Forestry Management System

Project Objective

The Forestry Management System will ease and facilitate the work of various organizations that depend upon natural resources from forests for their work. Forestry management becomes important as more companies become engaged in forest related endeavours. This system can be hosted over the internet thereby enabling communication between forest plots and the different clients such as mills or other such raw material providers. The different modules of the Forestry Management System enable different functions ranging from maintenance of land records to management of inventories.

The system will store information on the land parcels owned, track historical changes in ownership and even maintain a digital database of their deeds. Modern laws require accountability for the exploitation for any natural resource in the forest and different laws and rights cover the mineral and timber resources. The system will have a database of these rights as it pertains to different parts of the landholding. The system can also pursue active functions such as email reminders to the appropriate management levels to indicate upcoming tax related or other actions. These are designed to make the arduous task of forestry management easier. The storage of historical information such as payments, legal documents, transaction slips, tax assessments will further facilitate the process of land valuation as and when it is required.

The system also helps track client needs and schedule deliveries accordingly. Yard space is limited and maintaining low inventories is key to lowering operating costs. The system being internet based will enable the easy passage of client side demands to the forestry business deep in the woods. Having the updated information about client demands and the current status of client inventory can enable the forestry business to plan deliveries such that no client experiences a shortage of raw material. Extra information such as warnings, suspensions can be passed on as well. The system will have information on the different types and weights of wood and can ensure that the right load is sent to the right client.

Existing System

The existing system depends upon the maintenance of various ledgers or excel sheets at each point of this supply chain. It is rife with inconsistencies between two comparable records. A supervisor who supervises the loading of many different loads may find it easier to update many records at once at a later time and this can lead to inaccuracies. Clients call the wooding station once their inventory has dwindled to schedule a delivery but wooding stations may find it difficult to suddenly accommodate new demands. The many land records are largely incomplete and contract records are

maintained independently leading to disagreements when contract settlements are made.

Proposed System

The proposed system will ensure that one operation including data entry and logging is completed as soon as the operation is completed, this helps greatly minimize inaccuracies due to human error. Clients do not have to worry about stoppage of work due to lack of material, with updated client inventory information made available to the forestry business deliveries can be scheduled before hand so as to meet projected demand. Historically accurate and complete land records helps avoid unnecessary problems with local law enforcement and helps for further sales, tax payments and land valuation. Both the client and the forestry business can peruse the same database and are assured that no one side will have independent control over the records and this enables amiable contract settlements.

