

Estimation of Fare and Commutation Time for Logistics Services Using Java

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Abstract: *The transportation of goods from one location to another has been day to day practise among business organisations who perform import and export of goods. However, the estimation of freight charges and its corresponding duration from the pickup destination and until the drop location has been a complicated process for new budding importers and exporters. So, in order to come up with solutions for the estimation of freight charges and the expected shipping duration for cargo shipping through road transport, we have come up with a solution to freight calculator application that estimates the commutation charges and its corresponding duration for logistics services using java and xml in the android studio tool. The project implements the android application for a freight calculator model, with the front-end user interface using XML code, and the logical back-end code implementation uses JAVA.*

Keywords: Freight Calculator, Commutation Charges, Cargo Shipping, Shipping Duration, JAVA, XML

I. INTRODUCTION

The aim of the Project is to create an application that should calculate the freight fare for transportation of goods from one location to another. It is an application to simplify the task of freight calculation for commutation of goods from one location to another, For all types of business organizations and proprietors. The System is user friendly with clean and simple user interface, and reduces the mistakes and the task of users to calculate their freight charges for goods transportation. It provides an overview of the capital required by business organizations and small proprietors to calculate their shipping charges between two locations via road transport within the country. The application estimates the average shipping charges for the given details of the goods, based on the historical statistics and market information for shipping cost, speed of the shipping vehicle, and the duration expected with the given weight and the distance.

II. RELATED WORKS

Cheng Yao-rong et al proposed that, In order to figure out the cost of intermodal transport correctly and reasonably, firstly the meaning of intermodal transport has been introduced, secondly the forming mechanism of intermodal cost have been illustrated, and the construction and characteristics of intermodal cost have been analyzed carefully based on the mechanism, thirdly the mathematics modal to count the cost of intermodal transport is set up. The cost of intermodal transport are composed of the design cost, coordinate cost, network cost, operation cost, random cost and exclusive cost. Zoltan Bokarsays that Logistics costing provides useful information for decision makers when planning or evaluating logistics services and functions. The traditional procedures applied for calculating logistics costs are, however, not always able to deliver the requested information due to the use of arbitrary allocation techniques. This paper introduces a calculation approach for logistics with more exact cost allocations based on the identified performance flows or relations. The differences caused by the various roles of logistics in companies are also considered. The model can establish an improved form of the decision support information systems in logistics.

Milos Poliak proposes that, The shipping cost is not the same for each freight transport unit, as a lot of factors influence the cost of transport. An important aspect, apart from cost inputs, which decides how high the cost of shipping is the destination where the shipment is made. The aim of this contribution is to point out the necessity of setting the cost of transport based on a dynamic cost calculation, because many carriers do not calculate the costs and the shipping price is determined by competition. The aim of the paper is also to verify the hypothesis that it is economically incorrect to use one unit price for all transports carried out by the carrier. In the analytical part, the contribution will present an

economically correct procedure for compiling the transport price. In the next part the contribution verifies the established hypothesis on specific model transports.

III. EXISTING SYSTEM

The cost of intermodal transport is composed of the design cost, coordinate cost, network cost, operation cost, random cost and exclusive cost. The design cost, coordinate cost, exclusive cost and random cost can be got based on the historical statistics and market information. The frequency of transport is proportional to the volume of load units and inversely proportional to the effective capacity of the convey vehicle, the network cost can be allocated according to the actual occupancy amount and the usage frequency of the intermodal fixed infrastructure. Calculation approach for logistics with more exact cost allocations based on the identified performance flows or relations. The differences caused by the various roles of logistics in companies are also considered.

IV. PROPOSED SYSTEM

Our project which is a Freight calculator android application which uses android studio to build the application using java and Xml. The project is intended to solve the problems of new importers to estimate their freight charges to import goods from their source location of the goods to their destination location. User just needs to enter the relevant information to the specific questions from all required fields such as dimensions, weight of the goods, along with the distance and shipping terms, based on which, the goods need to be transported across two different locations. This makes the process of shipping of goods easy, with easy estimation of fare charges of commutation of the goods from 2 different location. Hence, making the process of capital allocation and other price estimations for the organization's progress along with the knowledge of the organization's cargo shipping costs.

V. IMPLEMENTATION

5.1 Input Module

This is the main module of the program. The user enters Details of the goods that needs to be shipped from one location to another. In this module according to their appropriate product details. The fields that the user can enter are Dimensions of the Goods, Type of shipping, Distance between the pickup and drop locations, Container load type, and Gross Weight of the goods that has to be transported. The dimensions of the goods are used to calculate the total volume of the goods, while the shipping terms refers to standard shipping with regular shipping duration, while express refers to faster delivery of the goods to the destination. The Load of the user's goods over the Container is also used to estimate the price. Also, the weight of the goods and distance of shipping between two destinations is also inputted by the user in the input module. This module is mostly based on collecting the appropriate and required information to further proceed with the calculation of the cost and duration for shipping goods. When the user clicks the calculate button, the backend logic function for freight cost estimation is triggered, and the user is forwarded to the result page.

5.2 Price Estimation Module

This module performs the task of calculation of Duration and total price for the transportation of goods, according to the user inputs. The input module collects the data entered by the user and calls the java function to performs calculations in order to estimate the freight charges and the corresponding time. In the price estimation module, the cost is calculated based on the volume of the goods, and its weight along with the distance between the two pickup destination and the end destination. The Price estimation also takes the shipping type and the shipping terms and container load into account. The express type shipping adds up the price with faster delivery, whereas, a standard delivery is the regular type shipping. The java function for the price and time estimation module calculates for price and time based on different levels of weight and distances defined in the function. The Time is represented in the format of the dates between pickup and drop of the goods, along with the number of expected days expected for the delivery of the goods. So, the price and time estimation module use the Java function defined in our program, that helps the application to collect the input details and display the expected result, based on calculations with the regular shipping charges and expected time duration.

VI. CONCLUSION

The freight calculation plays a major role in the calculation of capital required for the shipment of the goods from one location to another, across the country. This also has a major effect over the Time calculations influencing the production time. So, the application makes this task easier on freight calculation and its duration from one location to another. This is expected to provide a great estimation calculation and proper time and duration management for business organizations and individuals starting up with new businesses involving import and export of goods.

FUTURE WORK

The future of business organizations and individual enthusiasts is highly dependent on capital management and proper estimation of cash flow in the organization. The calculation of freight charges becomes highly important in this case, as it plays a major role in the proper management of capital. The future aim of this project is to add more price evaluation concepts for transport across countries via sea, road and air shipping. The app would also add a google maps to make it simpler for the user to calculate the distance between the two location and hence the price and duration for transportation of goods.

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