TEXTILE MILL MANAGEMENT SYSTEM

Estd-1984

ISO 9001:2000 Certified

PROJECT REPORT

Submitted by

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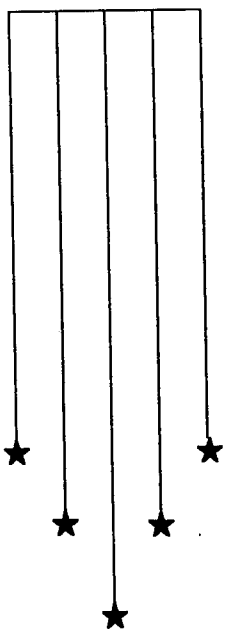

P.1048

Under the guidance of

Ms.U.SAKTHI B.E.

In partial fulfillment of the requirements for the award of degree of
Bachelor of Science Applied Science
Computer Technology
of Bharathiyar University, Coimbatore:641 046 .

DEPARTMENT OF COMPUTER TECHNOLOGY

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE: 641 006.

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Estd-1984

COIMBATORE: 641 006

Department of Computer Technology

Certificate

ISO 9001:2000 Certified

This is to certify that this project entitled

TEXTILE MILL MANAGEMENT SYSTEM

has been submitted by

Ms. Dhanya P.M., Madhini C., Sreema R.

In partial fulfillment of the requirements for the award of degree of **Bachelor of Science Applied Science Computer Technology** of Bharathiyar University, Coimbatore:641 046 during the academic year 2002-2003.

Sakthivel 21/03/03

(Guide)

(Head of the Department)

Certified that the Candidate was Examined by us in the Project Work Viva-Voce Examination held on 25.03.03

University Register Number 0028Q0123, 0028Q0136, 0028Q0162

(Internal Examiner)

(External Examiner)

NATIONAL TEXTILE CORPORATION
(TAMILNADU & PONDICHERRY LTD.,)
35-B, Somasundaram Mills Road,
P. B. No. 2409, NTC House,
COIMBATORE-641 009.

Ref : General/2002-03/0602

Dated : 20 September, 2002

CERTIFICATE

This is to certify Ms. Dhanya P.M., C. Madhini, R. Sreema, B.Sc. CT students of Kumaraguru College of Technology, Coimbatore have undergone Industrial Training at the Corporate Office of this Company during the period 20/10/2002 to 20/03/2003.

During the training period, they have developed a software for the company under the name "Textile Mill Management System". The software has been found very useful to the Company.

During the period of their project work, their conduct was found to be very good.

We wish her all success in their future endeavors.

A.N. KUTTY
MANAGER (PERSONNEL)
NATIONAL TEXTILE CORPORATION (TN & P) LTD.
(A GOVT. OF INDIA UNDERTAKING)
35, SOMASUNDARAM MILLS ROAD
COIMBATORE-641 009

ACKNOWLEDGEMENT

ACKNOWLEDGEMENT

Any achievement big or small should have behind it a catalytic and constant encouragement of valuable and noble minds. The same is true for our effort in completing our project work entitled "Textile Mill Management System" for the company National Textile Corporation (TN&P) Limited, Coimbatore.

We wish to express our sincere gratitude to Dr. K. K. Padmanabhan, B.Sc (Engg)., M.Tech., Ph.D., Principal, Kumaraguru College of Technology for providing us the necessary facilities in the college.

We wish to express our heartfelt thanks and a deep sense of gratitude to our Professor Dr. V. Sundaram, The Head of the Department of Computer Technology, for providing support to do our project.

We express our sincere thanks to Ms.U.Sakthi, B.E., Lecturer, Department of Computer Technology has offered us invaluable help and support throughout the project. We are thankful to her, without whose motivation and guidance we would not have been able to embark on a project of this magnitude.

We are grateful to Mr. R. Vijayakumar, Manager (Cost) of National Textile Corporation (TN&P) Limited, Coimbatore for allowing us to do the project under his division and for motivating us by his valuable ideas and suggestions.

We thank our beloved parents, friends and department staffs who have been a pillar of support from the start, until the completion of the entire project.

SYNOPSIS

"Textile Mill Management System " deals with the computerization of the day to day activities of the organization. The system takes into account various processes including raw material management, inventory management, purchase order management, stores management, sales and distribution management and maintenance management.

This project is developed using Visual Basic as front end and SQL [Structured Query language] server as back end. The advantages of Visual Basic are that it is user friendly and provides better security as it uses most of the features of the Object Oriented programming. The Microsoft SQL server is a relational database system. SQL, is a widely accepted industry standard for defining, changing and managing data. SQL servers are cheaper, faster, easier access to data for small, medium and large businesses.

The proposed system is to be developed as an alternative to the existing system. The initial system study revealed the bottlenecks of the existing system such as poor user interface, lack of database security and data redundancy. This project is aimed to overcome these disadvantages as well as to integrate the major activities of the organization.

CONTENTS

1. INTRODUCTION

Our project entitled "Textile Mill Management System" aims at computerizing the manual work done in various departments like raw material management, stores management, machinery maintenance and sales and distribution of a textile mill.

The existing manual system involves a lot of strenuous and monotonous work .the efficiency and accuracy factors are also not up to the expected standards. These bottlenecks are aimed to be removed by the proposed project. A detailed summary of the drawbacks of the existing system and the advantages of the proposed system are provided in the forthcoming chapter.