Modules

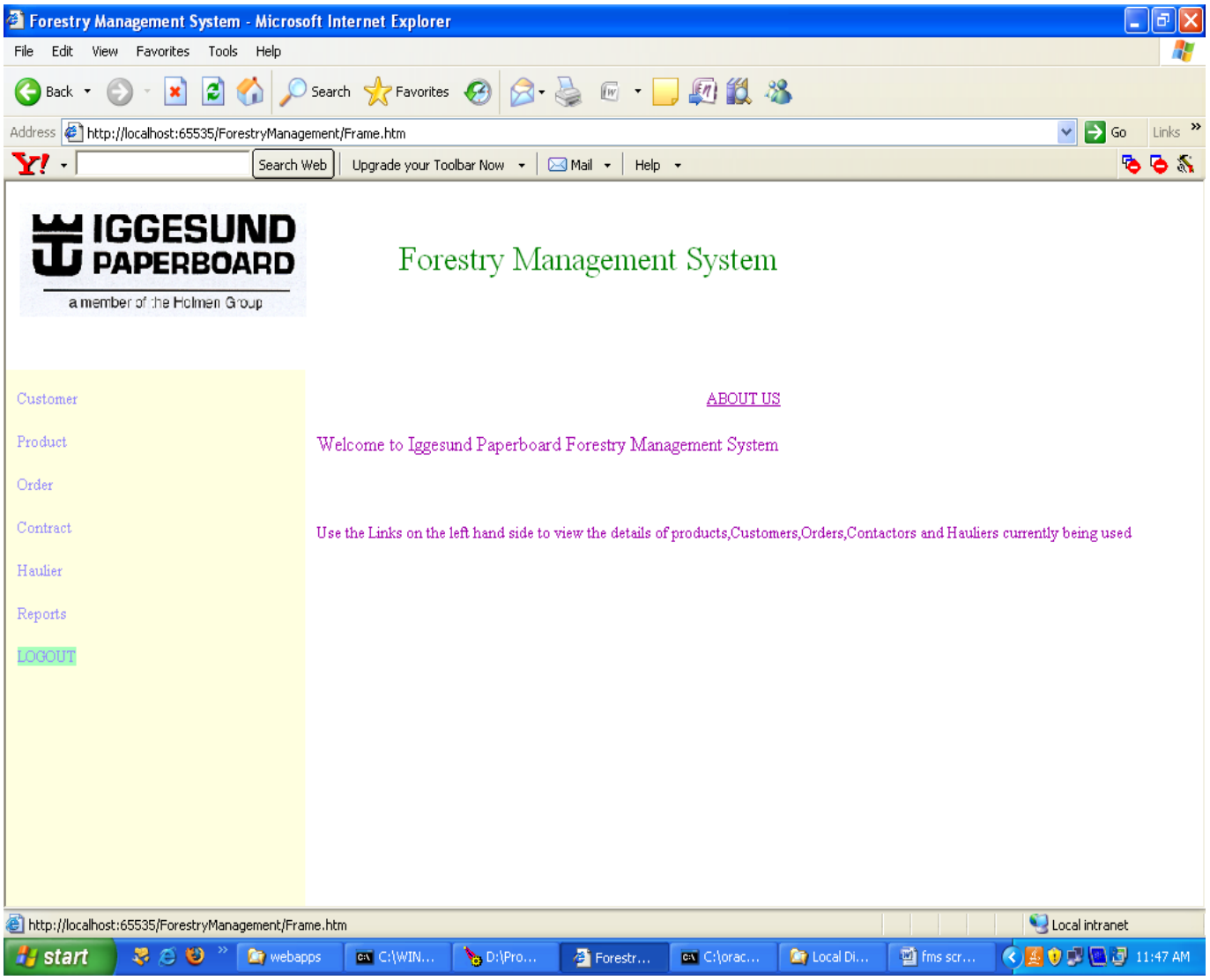
Land: This will store all the land records and the various rights assigned to all the resources in each of the land parcels. All reminders related to land related payments and other issues will be made here.

