

Cargo Booking System

A project report submitted in partial fulfillment of the requirements for the
degree of Bachelor of Engineering in Information Technology

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CERTIFICATE

This is to certify that the Project entitled

Cargo Booking System

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Project Report Approval

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DECLARATION

I declare that this written submission represents my ideas in my own words and where others ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea / data / fact / source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Ashish Brahmadande

Date _____

Abstract

The Cargo Booking and System (CBS) is an integral part of logistics and supply chain management, providing an efficient and reliable way to transport goods from one place to another. In this project, we propose a CBS that utilizes web technologies to improve the booking and transportation process. The cargo booking system is a digital solution designed to manage the movement of goods across different regions. This technology has become increasingly important with the growth of e-commerce and global trade, where businesses require an efficient solution to manage high volumes of shipments across multiple locations. The cargo booking system offers a centralized platform for booking and managing shipments. It enables cargo owners and freight forwarders to access real-time information about their cargo, such as the shipment's status, and location. By automating key processes, such as booking the system minimizes the risk of errors, reduces paperwork, and improves the overall efficiency of the logistics process. The cargo booking system offers a comprehensive solution for managing the complex logistics of modern businesses. It offers a streamlined, cost-effective, and efficient platform for managing shipments across different regions, enabling businesses to focus on their core competencies while improving their logistics operations.

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List Of Abbreviations

PHP	Hypertext Preprocessor
HTML	Hypertext Markup Language
CSS	Cascading Style Sheet
ML	Machine Learning
CBS	Cargo Booking System
DRP	Distributed Requirement planning

Chapter 1

Introduction

1.1 Existing System

Nowadays, system of the transportation uses the manual system where needs to fill all records in a file from the system users to the technical writers. This work is handled by staff to fill all the transport reservation form with handwriting. This will give difficult to find file when the same customer come to book transport again. Cargo Booking Software (CBS) is a system to effectively manage information about Cargo order and. It also manages the transportation system for other communities such as Shift Order, Track Cargo and Dispatch Order etc. Customer also can see types of transport that can be booked with faster and make the choice of the transport. Customer does not need to register many times because the profile customer has been saved into the database. These systems focus on a reservation form and the latest information about the transport availability.

The old cargo booking system had several disadvantages that made it inefficient and difficult to use. One of the main issues was the lack of automation, which led to manual data entry and processing errors. This resulted in delays and inaccuracies in booking and tracking shipments. Additionally, the old system often relied on paper-based documentation, which was time-consuming and prone to loss or damage. This made it challenging to retrieve important information and maintain accurate records. Another issue with the old system was its limited functionality, which meant that users had to switch between different software programs to complete tasks such as booking, tracking, and invoicing shipments. This led to a disjointed and inefficient workflow, which was not only frustrating for users but also slowed down the entire shipping process. Finally, the old system was often not scalable and could not handle the growing volume of shipments as the business expanded. Overall, the old cargo booking system was outdated and hindered the efficiency and growth of the shipping operation.

1.2 Problem Definition

The cargo transportation industry is complex and involves various parties such as shippers, carriers, freight forwarders, and customs agents. The process of managing cargo transportation can be time-consuming and error-prone, which can result in delays, increased costs, and unhappy customers. Therefore, the problem with the current cargo transportation system is that it lacks a centralized platform for managing shipments efficiently. The existing manual processes and paper-based documentation can be challenging to manage, resulting in delays and inaccuracies.

Moreover, communication between different parties involved in the cargo transportation process is often fragmented, which can lead to miscommunication and errors. The lack of visibility and transparency in the logistics process makes it challenging to track shipments in real-time, leading to uncertainty and delays. Furthermore, the increasing volume of shipments, especially with the growth of e-commerce, has further complicated the logistics process, making it challenging to manage efficiently.

Overall, the problem with the existing cargo transportation system is the lack of a centralized, streamlined platform for managing and shipments efficiently. This results in delays, increased costs, and inefficiencies, leading to a suboptimal customer experience.

1.3 Literature Review

The Use Of It System In The Distribution Of The Courier Service[1] (Tomasz szczepanik)

January 2016 25th international academic conference Paris

The distribution system in the logistics center focuses on the management of information streams that determine the efficacy of the corresponding physical distribution processes.

The physical control of the flow of goods from producer to the consumer is based on the technology of movement of goods. The article describes the essence of information systems management to the needs of courier companies. The possibilities to use information systems to ensure the efficient flow of goods and information in the management of courier companies. Presented functionality DRP and CRM systems and the possibility of combining them with other systems available in the courier companies. The influence of the use of information systems in the distribution of courier services, and customer service. It shows the practical application of class systems DRP and CRM used in the processes of service delivery courier. Also examined the use of information systems and assess their suitability for delivery courier.

Transport Management [2] (Mengistu Alehegn)

Heriot-Watt University January 2007

Green issues and transport are very much at the top of the political agenda at the moment. Not only are companies looking to reduce financial costs within their business, but increasingly, attention is being focused on the environmental consequences of their actions, and ways that these environmental costs may be lessened. As a result, transport operations are now being more closely scrutinized, with opportunities for improved transport efficiencies regularly being sought. A transportation management system is a software system that helps companies manage logistics associated with the movement of physical goods – by land, air, sea, or a combination of transportation modes. Part of the larger supply chain management system, TMS logistics software helps ensure timely delivery of goods by optimizing loads and delivery routes, tracking freight across local and global routes, and

automating previously time-consuming tasks, such as trade compliance documentation and freight billing. A TMS system reduces costs for both businesses and end customers.

Barriers To Change In Urban Freight Systems [3](Mikael Kervall)

(European transport research review, 2022)

This paper presents a systematic literature review that aims to contribute to the knowledge about barriers to change in urban freight systems and support managed changes toward more sustainable urban freight systems. The study is based on an analysis and synthesis of 93 peer-reviewed journal articles, and from a system perspective, 11 categories of barriers to change in urban freight systems were identified and characterized. These barriers are related both to each other and to a managed change process for sustainable development of urban freight systems. The study proposes a model for understanding categories of barriers and their connection to managed change processes in urban freight systems, consisting of three groups of barriers within the process, and two groups in the system context, which should be addressed with different priorities in a managed change process. The study identifies several future research options, such as supporting the development of sustainable urban freight systems by providing insights into change process governance and exploring methods to mitigate identified barriers. Urban freight activities are expected to grow as a result of increased urbanization, e-commerce, and digitalization. These activities are necessary for daily life in urban areas but also generate unsustainable externalities like noise, emissions, and congestion. A sustainable development of urban freight systems (also called urban freight transportation systems) would require changes within these systems. Before changes can be implemented in the systems the barriers to these changes must be understood and overcome.

A study by Parnasree et al. (2021) investigated the impact of a cargo booking system on the efficiency of the logistics process. The study found that the system significantly improved the speed and accuracy of cargo transportation, resulting in a reduction in overall logistics costs.