1.1. PROJECT OVERVIEW

The project modules include raw material management, stores management, sales and distribution and maintenance. In raw material management module, the company purchases raw material, then inspection of material is done for various parameters. After inspection the material is issued as per the requisition from the production department. The excess stock is stored in godowns. Stores management module includes stores inventory and purchase order. As the company has a wide range of machinery, the spares that are often needed are made available in the stores at any time. In sales and distribution module, the yarn produced in the mill is sold in various centers in India and in abroad. The maintenance of the machineries is essential to maintain the quality and productivity of the yarn. Hence it is an important function as far as a spinning mill is concerned.

1.2. ORGANISATION PROFILE

National Textile Corporation [NTC] (TN & P) Limited was formed in the year 1974 as one of the nine Subsidiary Corporations of National Textile Corporation Limited, New Delhi. The corporation has now completed 26 years of commercial operation current 12 spinning mills, 2 grey composite mills and one spinning mill with process house are under its fold. These include 5 mills viz, Sri Saradha Mills, Kaleeswara "A", CS & W Mills, Sri Bharathi Mills and Swadeshi Cotton Mills, managed by this corporation on behalf of National Textile Corporation Limited, New Delhi. Thirteen mills are located in the state of Tamil Nadu and two in Union Territory of Pondicherry.

At the time of takeover and nationalization, the mills were sick and closed. The corporation was entrusted with the responsibility of nursing these units back to health and put them on firm grounds.

The corporation is running a Retail Marketing Division for direct marketing of fabrics. The fabrics are directly sold to the general public by the Retail Marketing Division through its 49 showrooms spread over the state of Tamil Nadu and the Union Territory of Pondicherry.

In addition to the above direct marketing channel, the Corporation has established a wide network of Agents throughout the country for marketing of yarn to consumers.

The Corporation is selling the yarn in major consumption centers like Ahmedabad, Bhiwandi, Calcutta, Ichalkaranji, Malegaon, Delhi etc., similarly the Corporation is selling its fabrics to DGS & D and public sector undertaking for their uniform cloth, garment manufacturers and also for export. The Corporation has developed infrastructure for selling its fabrics both in inland and international markets.

2. SYSTEM STUDY AND ANALYSIS

A complete understanding of the software requirements is essential to the success of a software development effort. No matter how well designed or well coded, a poorly analyzed and specified program will disappoint the user and bring grief to the developer.

The requirement analysis task is a process of discovery, refinement, modeling and specification. The software scope, initially established by the system engineer is refined in detail. Models of the required data, information and control flow and operation behavior are created. Alternative solutions are analyzed and allocated to various elements. The information gathered after being analysed, are processed and presented to the user.

2.1. EXISTING SYSTEM

Currently there is no computerization of the activities carried out in the organization. Everything is done manually. All the data are entered manually by concerned persons in the department. The following are the bottlenecks of the existing system:

1. Large amount of official time is wasted.
2. Duplication of data entry and data storage i.e., redundancy of data cannot be avoided.
3. Data reliability and maintainability is difficult.
4. Access of accurate information is not possible.
5. Delay in information search and retrieval.
6. In case of decision, it is error prone as it is done manually.
7. Security to data is not provided.
8. Documents are not handled properly or stored safely.

2.2. PROPOSED SYSTEM

The following are the features of the proposed system:

- It reduces clerical time.
- Gives access rights to authorized users providing security.
- Data entries, deletion, updating are made easy.
- Fast search and retrieval is possible.

2.3. REQUIREMENTS FOR NEW SYSTEM

The system is required to maintain larger databases and also work very fast. It has to maintain the integrity and should care for duplication of data. Due to large amount of data it should retrieve the data very fast from the databases.

The following are the bottlenecks of the current system :

- Inaccuracy in maintaining the data.
- More time consuming
- Need for more number of employees.
- Problems in storing bulk information on ledgers and note books.
- Security and reliability of the data stored and information retrieved.
- Sharing of information by more than one person without duplication.

To achieve better accuracy, to get the reports faster and in order to cope with the latest technology, the proposed system would be of great use. Computerized system gives relief from monotonous clerical job and gives the company time to concentrate on creative efforts to produce better results.

PROGRAMMING ENVIRONMENT

3. PROGRAMMING ENVIRONMENT

3.1. HARDWARE CONFIGURATION:

Processor Type: Pentium IV
Speed : 800 MHz
Main Memory : 128 MB RAM
Hard Disk : 4 GB Free Space

3.2. SOFTWARE CONFIGURATION:

Operating System : Windows 95/Windows-2000/Windows-NT
Backend Databases : MS-SQL
Front End : Visual Basic 6.0

3.3. REASONS FOR CHOICE OF SOFTWARE:

3.3.1. VISUAL BASIC:

Visual Basic is a fast and easy way to create application for MICROSOFT WINDOWS. Visual Basic provides a complete set of tools to simplify rapid application development for both experienced professionals as well as the novice windows programmers.

In the name VISUAL BASIC – the "Visual" part refers to the methods used to create the graphical user interface (GUI). Visual Basic provides pre-built objects that can be used to form the graphical user interface. The "Basic" part refers to the basic language as the basic syntax of the statements is retained by visual basic.

The two most vital components of the Visual Basic are:

- A visual method of creating the application including its forms, controls, and components on the form.
- Ability to attach the code directly to each event of the each element in visual design.

Visual Basic lets us add menus, text boxes and command buttons, option buttons for making exclusive choices, list boxes, scroll bars and file and directory boxes. We can use grids to handle tabular data. It is possible to communicate with other window application and accesses databases.

