

Centralized Data for Transport Automation System using Android Studio

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Abstract – Mobile applications are software applications which are designed to run on mobile smart phones, & tablets, and other mobile electronic devices, during this generation of rapid technological advances, these applications became one altogether the predominant tools we use daily both in our personal furthermore as professional lives. These software applications play key roles in facilitating many choices that are important in our today's society in business, communication, entertainment, education, medical, finance, travel, social, transportation and utilities. Transportation concerns the movement of the products from a source such as a plant, factory or workshop and destinations such as warehouse, retail shops etc. To manage the freight details conveniently and more efficiently, the Roadline's application is developed. Application collects lorry data and stores in database. The Road line application is more secure than traditional methods of documentation. Beyond this the admin can also verify the freight details by himself and also track the freight from source to destination. The collected data is stored in firebase and the reports are generated in pdf format. The data is often reverberated as misinformation by the employees manually but as a software application the data is stored more accurately.

Key Words: Android, Application, Software, Technology, Transportation, Freight, Android Studio

1. INTRODUCTION

The roadway network is the backbone of infrastructure for freights. Handles data for transportation with more efficiency and less redundancy through automation and electronic collaboration – from order entry to settlement. Increases Business productivity. Centralized data management rate with a common platform is simple to integrate, extend, deploy, and access.[3] Deliver flexible reporting to assess all freight costs. Reduce unplanned overcharges and eliminate invoice errors by settling costs accurately and automating accrual generation, auditing, and charge .The Application helps in centralizing and monitoring the fleet data using the Integrated Development Environment (android studio) and Google Firebase as DataBase [2]

Transportation has become the trending revolution in the goods transport industry. This is due to the fact that unlike before, the need for safe, reliable, and fast delivery of

goods have gained prime importance. A lot of manpower is required to keep the records in the registers and repetition of work is done. The use of ink and paper to maintain the records is reduced through our proposed system. Brokers, third party, logistics, and transportation service providers need to provide these services to the customers and at the same time maintain cost efficiency too.

There are chances of duplication of data increases and there is a probability of the documentation of Lorry receipt gone missing/misplaced or turned, but this information can be generated and manipulated by Goods Loading Company /trader in bulk and the track of such data is reckless. Beyond this, the administrator can also act as a normal user and verify a lorry by himself. He has authority to track the source to the destination of lorry. This system calculates fare depending on two categories travel distance and tons(Weight) and the fare would be generated depending on advanced payment and charges of fuel. It will be able to authenticate users & can add and view the information on Transport categories and also available route depending on the customers demands. Mobile applications are software applications that are designed to run on smart phones, tablets, and other mobile electronic devices.

1.1 PROBLEM DEFINATION

The main reason behind the development of mobile app is the ability to offer real-time information of goods, employee productivity, vehicle status and more during transportation. The transport companies should get equipped mordern techniques and custom features, mobile apps can improve the data processing and stability in industry. In today's day to day life some companies are using registers to keep and track their recor. A lot of manpower is required to keep the records in the registers and repetition of work is done.

1.2 LITERATURE SURVEY

The chances of duplication of data knowledge increased and there's a probability of the documentation of Lorry receipt gone missing/misplaced or torned. But this information is generated and manipulated by Goods Loading company /trader in bulk and also the track of such data is reckless, so here proposed a "Centralized data for transport automation system using android studio"

Transport logistics industry are ready for adopting robust custom mobile solutions. From start to finish point of delivery, customers are quick to integrate technology for tracking their shipments.

2. PROPOSED METHODOLOGY

The proposed framework is an online application which brought together all fundamental information and allow clients to get data easily. The framework permits to track and deal with all data through all around characterized interfaces, require less manpower and less time for maintaining the records of the transportation company. In our proposed system everything is digitalized and As everything is automated in this system now user need minimal clerical work involved to manage transport work.