In addition, a study by Ojo et al. (2020) examined the impact of technology on the logistics industry, with a focus on the use of digital solutions in cargo transportation. The study highlighted the benefits of using cargo booking systems in terms of reducing costs, improving accuracy, and enhancing the overall customer experience.

Chapter 2

Proposed System

2.1 Working Features

Introduction

The transport services companies in India are using logistics management practices to fulfill the promises made to them such as time and faster because of increased relocation of people, rapid growth in the manufacturing, retail, and fast-moving consumer goods. A cargo booking system (CBS) is a combination of all such service providers who provide reliable services in the transportation sector. The cargo booking system is useful for the logistic service provider as well as for the user to book the slots in a convenient way (Online mode). User are free to ask the queries to admin as well as the provider as this site provides build in chat system. Tracking feature help the customer to track the cargo and know the date to delivery. Booking slot window provides an interface where already booked slots are been shown to user which help user for better booking option. Payment Gateway leads to safe transaction between the user and admin, where then admin after verifications send the amount to provider.

Working

The User module allows users to register and create an account on the site. Once logged in, users can view different cargo service providers available on the dashboard and book a slot based on their requirements. When a user books a slot, the provider will be notified of the request and can confirm the booking.

The Provider module allows service providers to register and publish their business on the site. They can create ads to enhance their business and attract more customers. The Admin module allows site administrators to manage user and provider accounts, approve provider ads, handle payments and refunds, and generate reports on system performance. The Cargo system provides an efficient platform for users to book cargo services and for providers to enhance their business and attract more customers. The Admin module is an independent module with the authority to manage user and provider accounts. In case of mismatched services, the Admin can remove users or providers from the system. Users and providers can contact the Admin module for technical problems or any queries they may have. Additionally, a chat system is provided for users and providers to solve any doubts related to delivery services or payment issues. This feature enhances communication and helps to solve any issues related to cargo booking services more efficiently. Overall, this cargo system provides a comprehensive solution for cargo booking services and enhances the user experience by providing a reliable and efficient platform for cargo service providers and customers.

Description of Modules

- **Login/signup Module:** On this page users can register itself if they new user with email mobile number. If they are registered user they can simply login by email and password. Encryption methods are used to store password.
- **Chatbox Module:** Chatbox is for connecting user with transportation company. Unique Id will be given to the company. When user select the company to chat unique id will matched after that they start chatting. No other third party can't access to the chat and it is completely secure.
- **Slot Booking Module:** Can book slots according to the service provided by the company. And it is complete dynamic. After booking they can do payment using payment gateway. After payment Tracking id will be given to the user.
- **Estimated Delivery:** Using ML[8] and previous data, estimated time for delivery will be given to user. In future we can add advanced tracking system instead of estimated delivery time.
- **User Module:** This module is used by customers to register and create an account, search for cargo services, place bookings, and make payments.
- **Provider Module:** This module is used by cargo service providers to manage their services, track bookings, and handle payments.
- **Admin Module:** This module is used by system administrators to manage user accounts, approve and monitor service providers, handle payments and refunds, and generate reports.
- **Payment Module:** This module is used to process and manage payment transactions, including payment gateways, invoicing, refunds, and payment disputes.

