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RESEARCH ARTICLE

ANDROID BASED ERP SYSTEM

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Abstract— In today's cooperate world, most of companies work on ERP (Enterprise Resource Planning) systems. These systems are based on local area network. Now if the director of the company wishes to access any data or Reports at remote location, it is not possible. To overcome this problem a new approach called Android based ERP system is presented here, Which would help to maintain the data of ERP at centralized location and can be accessed from anywhere in the world through Android Application. This would help the director to get live updates of company at any location. Moreover this system would also provide a facility of tracking of personal example, sales person using GPS. The location of this person would be sent to the server where we can track them on Google maps. Also the employee of company can be able to insert the details of ERP modules through Android application

Keywords— Android Application, CRM (Customer Relationship Management), ERP (Enterprise Resource Planning), GPS (Global Positioning System)

I. INTRODUCTION

Today most of existing mobile phones use android operating system. In other words android is an operating System that powers every Android Device. Android is an Open Source technology which uses Linux kernel and JAVA which is one of the most popular programming languages. [1]

About 500,000 Android Devices are activated every single day. As now-a-days each and every transaction can be performed by Android App such as E-commerce, E-banking, E-business etc. then Why not ERP?

ERP is software used for Business Management. Company uses ERP software to collect, store, manage and interpret data from many business activities, including - Product planning, development and cost. Manufacturing, sales and marketing, inventory management, shipping and payment [2].

Taking into consideration the popularity of Android Application and efficiency of ERP, this project involves the insertion as well as retrieval of data through Android application, which would be beneficial for the employee to insert data and for director to retrieve data at remote location once the application is installed their Android device as-well-as an active internet connection. The scope of this project is for decision making process in the large Organizations. Managers have to take quick decisions to enable their organization remain profitable and competitive, decision making is very important. The Goal of this project is development of Android application which will insert the data through android device and retrieve the data on android device. This can be achieved by developing an android application which will insert and retrieve data. There will be a centralized server for storing the data. Proposed system will consist of four ERP modules they are Sales, Purchase, Stock, CRM.GPS is used for tracking the sales person. Sales module will allow the preparation of reports to track sales trends over

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different periods, drill down for the aggregated data, allow for sales estimation and give a bird's eye view of the sales activities of the company. Purchasing management consists a group of application that controls purchasing of raw materials needed to build products and that controls the inventory. It helps creating Purchase orders / contracts, supplier tracking, good receipt and payment and reporting. Customer relationship module helps to provide superior customer service and enhanced customer relationship management. Stock Module is nothing but the inventory management. Efficient inventory management should be able to rapidly respond to customer requirements; at the same time should be flexible enough to undertake any corrections according to requirement, and do this without affecting operational efficiencies. A good sales and marketing ERP module is an essential feature of ERP software. GPS is used for tracking the sales person.GPS is used to determine the exact position or location of a vehicle, person or any other asset. [3]

II. PROBLEM DEFINITION

Suppose, there is large scale industry/organization who's branches or units resides in different countries or different regions in such case it is not possible for MD/CEO to be present at remote location. Also not possible to handle bulky laptops every time suppose while travelling. If the reports are not viewed on time the decision making process may get delay.

III.LITERATURE SURVEY

ERP system is the most important factor related to the organizations data point of view. Firstly there were ERP systems installed in the organization. These system works on local area network. But if the MD of the company wishes to see the reports or access any data from the system, he has to be present in the company for doing so, which is not possible every time. Also if he wishes to see the reports of his company's office plants at remote location then that thing is not possible too.

Most of Organizations use ERP Systems which are based on LAN Connection for the storage of data. Which is a tedious system oriented. If the Director/CEO of the company wishes to see the reports or access any data from the system, he has to be present in the company for doing so, which is not possible all the time. After that web based ERP systems were developed which again had some drawbacks and was not much efficient [4].

SoftMIMO is a company which is focusing on development of Android Application, publishing, consulting and education, and conducting study on Android platform implementation.