Visual Basic itself is a windows application. We can load and execute the VB systems just as other windows programs. It lets us to generate applications that interact with windows operating system.

The developer studio is Visual Basic's development environment. Most of the VB's windows are sizeable and dockable, meaning we can connect them together, move them and hide them.

3.3.2. MICROSOFT SQL SERVER 7.0:

- Completely integrates with Windows2000 server for mixed mode authentication and ADSI (Active Directory Service Interface) for specifying users and their rights.
- It inherits Kerberos authentication.
- Supports direct query interface for running command line queries over web browsers.
- Provide data migration over a variety of databases like Access, FoxPro, Paradox, etc., using data transformation services.
- Provides net monitoring tools for viewing active connections and gives output in graphical format.
- Uses XML for data transformation, which can be used for preserving data consistency across platforms.

- Uses 'English Queries' for specifying queries in pure English queries.
- It is highly scalable and reliable.
- It provides integrated and extensible analysis services.
- Quick development, debugging and data transformation.
- Simplified management and tuning.

SYSTEM DESIGN AND DEVELOPMENT

4. SYSTEM DESIGN AND DEVELOPMENT

4.1. SCREEN DESIGN

4.1.1. INPUT DESIGN:

Input design is a process of converting user-oriented inputs to a computer-based format. Errors entered by the user can be controlled by the input design. If the input data given to the system is wrong, then the processing may lead to an unexpected error or in some cases incorrect output. An entry that wants to reduce the data preparation time uses screen design for precise and quick data capture.

These screens provide instant visual verification of input data and a means of prompting the user. The user can make desired changes before the data is sent for processing. Screens have been designed using Visual Basic forms. On these forms we draw graphical objects called controls that include text boxes, command buttons, list boxes, etc. Screens are designed and necessary validations are done on controls using numerous events available with the particular control.

4.1.2. OUTPUT DESIGN:

Output requirements have been designed during system analysis. A good starting point for output design is the data flow diagram (DFD). Human factors or end-users issues for design involve addressing internal controls to ensure readability and distribution of outputs generated by the computer.

4.1.2.1. OUTPUT DESIGN PRINCIPLES:

- Computer outputs should be straightforward and interpret the purpose of the report.
- Every report or screen should have a title.
- The timing and volume of each output must be specified.
- The distribution of all output must be specified.

4.1.2.2. OUTPUT DATA FORMAT CONSIDERATION:

Output Labeling:

The output should be clearly and correctly labeled to ensure that the user has understood what is being reported.

Report Separation:

Different categories of reports must be properly separated from each other to enhance the readability and recognize the ability of the report.

Headers and Footers:

The starting of the report should be identified by a proper header, which should be highlighted. It may appear on a page by itself, which may form the cover page of the report. Each page in a report should have a legible and distinct ending, which is usually referred to, as footer.

Output Tabulation:

Data is more appropriate when presented in a tabular form. This allows the user to analyze all or at least some number of related data at the same time.

Highlighting:

The practice of focusing on important or exceptional piece of data in an output and including techniques like underlining, capitalizing, shading, etc., enhances the report.

Report Summary:

A report summary should always be terminated with a summary page. Often, only the summary page is reviewed by the top management. The content of this page is naturally based on environment. Our project produces the following reports,

- Contract Report
- Arrival Report
- Outstandings Report(2)
- Stocks Report
- Payments Report
- Receipt Report
- Supplier/Customer Information Report(3)

4.2. DATABASE DESIGN

A database can be defined as a central pool of data which is shared by various users of an organization. Therefore at one stroke, the problem of

redundancy is solved; Any database exhibits a controlled amount of redundancy primarily because this leads to inefficient operations of the database. Since data is stored only once, there is no wastage of storage and when the database is updated there is no question of it being in an inconsistent state.

The Textile Mill Management System uses the following tables:

Balanceqtytodeliver

S.no	Field Name	Data Type	Width	Description
1^	contractno	int	4	Contract number
2	balanceqty	int	4	Balance quantity

Chequemaster_C

S.no	Field Name	Data Type	Width	Description
1	custid	int	4	Customer id
2	rec_id	int	4	Receipt id
3	chequeno	varchar	50	Cheque number

Chequemaster_S

S.no	Field Name	Data Type	Width	Description
1	supid	int	4	Supplier id
2	payid	int	4	Pay slip id
3	chequeno	varchar	50	Cheque number

Contracttrans

S.no	Field Name	Data Type	Width	Description
1^	supid	int	4	Supplier id
2^	contractno	int	4	Contract number
3	contractdate	smalldatetime	4	Contract date
4^	deliverytype	nvarchar	50	Delivery type
5^	varietyid	int	4	Variety id
6	unit	nvarchar	50	Unit
7	qty	int	4	Quantity
8	rate	float	8	Rate
9	over	smallint	2	Used as a flag

CustomerMaster

S.no	Field Name	Data Type	Width	Description
1*	cusid	int	4	Customer id
2	customername	varchar	50	Customer name
3	address	varchar	50	Customer address
4	placecode	int	4	Place code
5	pin	int	4	Pin code
6	phoneno	nvarchar	50	Phone number
7	contperson	varchar	50	Contact person
8	email	varchar	50	Email id
9	contphone	nvarchar	50	Contact phone
10	custdate	smalldatetime	4	Customer date