Chapter 3

Implementation Methods

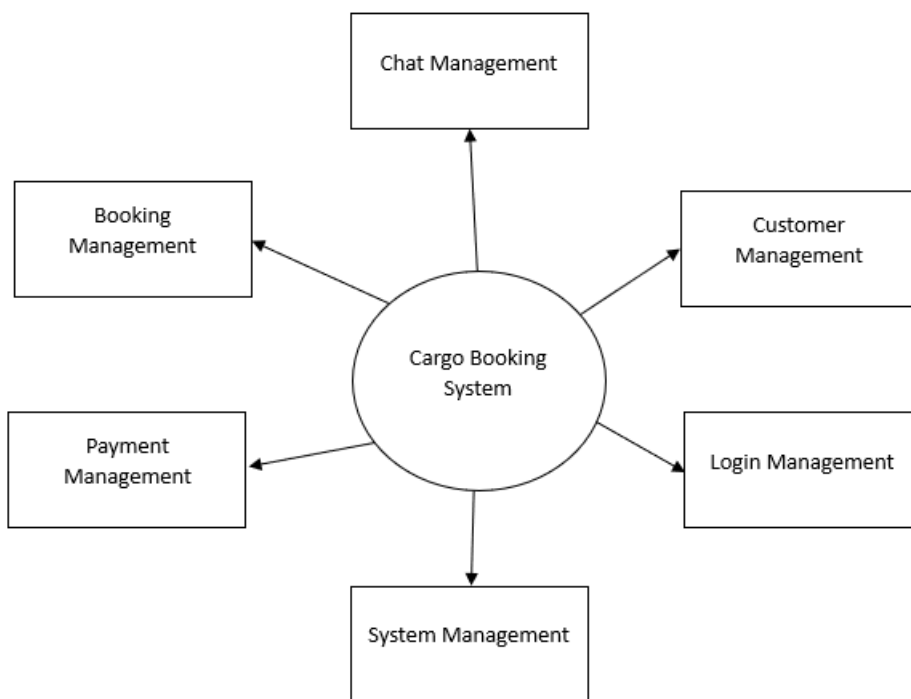


Fig .3.1 System Diagram

Different types of modules in cargo booking system

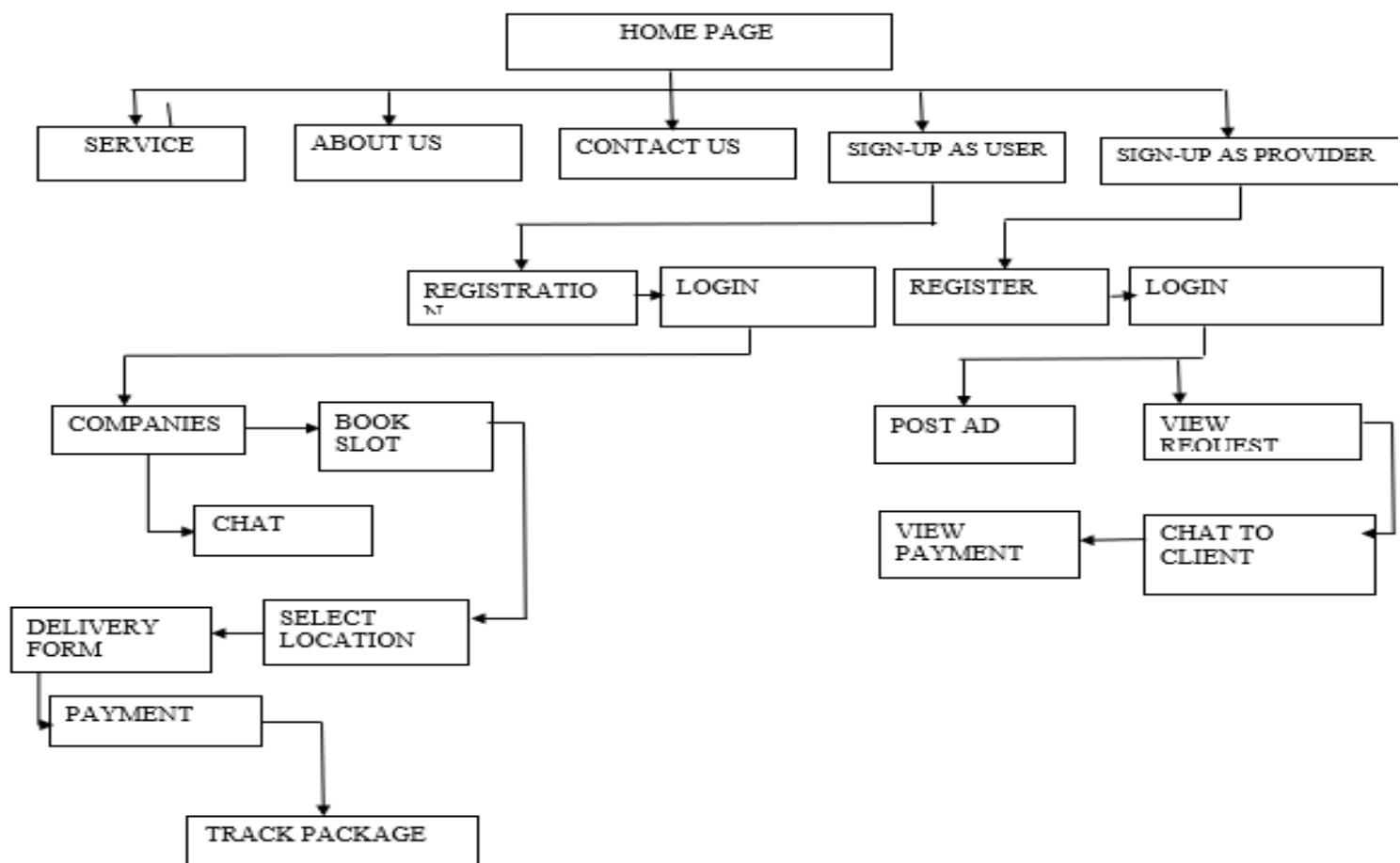


Fig. 3.2 flowchart

Flowchart for users(customers) and admin to use Cargo Booking System web page

Chapter 4

Development Tools

Programming Languages: PHP, HTML, CSS, Javascript

This project was developed using PHP. PHP (Hypertext Preprocessor) is a popular server-side scripting language used primarily for web development. It is an open-source language, which means that it is free to use and modify.

PHP is widely used for creating dynamic web pages, interactive web applications, and content management systems. Special features in this project model will be executed by the PHP interpreter.

Database: XAMPP is a free and open-source cross-platform software package that includes Apache web server, MySQL database, PHP, and Perl. It is used to set up a local web server environment for testing and developing web applications.

The name XAMPP stands for cross-platform (X), Apache (A), MySQL (M), PHP (P), and Perl (P). It is available for Windows, Linux, and macOS.

Chapter 5

Result and Discussion

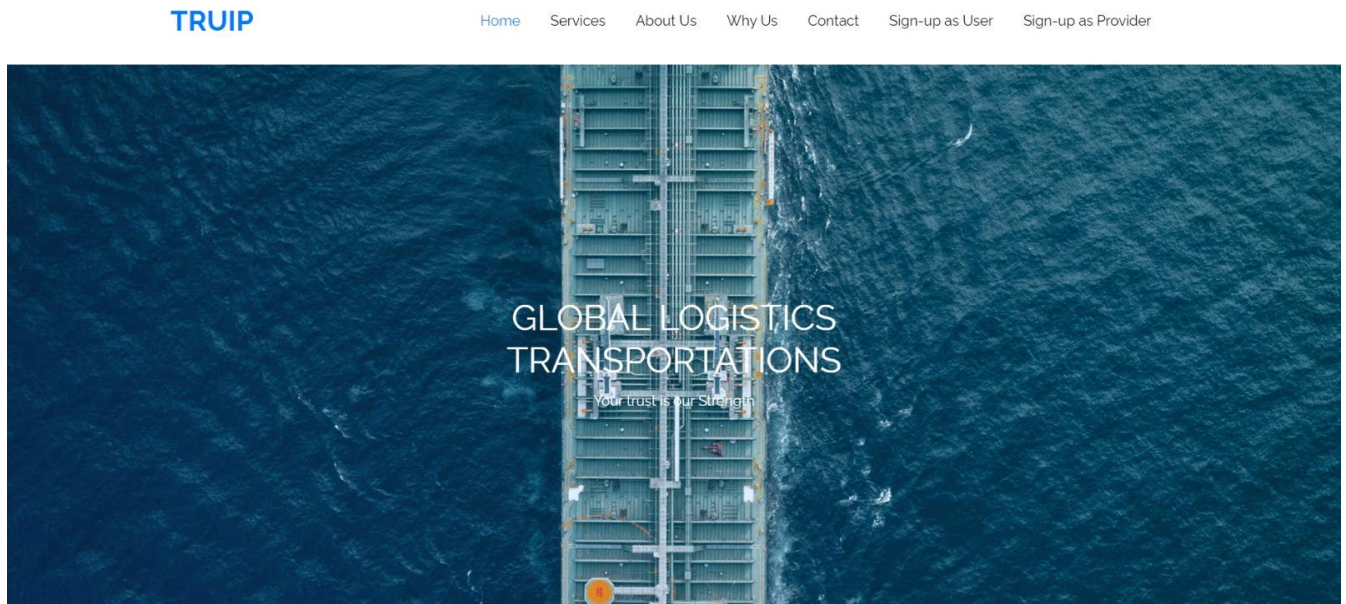


Fig No.5.1 Landing Page

This is a landing page where user can navigate to multiple pages through multiple module

