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Web-Based Agricultural Machinery Rental Business Management System

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Abstract: *Nowadays there are many online services which are on trend that give much benefit to user. This application named as tractor hiring application for farmers is a rental service in which the farmer arrives to request a hire of a rental unit. It is more convenient than carrying the cost of owning and maintaining the unit. There are several problems occur on farmer like they are not able to hire a tractor and equipment of agriculture for farming in nominal amount or they do not find tractor easily. In another case, sometimes farmers are unaware about the price of the tractor and other agricultural equipment; such that tractor owner misguide the farmers very easily and cheat them by taking extra money. The solution for solving such various problems occur on farmers regarding to agriculture can be overcome using this application. Therefore with this new method the process will me more efficient and safety of hiring tractor as well as equipment is secure. It is also the best way to increase the quality of agriculture management, productivity and can reduce the time constraints for farmers.*

Keywords: online services

I. INTRODUCTION

In this application, farmer will hire tractors based on their needs and other mechanization at a normal price. In this application, we will choose for the demand of farmer based on his demand we will recommend hire tractor with other mechanizations. In this, we will use pin code to locate nearby tractors based on farmer's requirements. This application will provide full detail about the tractor so that the farmer can choose a type of tractor he need based on his requirements and can easily get familiar with it. To register the farmer, only mobile no and name will be required, after a successful registration the farmer will receive a pin for future use. In this application farmer just need to register himself and then he'll able to book tractor at the appropriate price. User only need to select the number of hours for renting, the application will automatically calculate the renting price according to the total time selected by the farmer. Cloud computing is the delivery of computing and storage capacity as a service to a heterogeneous community of end-recipients. The name comes from the use of cloud-shaped symbols an abstraction for the complex infrastructure it contains in system diagrams. Cloud computing entrusts services with a user data, software and computation over a network.

II. PROBLEM STATEMENT

The goal of cloud computing is to apply traditional supercomputing, or high- performance computing power, normally used by military and research facilities, to perform tens of trillions of computations per second, in consumer-oriented applications such as financial portfolios, to deliver personalized information, to provide data storage or to power large, immersive online computer games

Using Infrastructure as a Service, users rent use of servers (as many as needed during the rental period) provided by one or more cloud providers. Using Platform as a Service, users rent use of servers and the system software to use in them. Using Software as a Service, users also rent application software and databases. The cloud providers manage the infrastructure and platforms on which the applications run.

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III. PURPOSE OF PROJECT

The scope of an online agriculture rental management system encompasses various aspects of the agricultural rental process, including equipment, land, and related services.

- Equipment Rental: The system should facilitate the rental of various types of agricultural equipment, such as tractors, harvesters, plows, seeders, sprayers, and irrigation systems. It should support the listing of equipment availability, rental rates, specifications, and maintenance records.
- Land Rental: It should also support the rental of agricultural land for farming purposes. This includes features for listing available land parcels, specifying rental terms (e.g., duration, acreage, usage restrictions), and facilitating agreements between landowners and renters.
- User Management: The system should have user management capabilities to allow farmers, landowners, and possibly intermediaries (e.g., agricultural rental agencies) to register, create profiles, and manage their rental listings and transactions.
- Booking and Reservation: It should enable users to search for available equipment or land based on criteria such as location, type, and rental duration. Users should be able to book or reserve equipment/land online, with features for managing reservations and scheduling.
- Payment Processing: The system should support secure online payment processing for rental transactions, including options for rental fees, security deposits, and possibly insurance premiums. Integration with payment gateways and support for various payment methods.
- Documentation and Agreements: It should facilitate the creation and management of rental agreements and related documentation, ensuring legal compliance and clarity of terms for both parties involved.
- Support and Maintenance: The system should provide customer support services to assist users with inquiries, technical issues, and disputes related to the rental process.

IV. PROPOSED SYSTEM

This system is developed to solve the problems that usually happen when farmer want to rent a tractor for their agriculture purpose. In this all activities are done manually and have done on mobile technology. We are going to develop an application of tractor hiring system for farmers in which there are four main modules.

TOMCAT

Apache Tomcat (called "Tomcat" for short) is a free and open- source implementation of the Jakarta Servlet, Jakarta Expression Language, and Web Socket technologies. It provides a "pure Java " HTTP web server environment in which Java code can also run. Thus it is a Java web application server, although not a full JEE application server. Tomcat is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation, released under the Apache License 2.0 license.

Glassfish server:

Glass Fish is open-source Jakarta EE platform application server project started by Sun Microsystems, then sponsored by Oracle Corporation, and now living at the Eclipse Foundation and supported by Omni Fish, Fujitsu and Payara.[2] The supported version under Oracle was called Oracle Glass Fish Server. Glass Fish is free software and was initially dual-licensed under two free software licences: the Common Development and Distribution License (CDDL) and the GNU General Public License (GPL) with the Class path exception. After having been transferred to Eclipse, Glass Fish remained dual-licensed, but the CDDL license was replaced by the Eclipse Public License.

FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

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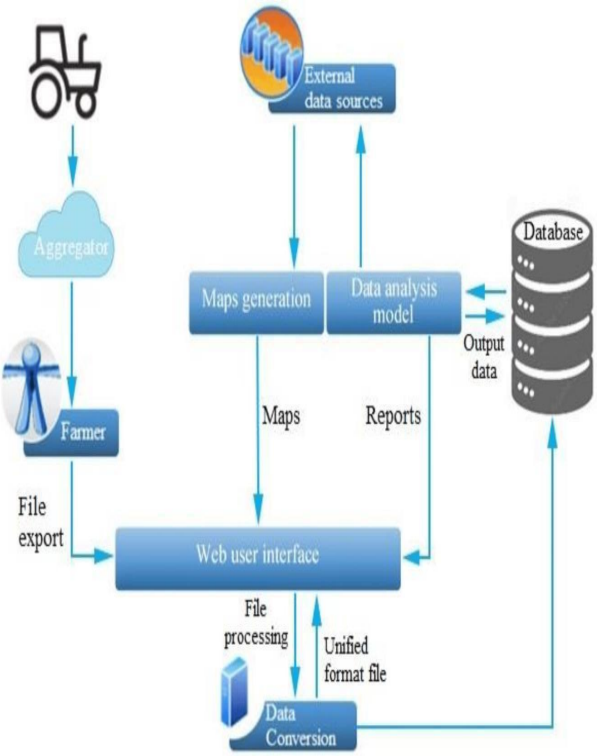
TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

ECONOMICAL FEASIBILITY

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

V. SYSTEM ARCHITECTURE



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