CustomersAccountDetailsMaster

S.No	Field Name	Data Type	Width	Description
1*	Custid	int	4	Customer ID
2	amount	decimal	9	Total Amount

DeliveryMaster

S.no	Field Name	Data Type	Width	Description
1*	deliveryid	int	4	Delivery id
2	deliverytype	nvarchar	50	Delivery type

DeliveryTrans

S.no	Field Name	Data Type	Width	Description
1^	transno	int	4	Transaction number
2	transdate	smalldatetime	4	Transaction date
3	transtime	smalldatetime	4	Transaction time
4^	supid	int	4	Supplier id
5^	contractno	int	4	Contract number
6	invoiceno	nvarchar	50	Invoice number
7	invoicedate	smalldatetime	4	Invoice date
8	r_qty	float	8	Required quantity
9*	vehicle	nvarchar	50	Vehicle
10	remarks	ntext	16	Remarks

DepartmentMaster

S.no	Field Name	Data Type	Width	Description
1*	deptid	int	4	Department ID
2	department	nvarchar	50	Department name
3	depcontactperson	nvarchar	50	Contact Person
4	depextn	int	4	Extension phone

FlexGridAddMaster

S.no	Field Name	Data Type	Width	Description
1	sec_id	smallint	2	Section ID
2	section	nvarchar	50	Section name
3	position	int	4	Position
4	description	nvarchar	50	Description

MaintenanceTrans

S.no	Field Name	Data Type	Width	Description
1*	transno	int	4	Transaction number
2	itemid	int	4	Item id
3	lastmaintenance	smalldatetime	4	Last maintenance date
4	nextmaintenance	smalldatetime	4	Next maintenance date

PaymentTrans

S.no	Field Name	Data Type	Width	Description
1	paymentno	int	4	Payment number
2	paymentdate	smalldatetime	4	Payment date

3^	supid	int	4	Supplier id
4	totalamount	Float	8	Total amount
5	modeofpay	Varchar	6	Mode of pay

PlaceMaster

S.no	Field Name	Data Type	Width	Description
1*	placeid	int	4	Place id
2	place	varchar	50	Place
3	distance	float	8	Distance from mill
4^	statecode	int	4	State code

ReceiptTrans

S.no	Field Name	Data Type	Width	Description
1	receiptno	int	4	Receipt number
2	receiptdate	smalldatetime	4	Receipt date
3	custid	int	4	Customer id
4	totalamount	float	8	Total amount
5	modeofpay	varchar	6	Mode of pay

SalesTrans

S.no	Field Name	Data Type	Width	Description
1	invoiceno	varchar	50	Invoice number
2	invoicedate	smalldatetime	4	Invoice date
3^	custid	int	4	Customer id
4^	varietyid	int	4	Variety id
5	unit	varchar	50	Unit

6	qty	int	4	Quantity
7	rate	float	8	Rate
8	total	float	8	Total

StateMaster

S.no	Field Name	Data Type	Width	Description
1*	areacode	int	4	Area code
2	area	varchar	50	Area name

StockMaster

S.no	Field Name	Data Type	Width	Description
1*	varietyid	int	4	Variety id
2	qty	float	8	Quantity

StockTransfered

S.no	Field Name	Data Type	Width	Description
1*	transno	int	4	Transaction number
2	itemid	int	4	Item id
3	supid	int	4	Supplier id

SupplierMaster

S.no	Field Name	Data Type	Width	Description
1*	supid	int	4	Supplier id
2	suppliername	nvarchar	50	Supplier name
3	address	nvarchar	50	Address
4^	placecode	int	4	Place code
5	pin	int	4	Pin code

6	phone	varchar	50	Phone number
7	contperson	nvarchar	50	Contact person
8	contemail	nvarchar	50	Contact Email id
9	contphone	varchar	50	Contact phone
10	supdate	smalldatetime	4	Supplier date

SupplierAccountsDetailsMaster

S.no	Field Name	Data Type	Width	Description
1*	supid	int	4	Supplier id
2	amount	float	8	Amount

TempMaintain

S.no	Field Name	Data Type	Width	Description
1	itemid	int	4	Item id
2	itemname	char	50	Item name
3	main_type	char	10	Maintenance Type
4	dateofissue	smalldatetime	4	Date of issue of item
5	lastmaindate	smalldatetime	4	Last maintenance date
6	nextmaindate	smalldatetime	4	Next maintenance date
7	slno	varchar	50	Serial number

Toolsissuetrans

S.no	Field Name	Data Type	Width	Description
1^	transno	int	4	Transaction number

2^	itemid	int	4	Item id
3^	deptid	int	4	Department id
4	dateofissue	smalldatetime	4	Date of issue

ToolsMaster

S.no	Field Name	Data Type	Width	Description
1*	itemid	int	4	Item id
2	itemname	varchar	50	Item name
3	description	varchar	50	Description
4	main_type	varchar	50	Maintenance type
5	wgt	float	8	Weight
6	rate	float	8	Rate

ToolsPurchasetrans

S.no	Field Name	Data Type	Width	Description
1	transno	int	4	Transaction number
2	transdate	smalldatetime	4	Transaction date
3	supid	int	4	Supplier id
4^	itemid	int	4	Item id
5	slno	varchar	50	Serial number
6	description	varchar	50	Description
7	invoiceno	varchar	50	Invoice number
8	invoicedate	smalldatetime	4	Invoice date
9	nos	float	8	Number of tools
10	rate	float	8	Rate of tools