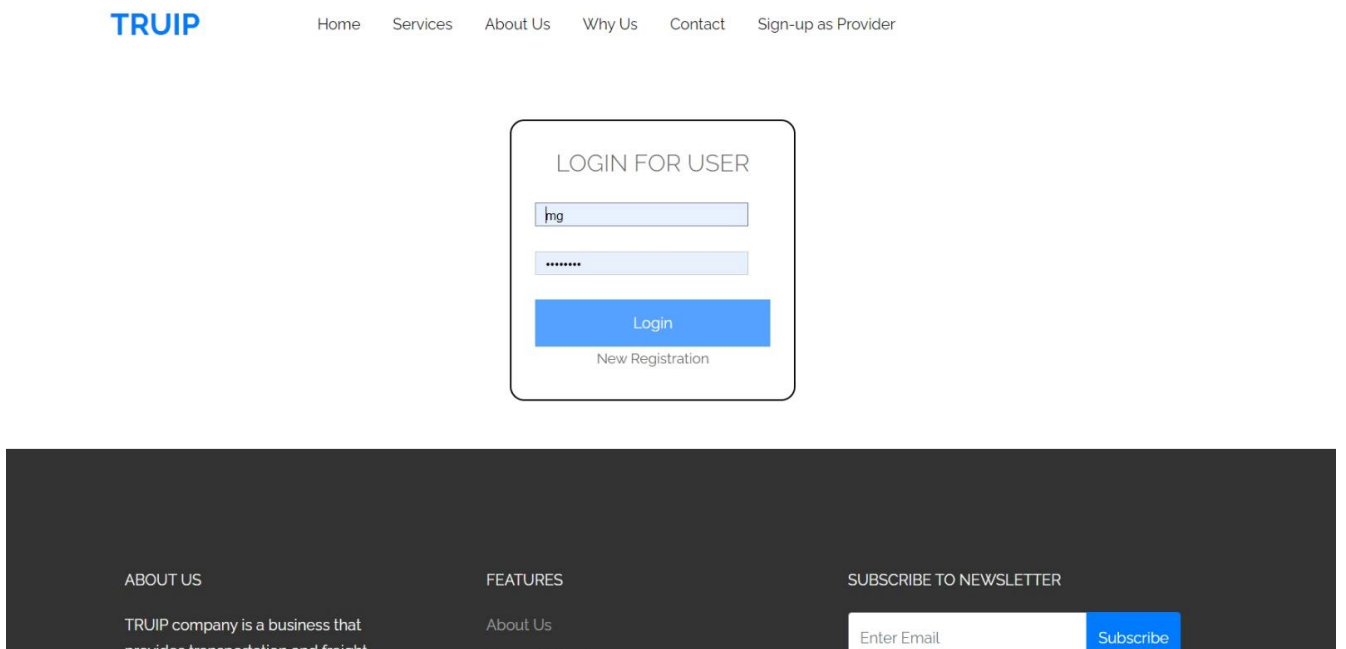


Fig No. 5.2 login page

This page is for registered user. They can simply login through email id and password

The image shows a web page for user registration. At the top left is the logo "TRUIP" in blue. To its right is a horizontal navigation menu with links: "Home", "Services", "About Us", "Why Us", "Contact", and "Sign-up as Provider". In the center of the page is a white rounded rectangle titled "REGISTRATION FOR USER". Inside this rectangle are three input fields: "Username", "Email Address", and "Password". Below these fields is a blue button labeled "Register". Underneath the "Register" button is a link that says "Click to Login". At the bottom of the page is a dark grey footer bar containing three links: "ABOUT US", "FEATURES", and "SUBSCRIBE TO NEWSLETTER".

Fig No. 5.3 Registration page

This registration page is for new user they can register to website through above details.

The image displays a slot booking interface. At the top, it says "Welcome Meenakshi Traders!". Below this, there are two dropdown menus: "Company:" and "Time : select". Underneath these is a row of three status indicators: a grey circle labeled "Available", a green circle labeled "Selected", and a white circle labeled "Sold". The main part of the interface consists of a grid of 20 slot icons arranged in two columns of ten. Most slots are grey, but one slot in the first column and one slot in the second column are white, indicating they are available. At the bottom center of the grid is a button labeled "Book now".

Fig No. 5.4 slot booking page

On this page user can book their slot by choosing service provider according to their need and check the availability.

Registration Form

Firstname

Middlename:

Lastname:

Company Name :

Ways :

From :

To :

Phone :


Delivery Address :

Email


[Book slot](#)

Fig No. 5.5 form for transportation

Here user must fill all the details required for transportation.




[Home](#)
[Services](#)
[About Us](#)
[Why Us](#)
[Contact](#)
[Hill mitesh](#)
[Logout](#)



INDUS EXPORTERS

We provide you with a great facility of fast and secure delivery within short span.


[Know More](#)



MUNAXI TRADERS

Best Delivery known for Flight


[Know More](#)



REGRACY TRUST

Let the your trust be our strength come join us.

[Know More](#)



Vardhman Textiles Ltd.

Delivering Excellence. Since 1965.

Fig No. 5.6 transportars page

User can compare Multiple compines on single platform



Fig No. 5.7 company profile

User can check company profile by single click.

[User Profiles](#) [Provider Profiles](#) [Companies](#) [Orders Details](#)

USERS

Name	Email	Action
mayur	mayurg78600@gmail.com	Send mail Remove
ashish	ashish@gmail.com	Send mail Remove
mitesh	mitesh123gmail.com	Send mail Remove
anuj	anuj@gmail.com	Send mail Remove
Opymix	olo@gmail.com	Send mail Remove
kapil	kapil@gmail.com	Send mail Remove

Fig No. 5.8 Admin Page

Admin can monitor and manage the website by login on the website

Chapter 6

Future Scope

The cargo transportation industry is continuously evolving, with new technologies and innovations emerging to address the challenges and opportunities in the sector. As such, there are several potential future scopes for the Cargo Booking System:








1. Integration with blockchain technology
2. Artificial intelligence (AI) and machine learning (ML)
3. Internet of Things (IoT)
4. Augmented and virtual reality (AR/VR)

Overall, the future scope of the Cargo Booking System lies in the integration of emerging technologies such as blockchain, AI/ML, IoT, and AR/VR, enabling businesses to streamline their logistics operations and stay ahead of the competition in a rapidly changing industry.

Chapter 7

Plan of Work

Gantt Chart

TASKS	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR
RESEARCH								
LITERATURE SURVEY								
PLANNING								
IMPLEMENTATION								
DEPLOYMENT								
DOCUMENTATION								
CONFERENCE PAPER PUBLICATION								

Chapter 8

Conclusion

Cargo Booking System is a digital solution designed to manage the complex logistics of modern businesses. It offers a centralized platform for booking, and managing shipments, enabling cargo owners and freight forwarders to access real-time information about their cargo, such as the shipment's status, location, and delivery time. The system optimizes the logistics process by streamlining communication between different parties involved in the cargo transportation process, such as shippers, carriers, and customs agents, resulting in improved efficiency, accuracy, and cost savings. cargo booking system is an essential tool for the logistics industry, providing businesses with the ability to manage their supply chain effectively. It offers a streamlined, cost-effective, and efficient platform for managing shipments across different regions, enabling businesses to focus on their core competencies while improving their logistics operation.