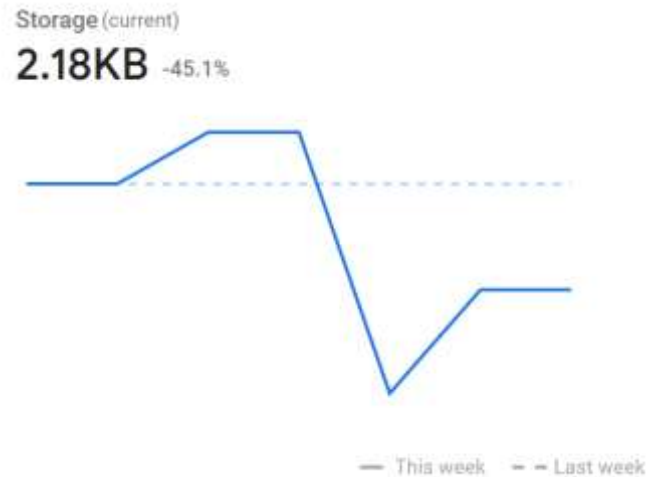
“Centralized data for transport automation system using android studio”have following features:

- Costs for Goods carriers
- Revenues to Goods carriers
- Costs to Goods shippers
- Goods volumes
- Goods operations
- Goods vehicle fuel use or emissions
- Report generation

3. SYSTEM ARCHITECTURE AND FUNCTIONING

The application developed is capable on running on minimum API 19 level that is it will support 97.3 % android devices. Application consist of mainly two functional modules. The modules are defined as the user module and admin module. User module will be handled by the supervisors to fill the data as per the lorry details and submit the data Then the Submitted data is collected on Servers and stored in database. Admin module will be handled by owner of the company to monitor the management process as well as generating real time report. For storing

Data google firebase is used , as the data gets stored in firebase it generates a unique key in which the initial letter is referred to the month of submission . It will also provide the daily data analytics which refers to saving and retrieving the data.



Application collects the information related to freight. The Goods details are collected from loading company to destination (unloading company) and directed to transport company. After the details are completed filling the payment mode is defined in order to describe the cheque number or NEFT draft number. For each Freight there is a unique Shipment ID to track and retrieve the specific freight details easily. After successfull data submission report is generated.

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241KB

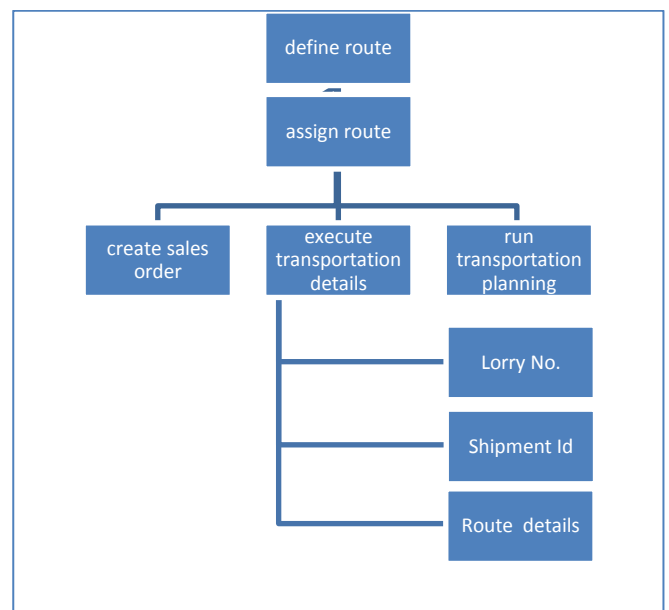
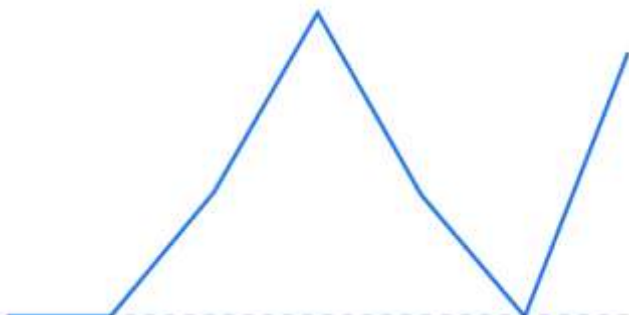


Fig -1: System Architecture

4. CONCLUSION

Using mobile application as a means of service management, transport companies can not only achieve substantial gains but also sophisticate their processes around much ease and convenience. With real-time GPS features of mobile app, fleet owners are enabled to use the GPS features. Having a mobile app is an interactive, fast and easy-to-use way to enable tracking, automation and real-time management of logistics processes such as dispatch, record storage, real time report generation and more .

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