app, which assists them in locating a customer's address accurately. This feature streamlines the process for agents, allowing them to navigate to their pickup and delivery points efficiently.

System Analysis

Admin Login

- Admin will have his/her own login details (username, password) to access the system and username and password is checked.

Create Bill – Admin , User

- Admin can create a Courier Bill after logging in. Bills contain the details of sender, receiver, courier type, delivery date and courier company.

Update bill– Admin , user

- They can also update the Bill with the entries and if there is any modification. user can view the list of details of his location only.

 Send

- Once they created and updated the Courier Bill admin can send the Bill as x.l.s file.

Manage Customer details

- Admin can manage all the Customer Details in a separate and secured Database.

Reporting

- Reports of all the Bill can be viewed by the admin of the system.

Logout

- At last they can logout if they have done with their actions on the database.

Admin Dashboard

- Status Counts

    a. View total status count for shipment in progress, delivered.

    b. Admin will view all location status counts.

    c. Agent can view only from or to location of his branch.

- Add Shipment

    a. New Courier

    b. Manage Shipment

    c. Print Shipment

    d. User can print tracking details

    e. Download Report (XLSX)

    f. Date Wise

    g. City

User Dashboard

- Add User

a.   Can view only "from or to" location

b.   Create User city wise login

c.   Manage Customer

d.   Search

User Login

- Track Shipment

    a.   User can search using consignment tracking details

b. Shipment status

   c. Print

- User can print tracking details

a. Notification

    b. Advanced Google Map

IV. USECASE DIAGRAM

Use case diagram consists of use cases and actors and shows the interaction between the use case and actors.

- The purpose is to show the interactions between the use case and actor.

- To represent the system requirements from user's perspective.

- An actor could be the end-user of the system or an external system.
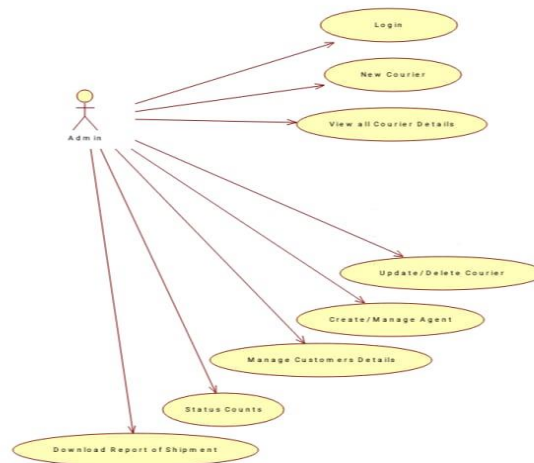
V. CONCLUSION

This paper introduces an online courier service system specifically designed for the courier service sector in Nigeria. The current state of the courier industry in Nigeria indicates a lack of utilization of mobile devices to support their operations, despite the significant benefits that mobile applications offer in the global economy. The system developed in this paper aims to address this gap by providing a convenient and efficient means for sending documents and packages, such as laptops, books, and more, with minimal delays and hassle.

With the implementation of the mobile courier service system, people will no longer need to visit courier offices for various reasons. The system eliminates the need for physical visits by providing an intuitive mobile application that allows users to easily send their packages to different destinations. This convenience and accessibility will greatly enhance the services rendered by courier companies in Nigeria.

The focus of this paper has been on developing the client-side courier software, which enables customers to initiate and manage their courier transactions. Despite resource limitations, the implementation of the client-side system has been successfully accomplished. However, there are further recommendations for future development to enhance the system's functionality and ensure its full potential is realized.

By introducing this mobile courier service system, the paper sets the foundation for transforming the courier industry in Nigeria. The utilization of mobile technology will streamline operations, reduce delays, and provide customers with a more seamless and user-friendly experience. It opens up new possibilities for growth, efficiency, and improved customer satisfaction in the Nigerian courier service sector.

VI. FUTURE ENCHANCEMENT

It's great to hear that the project is mature and successful. It's natural for organizations to continually seek improvements and updates to stay competitive and meet evolving requirements. If you're considering implementing more features or modules in the project, here are a few suggestions: Enhanced Tracking and Notifications: Consider implementing real-time tracking features that provide detailed information on the package's location and estimated time of arrival. Additionally, you could incorporate proactive notifications to keep customers informed about any changes or delays in their deliveries.

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