Chapter 9

Publications

1. Mitesh Gawade, Ashish Brahmada, Mayur Gaikwad, Anuj Gopanwar, Prof. Shaila Pawar, Dr. Varsha Bhole, “Cargo Booking System (Transportation Of Agricultural Products)”, ‘1ST INTERNATIONAL CONFERENCE ON ‘RECENT TRENDS IN MULTIDISCIPLINARY RESEARCH AND INNOVATION (ICRMIR 2023)’ ISBN No: 978-81-951319-8-3, pg.196-200
2. Mitesh Gawade, Ashish Brahmada, Mayur Gaikwad, Anuj Gopanwar, Prof. Shaila Pawar, Dr. Varsha Bhole “Cargo Booking And Transportation System Review Paper”, INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING & MANAGEMENT (IJSREM), Volume 07 Issue 04 April 2023

Chapter 10

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- 3) Mikael kervall “Barriers To Change in urban Freight Systems”, European transport research review, 2022
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Cargo Booking System (Transportation of Agricultural Products)

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ABSTRACT:

Food waste is a key issue in India's efforts to fight hunger and improve food security. Although the focus has been on improving production, reducing losses in the food chain has been a relatively unsolved problem until recently. Due to a lack of adequate infrastructure, it is currently difficult to estimate how much food is wasted in India, but according to a 2011 report by the United Nations agency FAO, fruit and vegetable waste accounts for up to 45 percent of production. (for distribution after harvest) to developing Asian countries like India. Cargo Booking Software (CBS) is an online web application. Cargo booking software will manage customers goods, farmers, traders, (Admin) Login and customer Login for different services. This portal will allow the customers to keep an eye on the goods that they are transporting. On this site, customers can track their goods and book slot according to the quantity of the product. farmers calculate the weight and other things of cargo and will make entry of it while transporting through this system. The role of transportation is crucial because the problem associated with food security is not only based on the availability of land and production but also on transportation and utilization. The admin has overall rights over the system and can watch the process. The website will provide multiple service providers for transportation. Admin can be the government or any private company that can host this website for better

accessibility and transportation of agricultural products.

Keywords: *Cargo booking system, Transportation, Agriculture, Farmers, customers*

INTRODUCTION:

The agriculture sector is very important to the economy of a developing nation like India. It provides employment directly or indirectly for at least 45% population of the country. And nearly 20% of India's GDP was provided by the agriculture sector in 2020[9]. The primary worldwide problem of the twenty-first century can therefore legitimately be seen as feeding the world's rapidly growing population. In India, a sizable portion of the ecosystem that makes up the agriculture supply chain is either directly or inextricably related to the public sector. The Indian government purchases goods from farmers at Minimum Support Prices (MSPs), which are established by the Commission for Agricultural Costs and Prices after considering the costs associated with producing a particular crop. This protects farmers against price volatility. The Food Organization of India (FCI)[13] acts as the buyer, storing the purchased products in the warehouse of the appropriate warehousing corporation, and the 7500+ Agricultural Procurement and Marketing Committee (APMC)[14] serves as the marketplace for the

transaction.

In order to sustainably promote agricultural production, improve the global supply chain, ensure that all people suffering from severe hunger and malnutrition have access to high-quality, nutrient-rich food, as well as reduce food losses and waste, more innovation must be quickly intensified.

Better rural transport infrastructure and services may be required to enable rural access improvement the entry to markets, decrease transporting cost, reduce crop wastage, increase food safety and increase manufacturing on a diminishing worldwide land resource, depleted through nutrient flows to the urban centres[4]. Improved rural transportation will allow investments and rural-based supply chain with associated rural employment and economic development main to greater self-reliant rural areas. Our aim is to provide solutions for cold storage and refrigerated transportation across India for fresh and frozen commodities and provide a way to bypass the long chain of intermediaries by directly connecting buyers and sellers of agricultural produce and allied service.

BACKGROUND

When analysing the transportation of agricultural products, it is found that transportation costs play a critical role in identifying the link between accessibility and agricultural development [7]. A good transportation system is critically crucial for competent agricultural products marketing. For the distribution of agricultural products, all transport has a vital role because it is the major means of transporting agricultural products from the farms to the markets as well as to various urban communities. It is the only means by which food produced at farms is transported to different homes as well as markets all over the globe. Transport creates market for agricultural produce, improves interaction among geographical locations and economic regions, and opens up new areas to economic growth. The role of transportation is crucial because it is a stage in the production technique that gets completed only when the products reach of the final consumers. The availability of transport services is an essential investment element that stimulates monetary growth via accessibility and its performance. The betterment of transportation services have made viable modification in the manner of farmers and the way wherein societies and affect the improvement of the economic conditions.

EXISTING SYSTEM

There is no centralized system or organization which keeps an eye on the transportation of agricultural products and its transaction [3]. If farmers want to sell their product it is not possible because of transportation costs or by an other reasons. They first need to sell this to trader at very low price which is not up to the producing cost which will result in loss of farmers. Farmer first need to visit multiple transportation service provider offices if they want to transport it personally and it is time wasting process. In some offices, all processes are manual means every time you need to fill form, submit a document a , verify it and it is long process and it is repeating process when you visit offices every time which is a delay in transportation. There are a lot of frauds done by traders with farmers during manual agreements.

Some problems related to the Indian agriculture sector

Inefficient price signals:

The government has been buying nearly one-third of all rice and wheat produced in India through the PDS system, but in other kinds of grains, fruits, and vegetables (both being largely perishable), the part of the government is limited. Due to this, MSPs are rendered useless as both price alerts and buffers against the attitudes of the larger agricultural community.

Lack of cold storage infrastructure: India's current cold storage capacity at 25 MT is barely sufficient for 10% of fruit and vegetables produced in the country [10]. Lack of collateral management options: Collateral management refers to the financing of agricultural goods stored at warehouses and is estimated to be a Rs 3,500 CR opportunity by agriculture industry sources.

Too numerous interposers, information asymmetry: The above-mentioned problems have led to the conformation of long marketing channels, with multiple interposers, adding to the straits of the directors of perishable husbandry goods. These interposers have led to a cost affectation of 250(over the cost of products) and have aggravated the being information asymmetries in husbandry, especially for non-MSP crops.

LIMITATION OF EXISTING SYSTEM

There are the following challenges involved in the existing system.

1. **Inefficiency:** The process of registering and transporting products can be slow and resource

intensive as physical documents and visits are required to the office.

- II. **Lack Of transparency:** traditional systems can be opaque and difficult to contact making it difficult for farmers to contact.
- III. **High Risk of fraud:** In an offline system there are high chances of fraud from the transporter.
- IV. **Inflated cost:** since all process are offline and no one is there to keep control on transactions, cost of transportation increased for farmers.

LITERATURE SURVEY

The use of IT system in the distribution of the courier service [1]

January 2016 25th international academic conference Paris

The distribution system in the logistics center focuses on the management of information streams that determine the efficacy of the corresponding physical distribution processes. The physical control of the flow of goods from the producer to the consumer is based on the technology of this leads

Transport Management [2]

Heriot-Watt University January 2007

Green issues and transport are very much at the top of the political agenda at the moment.

