

SALES AND INVENTORY PREDICTION USING DATA MINING

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Abstract: Data mining is the extraction of hidden predictive information from large databases it is a powerful new technology with great potential to help companies focus on the most important information in their data warehouses. Data mining tools predict future trends and behaviors allowing businesses to make proactive, knowledge-driven decisions. The purpose behind developing this project is to create the application which is sale and inventory using the distributed association rule mining. It will be used in super markets for analyzing the related products. This project will help to analyze which product will be associated with other product and help the super market manager to predict the sales and inventory of related products.

Keywords: Market Basket Analysis, Association Rule Mining, Online Transaction Processing, Knowledge-Discovery, Data Warehouse.

I. INTRODUCTION

Data mining, the extraction of hidden predictive information from large databases, is a powerful new technology with great potential to help companies focus on the most important information in their data warehouses. Data mining tools predict future trends and behaviors, allowing businesses to make proactive, knowledge-driven decisions. Data mining tools can answer business questions that traditionally were too time consuming to resolve. They scour databases for hidden patterns, finding predictive information that experts may miss because it lies outside their expectations. Most companies already collect and refine massive quantities of data. Data mining techniques can be implemented rapidly on existing software and hardware platforms to enhance the value of existing information resources, and can be integrated with new products and systems as they are brought on-line. Data mining techniques are the result of a long process of research and product development. This evolution began when business data was first stored on computers, continued with improvements in data access, and more recently, generated technologies that allow users to navigate through their data in real time. Data mining takes this evolutionary process beyond retrospective data access and navigation to prospective and proactive information delivery.

II. TECHNOLOGY USED

.NET Framework

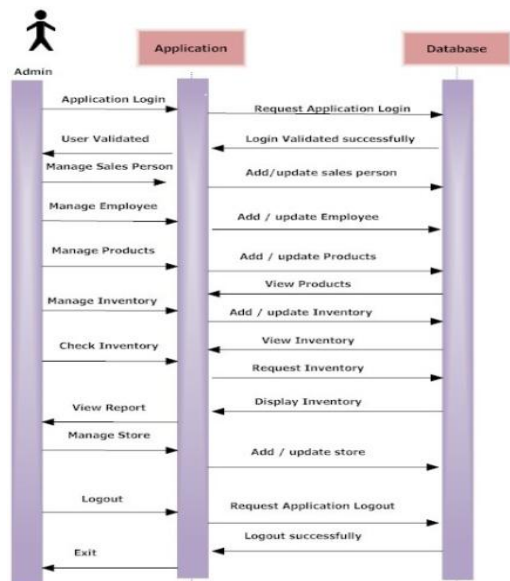
The .NET Framework is an environment for building, deploying and running XML Web services and other applications. It is the infrastructure for the overall .NET platform. The .NET Framework consists of three main parts:

The common language runtime, the class libraries, and ASP.NET. It is integrated with a wide variety of languages.

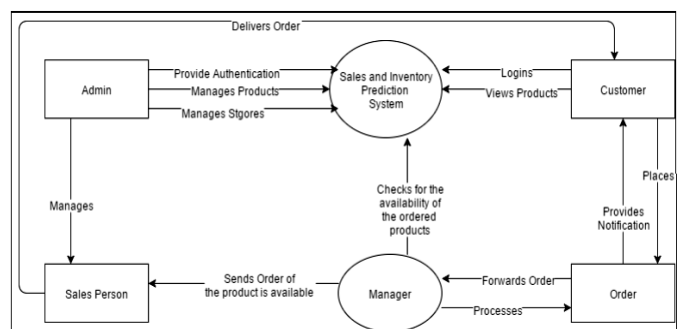
2. Microsoft SQL Server

Business today demands a different kind of data management solution. Performance, scalability, and reliability are essential. The SQL Server 2005 exceeds dependability requirements and provides innovative capabilities that increase employee effectiveness, integrate heterogeneous IT ecosystems, and maximize capital and operating budgets. SQL Server 2005 provides the enterprise data management platform for the organization that needs to adapt quickly in a fast changing environment.

III. SEQUENCE DIAGRAM



IV. WORKING OF THE SYSTEM



MODULES

- Admin
- Products Management
- Sales And Inventory Prediction System
- Sales Person
- Stores Management
- Inventory Notification
- Customer
- Products Management:- Admin can keep track of all the products and the quantities of the products.
- Sales And Inventory Prediction System:- It provides the authentication to Admin and Customer.
- Sales Person:- If the requested product is available then sales person delivers it to the customer.
- Manager:- Manages processes the order of the customer and sends the notification to the customer about the particular requested product .
- Inventory Notification:- It will notify about the product quantity that are remaining from the total product quantity.
- Customer:- Customer logins and authentication it can views the product and place the order. This order is processed by manager and delivered by the sales person.

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V. FUTURE SCOPE

It can be applied in applications that deals in mining on live data on daily timely basis such as:

1. Stock markets
2. Financial statistics collection
3. Weather forecasting etc.

VI. CONCLUSION

In this paper after applying the data mining technique in enterprise database following conclusion we can derive as:

- With the help of data mining technique we are predicting the items that are associated with each other.
- In Apriori algorithm we are doing the prediction of how the items are related to each other on basis of customer's purchase.
- In Apriori algorithm helps manager to analyse the inventory of the system.
- With the help of prediction algorithm we are doing the prediction of customer behaviour regarding the purchase order.
- With the help of association mining we are getting the frequent item set which occur during the purchase order of product.

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