Toolsstock

S.no	Field Name	Data Type	Width	Description
1^	toolsid	int	4	Tools id
2	qty	float	8	Quantity

ToolsSupplierMaster

S.no	Field Name	Data Type	Width	Description
1*	supid	int	4	Supplier id
2	suppliername	nvarchar	50	Supplier name
3	address	nvarchar	50	address
4*	placecode	int	4	Place code
5	pin	int	4	Pin code
6	phone	varchar	50	Phone
7	contperson	varchar	50	Contact person
8	contemail	varchar	50	Contact email
9	contphone	varchar	50	Contact phone
10	supdate	smalldatetime	4	Supplier date

UnitMaster

S.no	Field Name	Data Type	Width	Description
1	unitid	int	4	Unit id
2	unit	nvarchar	50	Unit

VarietyMaster

S.no	Field Name	Data Type	Width	Description
1*	varietyid	int	4	Variety ID
2	varietyname	nvarchar	50	Variety name

VehicleMaster

S.no	Field Name	Data Type	Width	Description
1*	vehicleid	int	4	Vehicle ID
2	vehiclename	nvarchar	50	Vehicle name
3	conv_rate	int	4	Conveyance rate

VehicleTrans

S.no	Field Name	Data Type	Width	Description
1^	contractno	int	4	Contract Number
2^	transno	int	4	Transaction number
3	transdate	smalldatetime	4	Transaction Date
4	vehicleno	nvarchar	50	Vehicle Number
5	drivername	nvarchar	50	Driver Name
6	con_amt	int	4	Conveyance amount

Legend:

