Web Based Application for Cashew Industry on Cloud

Ambegaonkar Satyendra Sudhendra¹, Chougule Prathamesh Ranganath² & Gupte Tanmay Nandan³

¹,²&³Department of Information Technology GSMCOE Balewadi, Pune

Abstract: In this project we are providing a solution developed to address all the pain points of the cashew industry. This Cashew Industry System is cloud based software developed for managing the industry’s daily production details, stock maintenance, salary details and employee details, managed by office workers and administrator. This software system allows administrator to control the entire system including database maintenance for adding a new employee, supplier details. As well as this software keeps track of work done by each employee in each section & inventory processes. The use of this software, particularly for eliminating the book keeping method to maintain the data secure and structured as well as it reduces the paper use. We are using VPS as a cloud for providing more security to the data. Self-dependency makes a VPS Host more secure than shared web hosting. Automatic report generation provide solution for hectic calculation process.

Keywords: Virtual Private Server (VPS), Cashew Industry System (CIS), Automatic Report Generation (ARG)

1. Introduction

An inventory control system or a computerized inventory system is a process for managing and locating objects or materials. In common usage, the term may also refer to just the software components. In this project we are providing a solution developed to address all the pain points of the cashew industry. It includes some of the important modules like stock management for each process, number of cashew processed and take care lot of hassles which was very difficult to maintain in the legacy book keeping method.

This Cashew Industry System is cloud based software developed for managing the industry’s daily production details, stock maintenance, salary details and employee details, managed by office workers and administrator. This software system allows administrator to control the entire system including database maintenance for adding a new employee, employee wage payment, supplier details. As well as this software keeps track of work done by each employee in each section & inventory maintenance.

2. Literature Survey

A. Cloud Computing and Enterprise Resource Planning Systems [1]:

In this paper we had studied about Cloud architecture there various types such as SaaS, Paas, Iaas etc. This Research paper includes the review of development of Low cost ERP Solution to Indian industries on Mobile using latest technologies. ERP software brings users economic benefits during a company’s operational management. The economic benefits of ERP users are better than the non-users. As per this paper we are going to use Amazon EC2 Cloud for paper as it is very reliable, low budget.

B. Design of Cloud Computing based ERP model [2]:

In this paper we have studied about the architecture of cloud, it describes the theory and development of ERP system than analyzes the principle of the ERP system in detail which is based on cloud architecture, and discusses the advantages of the ERP system that uses this method to design; finally, it presents the shortcomings and future development trends of this kind of cloud based ERP system.


In this paper we have studied about how to implement a new ERP system is an excellent time to reassess your business processes and look for areas of optimization. Software implementation is just one part of the process. An effective system integrator will take you through each of these steps, and provide you with a fresh perspective on how you can
change your way of doing business to optimize your work and your use of the ERP system. They use a process implementing the ERP system. With any software implementation project, the process and plan should be designed to reduce risk. It is a maturing deployment model that may provide a greater opportunity to capitalize on an ERP investment which encourages standardization through visible economic drivers and provides the opportunity for greater focus on strategic activities.

D. Cloud Based ERP for Small and Medium Scale Enterprises [4]:

In this paper we have studied about the Cloud Based ERP System for the medium Scale Company. Cloud computing is one of the most important revolutionary changes in Information and Communications Technology (ICT). ERP systems has been much easier for almost all industries. SMEs are said to be the lifeblood of any economy and in Indian business context, it one of the major contributors to the growth and development of the economical conditions.

3. Proposed System

Fig1: System Architecture

Existing environment used by Cashew industries is book keeping method for accounting and all processes which is very time consuming and less secure. So we are designing a software for cashew industries. By using this software user can work very efficiently and it will provide more security. For each of the processes report will be generated automatically.

As shown in Fig 1 Consider a PC is connected to server machine. The interaction between the user and the database happens through server. Our system is made up of six modules. Which are as follows: User, Purchase, Inventory, Packaging, Sales, Analytics. We are using VPS as a cloud in our system.

MODULES USED:

1) User:

There are two types of user. One is Admin and another is Super Admin. Each individual admin can access independent module in this system. The Super Admin can add, remove admins and processes. Only Super Admin have access to the analytical reports.

2) Purchase:

In this module Company purchase raw cashews from vendors. Each stock is divided into lots and given specific lot id’s.

3) Inventory:

In this module all the processes of Production are done on cashews in company. There are total nine inventory processes (Sundry, Initial Grading, Boiler, Dryer, Cutting, Peeling, Final Grading and Dispatch).

4) Packaging:

Ready Cashews are packed in packets, Tin, Wrappers, Bags.

5) Sales:

Sales order are generated as per requirements of cashews and then sold out.

6) Analytics:

In this module all Reports of all processes which are done on cashews and their results are generated automatically. Only Super Admin can access these reports.

4. Algorithm Used

1) RSA Security Algorithm [4]

P = Plaint Text
C = Cipher Text
p,q= Two random prime number
k = server public key
j = server private key
n=p*q
z=(p-1)(q-1)
k = choose a prime number k, such that k is co-prime to z, i.e. z is not divisible k
Find j with the formula  k * j = 1 ( mod z )
Means $k^j/z = ?$

Encryption
$C = P^k \pmod{n}$

Decryption
$P = C^j \pmod{n}$

1) Deflate Compression Algorithm

The DEFLATE compressed data format consists of a series of blocks, corresponding to successive blocks of input data. The DEFLATE format limits distances to 32K bytes and lengths to 258 bytes. A 32K sliding window means that the compressor (and decompressor) have a record of what the last 32768 (32 * 1024) characters were.

7. Conclusion

In manufacturing industry managing inventory or product records is most challenging part. For cashew industry, where to achieve the end product i.e. sellable cashew, raw cashew has to be processed in six to seven stages. So it becomes tedious and hectic for an individual to maintain the inventory data on paper. Therefore software with graphical user interface and systematic approach to store the record on every process will help industry to get real insights into inventory records.

It can also help the authorities to maintain the records for the lifetime and save their data for analysis. Statistical analysis also helps to gain insights and to make some valuable decision to increase efficiency.

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9. References