Companies are increasingly paying attention to the environmental costs of their actions and methods in which these environmental costs may be reduced, in addition to reducing financial expenses inside their businesses. As a result, transport operations are now being more closely scrutinized, with opportunities for improved transport efficiencies regularly being sought

Barriers To Change In Urban Freight Systems [3]

Civic freight conditioning is anticipated to grow as a result of increased urbanization e-commerce, and digitalization. This conditioning is necessary for diurnal life in civic areas but also induces unsustainable externalities like noise, emigration, and traffic. Sustainable development of civic freight systems(also called civic freight transportation systems would bear changes within these systems. Before changes can be enforced in the systems the walls of these changes must be understood and overcome.

Impact of Transportation on agriculture practices and production [4] Biomedical Journal of scientific and technical research 2021

This paper examines the transportation of agricultural practices and production in rural areas. In pastoral placing, transportation is an essential within the switch of goods from the ranch to the requests and such a company is right for near effectiveness in enhancing the livelihood openings of the original growers. As similar transport is one of the colourful essential rudiments in pastoral enhancement and it's long hauls important to understand its function in pastoral development and specifically the way it interacts with long other factors of development, to give the preceding structure of the pastoral fiscal system and society.

The impact of transportation on agriculture production in developing countries [5]

International journal of agriculture economics and rural development 2009

Transportation services Plays important role in the structure of food production and marketing and that easy transport to market can make all the difference in the level of rural income. From the analysis, it could be deduced that transportation will encourage farmers to work hard to increase production and add value to their products.

WORKING OF THE PROPOSED SYSTEM

The transport services companies in India are using logistics management practices to fulfil the promises made to them such as timely and faster because of increased relocation of people, rapid growth in the manufacturing, retail and fast-moving consumer goods. A cargo booking system (CBS) is a combination of all such service providers who provide reliable services in the transportation sector.

Nowadays, a system of transportation uses a manual system which needs to fill all records in a file from the system users to the technical writers. This work is handled by staff to fill all the transport reservation forms with handwriting. This will give difficult to find a file when the same customer comes to book transport again. Cargo Booking Software (CBS) is a system to effectively manage information about Cargo orders. It also manages the transportation system for other communities such as Shift Order, Track Cargo, etc.

Customers also can see types of transport that can be booked faster and choose the transport. Customers does not need to register many times because the profile customer has been saved into the database. This system focuses on a reservation form and the latest information about transport availability.

Farmers and traders can look for multiple transportation service providers by comparing their charges and estimated delivery dates to send their

products. This will be a faster process as compared to visiting multiple service providers and calling them for their services. This is hectic for farmers.

The cargo booking system provides a slot booking service for farmers. Farmers can book according to their quantity of products and service providers will be charged according to the volume and weight of the products. CBS provides all types of service providers who can transport agricultural goods by road, air, and sea. This system will be hosted by a private company or government to keep an eye on the overall process of the transportation and smooth working of the system.

There is one to one chat section in the cargo booking system where farmers and traders can chat one to one with service providers and if needed with the owner of the system which is a private company or the government. Users can register/complaint over here in the chat section. Government can analyze and review the service providers. This system will help the government to take decisions in the agriculture sector and the transportation of agricultural products.

A cargo booking system can be used as an e-commerce platform in future use where a farmer can sell their products directly to customers anywhere in the world.

THE CURRENT SYSTEM HAS THE FOLLOWING THINGS:

- Provide registration to service providers (rail/road/ship/air) with access to their space availability, in real-time. Service providers will be able to apply for registration through the system, however, approval should be a result of an inspection and the quality of data provided by the service provider.
- Provide self-registration options to traders—importers and exporters. No inspection/checks.
- Show the available space container-wise to all registered farmers and service providers.
- Farmers should be able to book the space by clicking and making payment for the space online.
- Online chat window between traders, farmers, and logistics service provider
- Link to the payment gateway.

RESULT AND DISCUSSION

This system will try to reduce problems of existing systems and help farmers to transport their product easily and efficiently.

Cargo booking system projects will eventually save time, money, and effort as multiple companies can use and compare a multiple companies on a single platform. As a result, comparing prices from various companies

will save your time and efforts. There will be no food waste, and the supply chain will continue to operate normally. This will help to farmers to increase their profit and hence productivity. In the future, multiple transport and courier companies can be partner with CBS to provide their services at low cost which will help companies to grow and farmers can transport their products in easy way without hesitation.



Login page

This is login page where farmers can login to check availability of the slot on the system and for further process



Slot booking page

This is a slot booking page where farmers and traders can book their slots according to quantity and volume of their cargo



Registration page

If farmers and traders are new to the system they can simply access to the system by registering themselves by using email id and mobile number.



Registration form

In registration form sender or receiver needs to fill out the form regarding sender and receiver detail information required for transportation.



Chatting page

This is one to one chat system where customers can chat with the service provider.

CONCLUSION:

The "Cargo Booking System" application is designed very well to transport agricultural and related products. The application will be used to transport cargo from one place to another. Here different transport companies are available on a single platform. Farmers can choose their transport company according to their requirements and book slot easily. The system contains one-to-one chats with different transport companies. It also includes tracking and an easy payment gateway. The application is user-friendly. Which will reduce the number of fraud cases done with farmers.

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Cargo Booking And Transportation System

(Review Paper)

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ABSTRACT:

The web application Cargo Booking Software (CBS) is accessible online. The management of customer goods, producer and seller input, (Admin) logins, and customer logins for various services is handled by cargo booking software. Customers will be able to monitor the goods they are transporting because of this portal. Customers can track their products on this website and reserve a slot based on the quantity of the item. Producer will enter the weight and other details of their cargo as they are transported through this system. The administrator can view the process and has full control over the system. The website will offer a variety of transportation service provided. The cargo industry is rapidly evolving, with increasing demands for efficient and reliable cargo transportation services. One of the critical components of this industry is the cargo booking system, which plays a crucial role in the supply chain management of various businesses. This paper presents a review of the cargo booking systems, focusing on the challenges and opportunities that exist in this sector. The paper provides an overview of the key components of a cargo booking system, including the booking process, tracking, and invoicing. The review also discusses the challenges that exist in the cargo booking system, such as the lack of standardization, communication barriers, and data security issues. Additionally, the paper explores the emerging opportunities in this sector, such as the use of blockchain technology, AI and machine learning, and IoT-based solutions. The review concludes with

recommendations for the future development of cargo booking systems, emphasizing the need for increased collaboration among stakeholders and the adoption of innovative technologies to address the challenges and seize the opportunities in this sector.