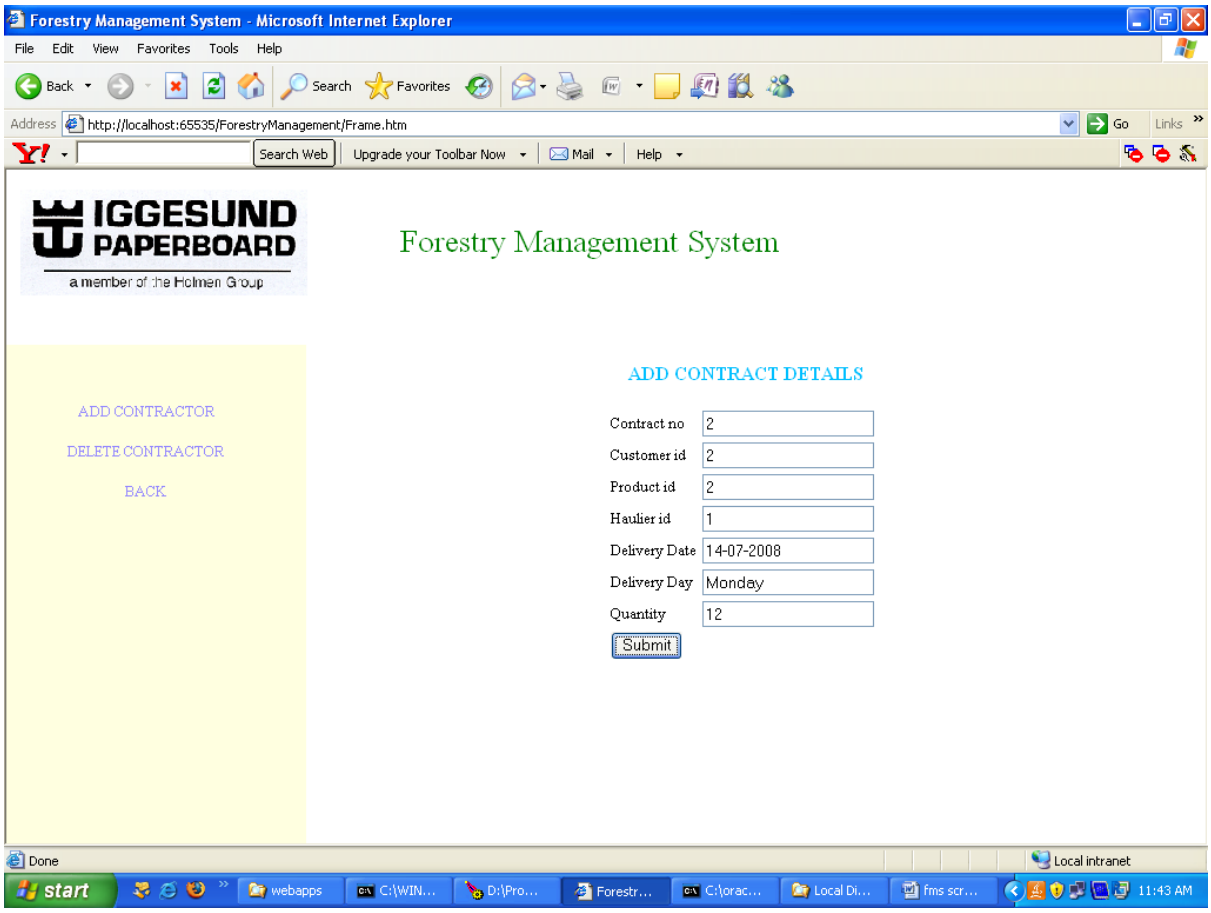
Client: Client accounts will be created by the Admin. Contracts will be stored under the client account and all contract related information can be accessed from the same. Clients will be able to continually update their inventory information and projected demand through this module.

Scheduler: The scheduler will take in information such as current inventory at the forestry business and the projected demand and inventory information at the client side. Using this information it will be able to schedule transport and assign the right load to the right client.

Admin: The admin will be able to assign secure logins to new clients. The admin CANNOT alter record information but can add new data after authentication. The admin module can view inventory and contract settlement data and will show the contract information for verification by the forestry business.