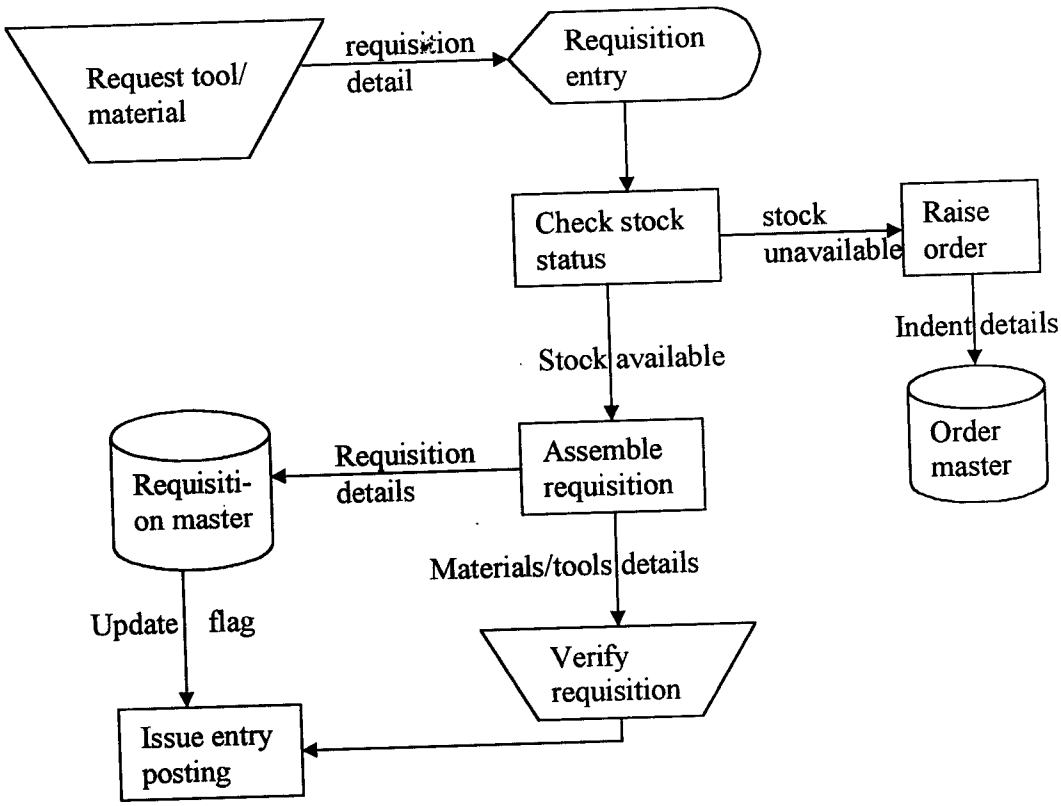
* --->Primary Key

^ --->Foreign Key

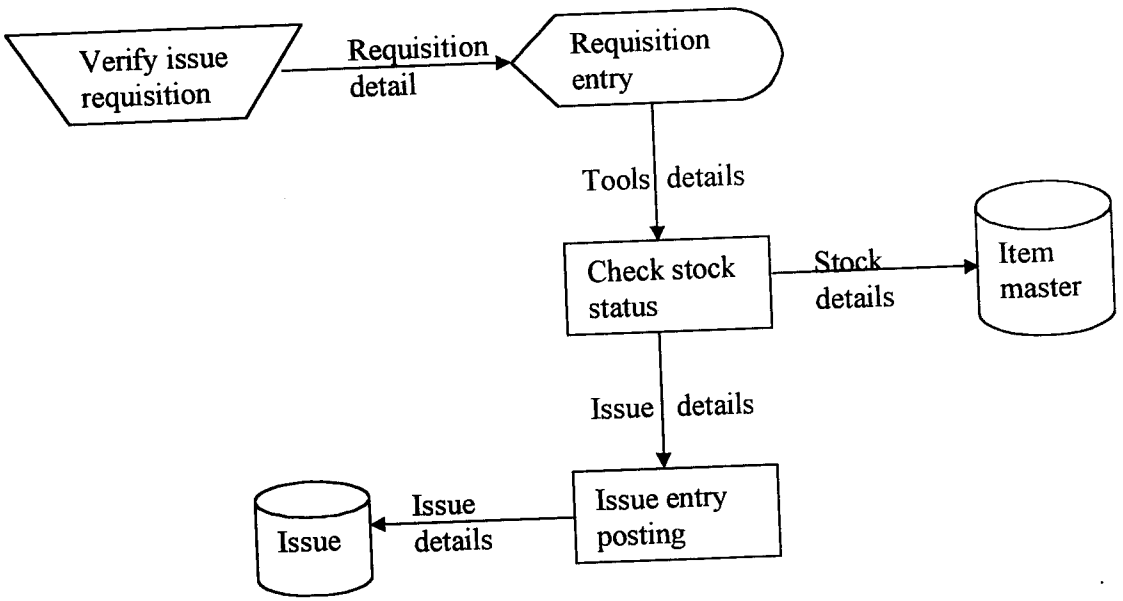
4.3. PROCESS DESIGN

4.3.1. SYSTEM FLOW DIAGRAM

4.3.1.1. MATERIALS/TOOLS REQUISITION

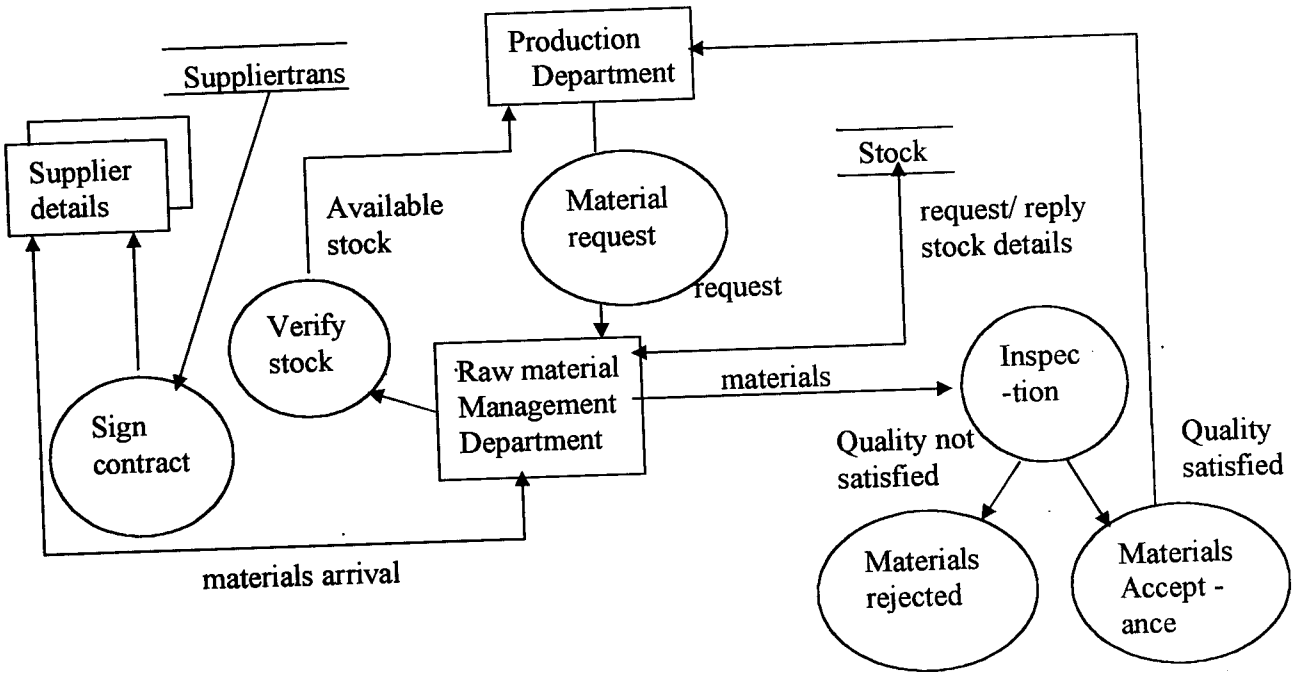


4.3.1.2. MATERIALS/TOOLS ISSUE

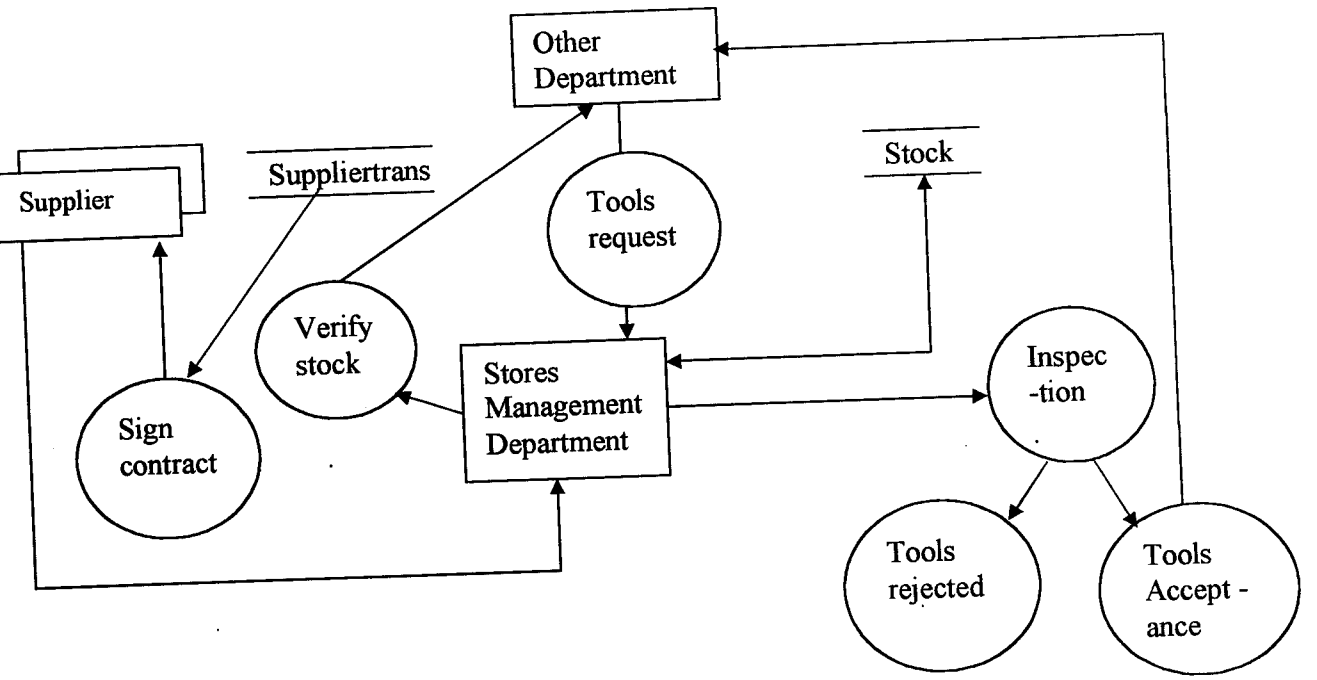


4.3.2. DATA FLOW DIAGRAM

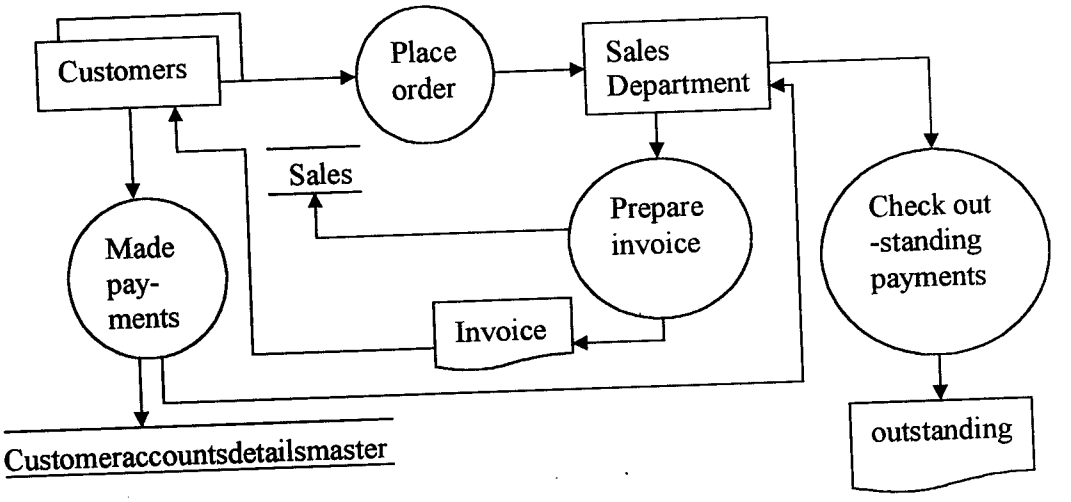
4.3.2.1. RAW MATERIAL MANAGEMENT



4.3.2.2. STORES MANAGEMENT



4.3.2.3. SALES AND DISTRIBUTION



4.3.3. MENU STRUCTURE

- Masters
- Transactions
- Accounts
- Utilities
- Tools
- Reports
- Window list
- Exit

Main Menu Expansion:

- Masters
  - Suppliers
  - Customers
  - Tools
    - ✓ Suppliers
    - ✓ Machinery
    - ✓ Department
  - Others
  - Exit

- Transactions
  - Contract
  - Arrival
  - Sales
  - Daily
    - ✓ Payment (to suppliers)
    - ✓ Receipts (to customers)

- Accounts
  - Customers
  - Suppliers

- Utilities
  - Stock list
  - Calculator
- Tools
  - Purchase
  - Issues
  - Maintenance
- Reports
  - Contracts
  - Arrivals
  - Outstandings
  - Stocks
  - Payments
  - Receipts
  - Supplier/Customer Info
- Window list
  - Cascade
  - Horizontal
- Exit

4.4. MODULE DESIGN

The following are the modules which are included in the Textile Mill Management System:

- Raw material management
- Stores management
- Sales and distribution management
- Maintenance management

4.4.1. RAW MATERIAL MANAGEMENT

Raw material management includes

a. PURCHASE OF RAW MATERIAL

b .INSPECTION OF RAW MATERIAL

c. INVENTORY AND ISSUES

a. <u>PURCHASE OF RAW MATERIAL:</u>

Cotton is the major raw material. Cotton of various length, micronaire value [fineness], different trash content and uniformity ratio are available. The head of the department has to decide the variety of cotton to be purchased as per their count pattern. They may produce three or four counts at a time like 20s, 30s, 60s, 100s, etc., The cotton can be purchased on the spot basis or mill delivery basis. Rates also differ for cash payment and credit payment. The purchase order should be placed after getting the fiber sample and inspecting it.