Keywords: *Cargo booking system, Transportation, customers*

INTRODUCTION:

The cargo industry has been a vital component of the global economy for decades, enabling the transportation of goods across the world. The industry has undergone significant changes over the years, driven by advances in technology and changes in consumer behaviour. One of the critical aspects of the cargo industry is the cargo booking system, which enables shippers to book cargo transportation services from carriers. The cargo booking system plays a crucial role in supply chain management, ensuring that goods are delivered on time, and the supply chain operates smoothly.

In recent years, there has been a growing need for efficient and reliable cargo transportation services, leading to an increase in demand for cargo booking systems. As a result, there has been significant innovation in this sector, with the development of advanced technologies such as AI, blockchain, and IoT. However, there are still significant challenges that exist in the cargo booking system, such as the lack of

standardization, communication barriers, and data security issues.

In this review paper, we aim to provide an overview of the cargo booking system, including its key components, challenges, and emerging opportunities. We begin by discussing the basics of the cargo booking system, including the booking process, tracking, and invoicing. We then move on to discuss the challenges that exist in this sector, such as the lack of standardization and communication barriers. Next, we explore the emerging opportunities in the cargo booking system, such as the use of blockchain technology, AI and machine learning, and IoT-based solutions. Finally, we provide recommendations for the future development of cargo booking systems, emphasizing the need for increased collaboration among stakeholders and the adoption of innovative technologies to address the challenges and seize the opportunities in this sector.

BACKGROUND

The cargo industry is a critical component of the global economy, enabling the transportation of goods across the world. The industry encompasses a wide range of businesses, including shippers, carriers, freight forwarders, and logistics providers. One of the essential elements of the cargo industry is the cargo booking system, which enables shippers to book cargo transportation services from carriers.

The cargo booking system plays a crucial role in supply chain management, ensuring that goods are delivered on time, and the supply chain operates smoothly. The cargo booking system includes various components, such as the booking process, tracking, and invoicing. The booking process involves the creation of a booking request, which includes details such as the type of cargo, the destination, and the delivery date. Once the booking request is created, it is sent to the carrier for acceptance. Once the carrier accepts the booking request, the cargo is transported, and the tracking and invoicing process begins.

Despite the importance of the cargo booking system, there are significant challenges that exist in this sector. One of the critical challenges is the lack of standardization, which makes it difficult for different stakeholders to work together effectively. Additionally, communication barriers between shippers, carriers, and other stakeholders can lead to delays and inefficiencies in the supply chain. Furthermore, data security issues, such as the risk of cyber-attacks and data breaches, pose significant risks to the cargo booking system.

To address these challenges, there have been significant innovations in the cargo booking system, such as the use

of advanced technologies like blockchain, AI, and IoT. These technologies have the potential to increase efficiency, reduce costs, and enhance security in the cargo booking system. However, there is still much work to be done to fully realize the potential of these technologies and address the challenges that exist in the cargo booking system.

LIMITATION OF EXISTING SYSTEM

There are the following challenges involved in the existing system.

- I. **Inefficiency:** The process of registering and transporting products can be slow and resource intensive as physical documents and visits are required to the office.
- II. **Lack Of transparency:** traditional systems can be opaque and difficult to contact making it difficult for farmers to contact.
- III. **High Risk of fraud:** In an offline system there are high chances of fraud from the transporter.
- IV. **Inflated cost:** since all process are offline and no one is there to keep control on transactions, cost of transportation increased for farmers.

Literature Review

"A Literature Review, Container Shipping Supply Chain: Planning Problems and Research Opportunities" [2] (Dong-Ping Song)

This paper presents a logistics-based overview of the container shipping supply chain (CSSC), which comprises various value-adding segments such as freight logistics, container logistics, vessel logistics, port/terminal logistics, and inland transport logistics. The objective is to identify the primary planning challenges and research opportunities within each logistics segment and to promote further studies in the field. Additionally, the paper discusses two significant challenges facing the CSSC, namely digitalization and decarbonization, and emphasizes the inefficiency of the system caused by its fragmentation. To address this issue, the paper proposes a digitalization pathway that involves the implementation of digital technologies in the business processes of each logistics segment and encourages stakeholders to change their behaviors and relationships. Furthermore, the paper acknowledges that decarbonization in the shipping industry may involve diverse pathways that rely on different fuel/energy systems for ships and ports, which present additional

research and application opportunities in the complex CSSC environment.

The container shipping supply chain (CSSC) is a vital global supply chain that moves goods from one country to another. It involves different modes of transportation such as vessels, trains, and trucks, as well as various handling equipment and facilities like terminals, cranes, trailers, wagons, lifters, and depots. Over 70% of world trade by value is carried by the seaborne transport mode, and over 50% of world seaborne trade by value is carried by container ships, making the CSSC an essential component of global trade.

The CSSC comprises several key stakeholders, including shippers, freight forwarders, shipping lines, port/terminal operators, inland carriers, and intermodal terminal/depot operators. These stakeholders are responsible for different operations in the five value-adding segments of the CSSC, including shipment arrangement, container management, seaborne transport, port and terminal management, and inland transport and depot management.

Although several studies have reviewed individual segments of CSSC, few have comprehensively covered the entire supply chain. This paper provides an overview of the logistics management problems and research opportunities in CSSC and addresses the challenges of digitalization and decarbonization in the industry. The article also highlights the extreme fragmentation of the CSSC, which causes inefficiencies in operations. Overall, the CSSC plays a significant role in global trade, and there is a need for more research to improve its efficiency, especially in the areas of digitalization and decarbonization.

This paper makes several contributions to the existing literature. Firstly, it provides a comprehensive overview of the container shipping supply chain (CSSC) and its five logistics segments. The paper highlights the main operations management problems and identifies research opportunities for each of the logistics segments. Secondly, the paper raises awareness of the fragmentation of CSSC, which causes issues such as schedule unreliability, port congestion, no-show, and rollover. Thirdly, the paper discusses the challenge of digitalization in CSSC and proposes a pathway to achieve it by using digital technologies in various business processes and changing the behaviours and relationships of the stakeholders in the supply chain. Lastly, the paper discusses the challenge of decarbonization in CSSC and argues that it will have a significant impact on the shipping industry in the next two decades. The paper suggests that shipping decarbonization will follow diverse pathways with different fuel/energy systems for ships and ports. Overall, the paper provides insights into the container shipping supply chain and identifies the main challenges that the industry is currently facing.

"The use of IT system in the distribution of the courier service" [1]

January 2016 25th international academic conference Paris

Businesses must employ current information systems to perform effectively in the global economy. It is made up of aspects such as people, processes, information, and data resources, and it is intended to meet the information demands of the company and make sound choices. Data is processed using computer systems.