Forestry Management System Snapshots

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a member of the Holmen Group
Forestry Management System
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ADD CONTRACT DETAILS
Contract no 2
Customer id 2
Product id 2
Haulier id 1
Delivery Date 14-07-2008
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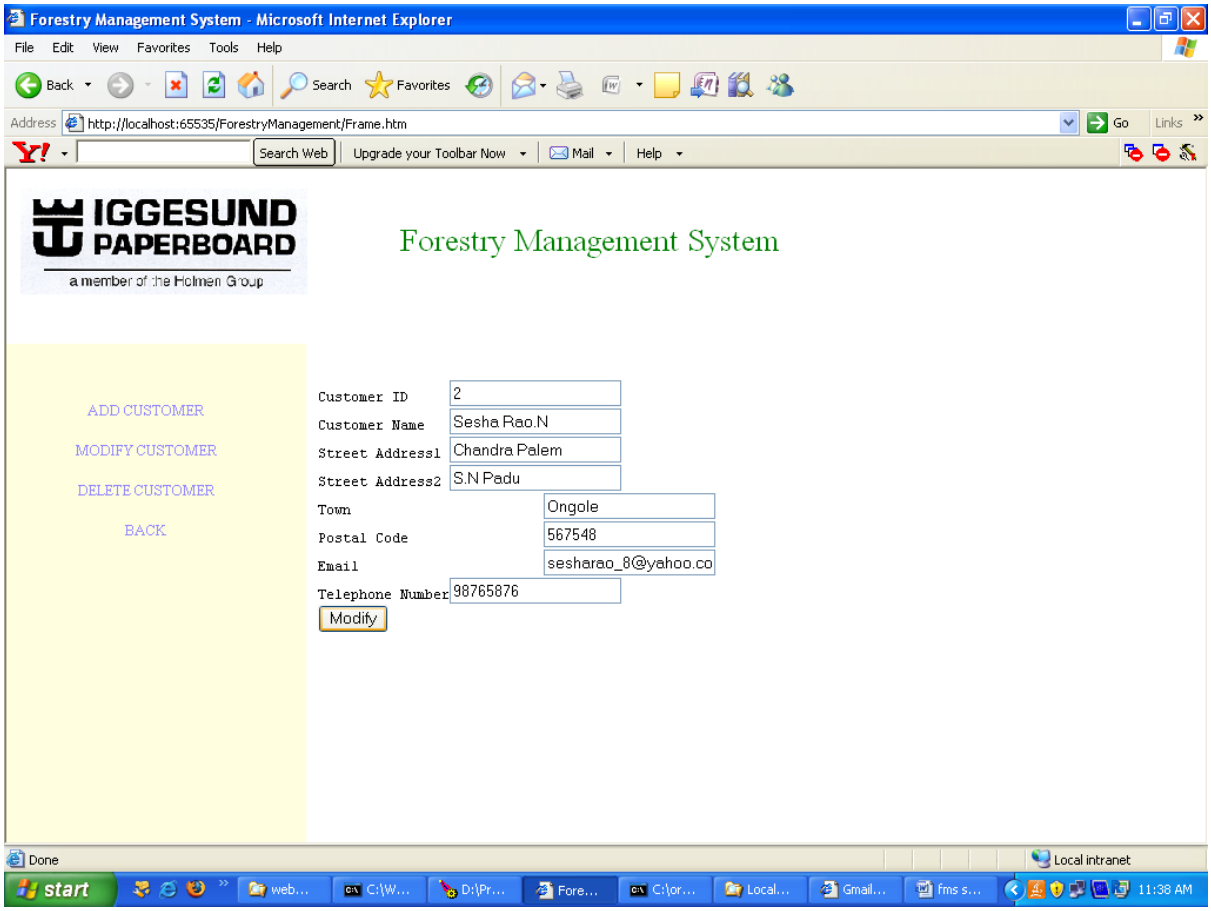
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IGGESUND PAPERBOARD
a member of the Holmen Group
Forestry Management System
ADD CUSTOMER
MODIFY CUSTOMER
DELETE CUSTOMER
BACK
Customer ID 2
Customer Name Sesha Rao.N
Street Address1 Chandra Palem