After the survey we believe the open source market model is the future of software development, and the platform that club Internet, GPS together with android phone functions is the future of any man-machine-interaction system. Low cost, quick turnaround, customer relationship and support, low risk, will drive the companies that still follow stiff project development process out of the market and into history very soon. [5]

IV.PROPOSED SYSTEM DESIGN AND METHODOLOGY
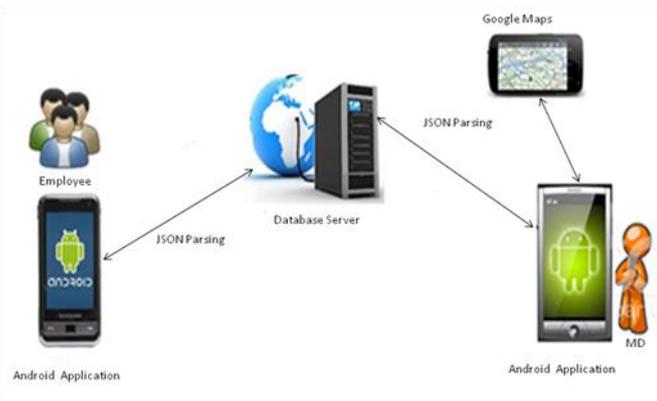
4.1 System Architecture

Fig1.Proposed System Architecture

4.2 System Components

Database Server

A Database server is a computer program that provides database services to other computer programs or devices. Database server is the term used to refer to the backend system of database application using client server architecture. The data would be hosted in Microsoft SQL database and accessed by the android application. Android Application

This would be an application that would insert the data in a database. Also can access the database over the internet, retrieve and display a summarized version of the data captured in the database.

Google maps

Google maps is a mapping service application and technology provided by Google, offering satellite imaginary, street maps and street views perspective as well as functions such as a route planner for travelling by car, bicycle or with any public transportation. GPS is used to determine the position or location of a person, vehicle, or any other asset.

Backend

The Information updated by employee of an organization would be stored in a centralized database which would act as a backend for proposed system.

Frontend Application

Firstly, Employee working at the remote location of the office would insert the credentials, if the credentials are verified – employee would be able to insert or update the ERP module information. Secondly, the Manager would insert the credentials, if the credentials are verified manager would be able to retrieve summarized data on his android application. Manager can be able to retrieve monthly, yearly or day to day data in the form of report which would be helpful in making decisions.

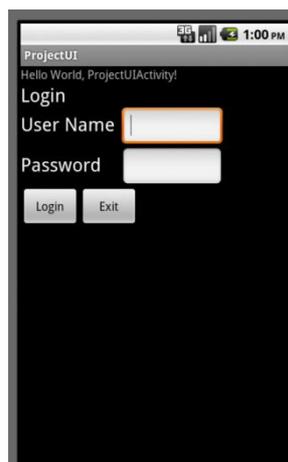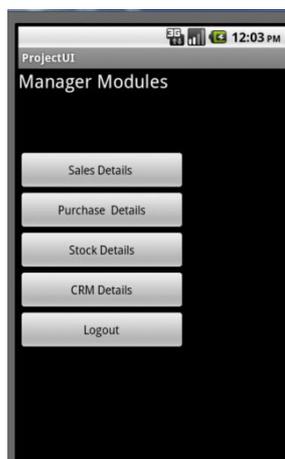**V.** SYSTEM IMPLEMENTATION

Fig2.Login Page

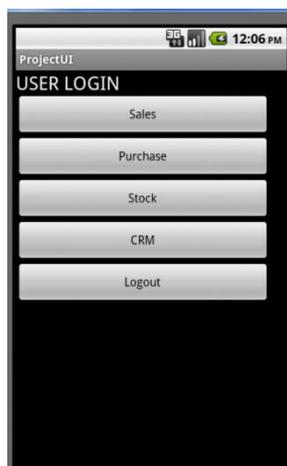Fig3.ERP modules for manager (Retrieve Data)

Fig4.ERP modules for User/Employee (Insert/update Data)

VI.CONCLUSION

This Project when implemented would help to provide live updates to Director, insertion of ERP data by employee, tracking the location of sales person .This would be helpful in monitoring of business and undertaking strategic business decisions. It would be helpful to retrieve up-to-date information on Android Application.

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