The Use of DRP system in distribution of courier services: The basis for arranging and simplifying the flow of completed products to the distribution network is Distribution Requirements Planning (DRP). It operates in a courier - service distribution system by gauging demand for the goods and aggregating it into a single estimate. There are two concurrent adjustment processes: adjusting plans to market needs and considering distribution restrictions. An inventory plan in the DRP system is intended to represent the future time adjustment of product delivery to particular cells. Demand predictions that are regularly updated and confirmed, prepared for short time periods such as days or weeks, and timely deliveries are critical components of DRP. DRP employs operational rules to establish the temporary demand schedule, the existence of gross needs resulting from the demand, the availability of net requirements for open orders, and additional orders in the event of actual need. DRP is a popular and versatile way of assessing the optimal level of inventory in a distribution logistics system, which is typically used in conjunction with an ERP system. It enables more accurate demand forecasting and the utilisation of data to determine sales and distribution requirements. The DRP system is used to estimate demand for each stock keeping unit (SKU) and streamlines the procurement and maintenance of distribution inventory. It is distinguished by the fact that demand is independent on the network's lowest level and set on the basis of forecast, with planned demand computed at higher levels. The DRP system offers advantages such as increased customer service, lower stock exhaustion, stock levels, transportation costs, and improved distribution centres. It also has a marketing module that allows for the building of databases and the transfer of pertinent information.

The use of CRM in customer service : CRM solutions are used to manage customer connections and keep customers loyal. They are very young, having grown from less advanced systems targeted primarily at organising consumer information and constructing computer databases. CRM software is classified into three types: operational, analytical, and communication. Operational CRM directly supports client-related operations such as sales, marketing, and after-sales care. Analytical CRM enables the processing of analytical data and converts it into the information required to assist decision-making. The system stores, processes, and analyses client data, providing reports based on the information gathered. CRM is a communication system

that enables direct contact with customers through both traditional and electronic communication channels. It is advanced and allows the integration of many activities related to customer service such as sales, marketing, service and after-sales service. In many cases, CRM systems include scheduling and communication management, telemarketing, and integration with ERP systems. There are many modules for integration, data synchronization, interoperability between portable devices, e-commerce and call center services, telephone customer service, and more. CRM frameworks are coordinated frameworks that assist with making overhauls and upgrades in regions like online business and ERP frameworks. An integrated customer service system can be achieved through the efficient use of CRM in an organization by using information technology. CRM is a set of applications that work together to support an organization's CRM strategy. It is becoming more and more popular in Poland and other countries. In the current activity of logistics centre's, supporting areas where customer service may build a competitive advantage through the use of information systems is a daily practice. The need to improve the flow of information also determines the level of logistics customer service and the efficiency of the distribution process.

"Design of Logistics Information Management System Based on Information Technology"[3]

As society advances, manual operations are gradually being replaced by network technology, resulting in intelligent management that saves time and effort and ensures the efficient operation of enterprises. Logistics management information technology is becoming increasingly important, and logistics enterprises must become proficient in its application to promote sustainable development. The arrival of technology conferences has changed society, as people rely heavily on smartphones and computers, and industries are increasingly dependent on information technology. As freight transportation is a vital part of social and economic development, logistics enterprises must adopt scientific management methods and continuously strive for progress. This article explores the role of information technology in logistics information management and introduces design requirements for a logistics information management system. It analyzes the problems of logistics management informatization and concludes that logistics enterprises must pay more attention to logistics management informatization, improve relevant standards and levels of information technology, and strengthen supervision and management of information construction to achieve high-quality information technology.

China's growing economy has led to an increase in the circulation of production materials and products,

alongside the expansion of domestic online shopping and express delivery industries. Consequently, logistics and transportation businesses are expanding rapidly, making the logistics industry more crucial than ever before. Improving the management and optimization of logistics is essential to reduce costs and meet customer demands. This requires effective data collection, storage, and dissemination to achieve centralized logistics information management. The logistics management platform is a software system that combines tangible and intangible management resources to efficiently use internal and external resources and achieve organizational goals. It allows for personalized modules for each object in the logistics chain, promoting upstream and downstream collaboration. Logistics enterprises must continuously adapt to changing business models and meet customer needs while reducing costs and increasing speed. Informatization of logistics management is necessary for enterprises to stay competitive and improve logistics management information levels. This article highlights the importance of enterprise logistics management information and proposes innovative ways to improve its level.

Our System

A cargo booking system is a software application that facilitates the booking and management of cargo shipments. It is used by freight forwarders, shipping lines, and other logistics service providers to manage their operations efficiently. With the growing demand for e-commerce and global trade, the cargo booking system has become an essential tool in the logistics industry.

Traditionally, cargo booking was a manual process that involved a lot of paperwork, phone calls, and emails. This method was time-consuming and prone to errors, resulting in delays and inefficiencies in the supply chain. The advent of technology has revolutionized the cargo booking process, making it faster, more accurate, and more convenient.

The cargo booking system is a web-based application that can be accessed from any device with an internet connection. It allows shippers to book, track, and manage their shipments from a single platform. The system provides real-time visibility of the cargo, enabling stakeholders to monitor the status of the shipment at every stage of the journey.

The cargo booking system streamlines the entire booking process, from quotation to invoicing. It allows shippers to compare rates, select carriers, and book shipments in a matter of minutes. The system generates all the necessary documentation, such as bills of lading,

commercial invoices, and packing lists, reducing the risk of errors and delays.

One of the key features of the cargo booking system is the chat system. The chat system allows shippers to communicate with carriers, freight forwarders, and other stakeholders in real-time. It eliminates the need for phone calls and emails, which can be time-consuming and inefficient. With the chat system, shippers can get instant updates on their shipments, ask questions, and resolve issues quickly.

The cargo booking system also provides analytics and reporting tools that enable stakeholders to track and analyze their performance. The system generates reports on key metrics such as on-time delivery, transit time, and cost per shipment. These insights help stakeholders identify areas for improvement and make data-driven decisions.

THE CURRENT SYSTEM HAS THE FOLLOWING THINGS:

- Provide registration to service providers (rail/road/ship/air) with access to their space availability, in real-time. Service providers will be able to apply for registration through the system, however, approval should be a result of an inspection and the quality of data provided by the service provider.
- Provide self-registration options to traders—importers and exporters. No inspection/checks.
- Show the available space container-wise to all registered farmers and service providers.
- farmers should be able to book the space by clicking and making payment for the space online.
- Online chat window between traders, farmers, and logistics service provider
- Link to the payment gateway.

CONCLUSION:

The cargo booking system is a critical component of the logistics industry, and it has undergone significant changes and improvements with the advancements in technology. This review paper examined various aspects of the cargo booking system, including its definition, key features, benefits, and challenges. We also discussed some of the existing systems and their limitations, as well as the potential solutions and innovations that can enhance the effectiveness and efficiency of the system. Overall, the cargo booking system plays a crucial role in streamlining the logistics operations, reducing costs, improving customer satisfaction, and promoting sustainable development. However, there is still a need for further research and development to address the

remaining challenges and fully exploit the potential of this system in the logistics industry.

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CERTIFICATES:





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