Street Address2 S.N Padu
Town Ongole
Postal Code 567548
Email sesharao_8@yahoo.co
Telephone Number 98765876
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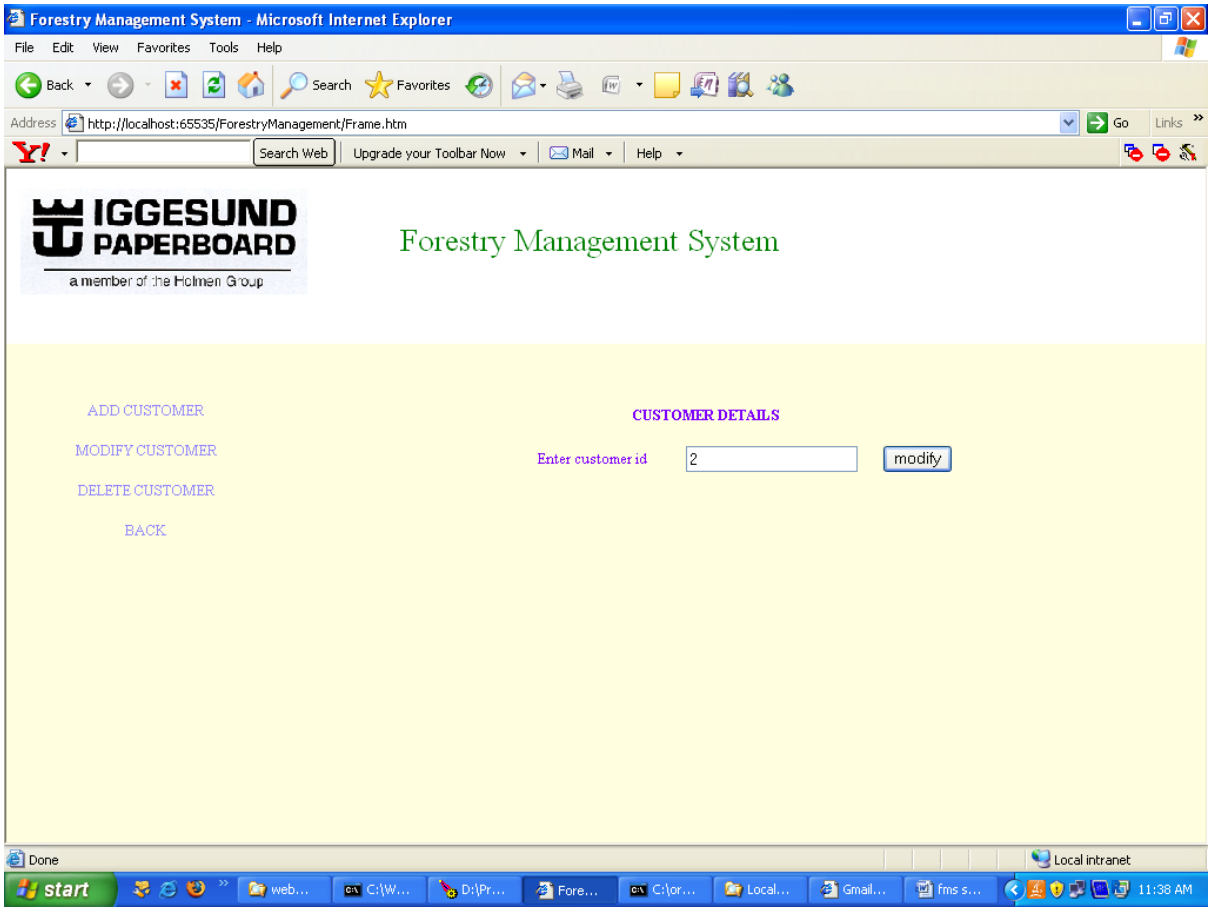
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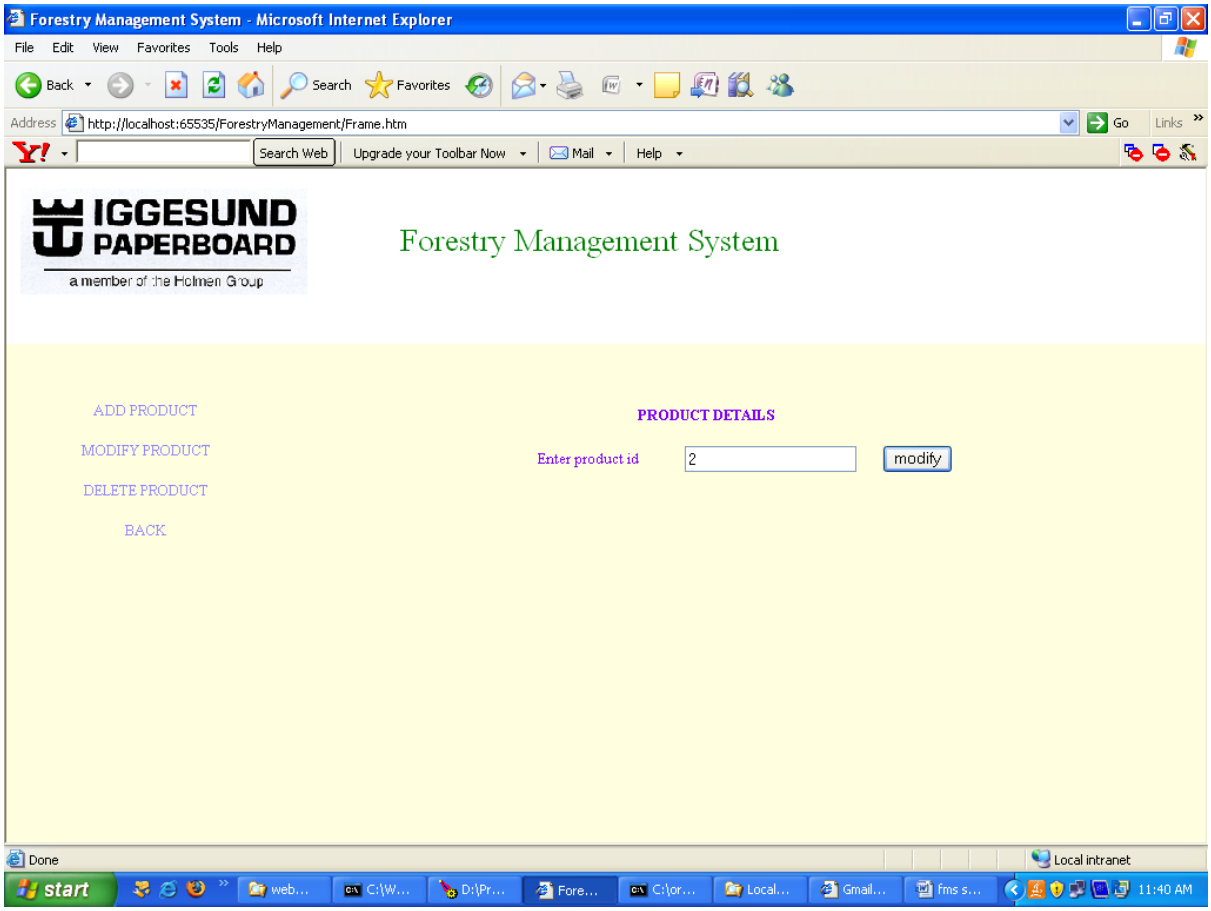

Software Requirements

- Windows
- Apache Tomcat Web Server
- Oracle / MySQL

Technology Used

- Java
- Spring
- JPA
- JDBC
- Spring Boot
- Spring REST

Hardware Requirements

- Hard Disk – 2 GB
- RAM – 1 GB
- Processor – Dual Core or Above
- Mouse
- Keyboard
- Monitor

EVALUATION AND ASSESSMENT PARAMETERS:

This mini project will be done in groups of five. Each group will identify a Team Lead who will decide which team member will code for which functionality. This project shall be evaluated at the end of spring module.

Evaluation Criteria (out of 100):

Look of console for all the screens	**05**
Client-side validation of inputs	**10**
Code Documentation and using coding standards	**10**
Overall Business logic. This includes: • Usage of Logging API (log4j)	**30**
Good amount of appropriate dataset to showcase project completely	**5**
Appropriate test cases using JUnit 4.0	**5**
Using MVC architecture and clean encapsulation of business logic in appropriate components. Judicious use of java beans.	**35**