b. INSPECTION OF RAW MATERIAL:

After the arrival of raw material to the company, the samples are collected randomly from as many bales as determined by Quality Control department. The cotton will be tested for various parameters like length, micronaire value [fineness], color, trash contents, fiber strength, maturity value, etc., If the sample is similar to the lot, the lot will be accepted otherwise it will be rejected.

c. INVENTORY AND ISSUES:

The department head decides the stock after assessing its production pattern, cotton availability and the financial position of the mill. Different varieties of cotton are stored as different lots. Mills pattern is not affected and maximum benefit is derived in the purchase of cotton. Bales of cotton are issued to Blow Room daily as per their requirement.

Inventory has its own maximum level and reorder level. The raw material stock should be maintained at least a minimum level so that if the production department requests there should not be any lack of raw materials.

4.4.2. STORES MANAGEMENT

Stores management includes :

a. STORES INVENTORY

b. PURCHASE ORDER

a. STORES INVENTORY:

A spinning mill has a wide range of machinery. So purchase of spares and stores and its inventory management is an important area in a textile mill. Usually a mill will have a storekeeper and two or three staff for assisting the storekeeper. The

spares are kept in different shelves according to the departments like carding, spinning, etc.,

The items having direct bearing on yarn quality are identified as critical and noncritical items. Bobbins, spinning and doubling empty tubes, plastic cones, paper cones, ring travelers, spindle, spindle tapes, etc., are critical items.

It is the responsibility of the storekeeper to prepare the list of the parts required. The mill manager will approve these parts.

After approving the items by the mill manager, the mill will receive the material from the central officer and the items are added in the stores ledger. If any updation is done, that is also noted. Then inform the head of the department regarding the material arrival, then inspect the material as per specification and get approval from the head of that department. After all these steps the material is issued to the concerned departments as per their requisition.

b. PURCHASE ORDER:

Purchase order includes the various phases like arrival, inspection, issues, stock levels, etc.,

The purchase is ordered as per the order level. It is done sometimes every week or every day. The storekeeper will collect the requirements from the machinery maintenance department and production department. They will call for the rates and quotation from different suppliers. They will get samples along with the quotation. The party supplies after getting the order. Then the party has to confirm this, and then the company gets the material.

The company inspects the material with quantity, quality and specification. If all specifications are proper, the material is passed else rejected.

4.4.3. SALES AND DISTRIBUTION

Sales and distribution is a part of the marketing branch of the company. The yarn produced in the mill is sold in various centers in India. The yarn is also exported to foreign countries.

The operations done in the marketing department of the company are:

- order entry
- billing
- sales analysis
- forecasting
- distribution statistics
- stock availability
- demand history

There are various numbers of depots in India associated with sales and distribution. These depots are managed by depot keepers, who are responsible in receiving the yarn, storing it and selling as per the market. Daily reports about the prices, demand and market situations will be maintained regularly. After getting permission from the mill, the depot keeper will sell the yarn in the market. Depot keeper collects the money for sold yarn and deposit in the mill's account in the local bank. Then the money is transferred to the mill by TT, MT, drafts, etc., Depot keeper will send daily reports about the stock statement, sales details, etc., [through fax/email].

In sales and distribution system the steps involved are to enter a customer order or return data, getting information from the customer and product details, informing the warehouse workers how to fill and ship the order [or restock the return], prepare packing slip, back order file and customer invoice.

The other method is keeping a consignment agent for each center. The agent will inform about the price details, market trend, etc., If it is satisfied, the mill will send the yarn for sale on consignment basis.

The brokers from various areas will approach the mill and buy the yarn on cash basis. This type of approach is called a direct sale by the mill.

4.4.4. MACHINERY MAINTENANCE MANAGEMENT

This module mainly deals with the maintenance of the various machineries in the mill.

The company will have a maintenance incharge in the managerial level. The incharge will be informed about the breakdown from various departments. The severity of the breakdown should be studied. The electrician should be called if the problem is pertaining to power house. The maintenance workmen should be called if it is a mechanical problem. The machine should be handed over to production department after attending. The machine should be run by tenters and the quality should be checked if necessary.

A record is properly maintained keeping tracks of the problem. A schedule should be made for cleaning various machines at regular intervals. The cleaning process is done in three different ways. They are:

- Daily cleaning
- Periodic cleaning
- Thorough checking

Maintenance of spares is those which are consumed regularly like bearings, bells, etc., these are available in plenty and the spares can be stocked after building

a data based on the consumption pattern. Maintenance supervisors will assist the storekeeper in placing orders for the spares. Maintenance is divided into four parts,

1. Day to day maintenance
2. Preventive maintenance
3. Breakdown maintenance
4. Capital repair and overhaul.

If the machineries are not maintained properly, the production and the quality of the yarn will be affected, which in turn will affect the profitability of the mill.

SYSTEM TESTING AND IMPLEMENTATION

5. SYSTEM TESTING AND IMPLEMENTATION

5.1. TESTING

System testing is the stage of implementation that is aimed at ensuring that the system works accurately and efficiently before line operation commences. Each module in the system has been tested individually and extensively. The subsystems were integrated to form a complete system. The main system has also been tested.

Using test data the whole system is tested in order to verify that the programs link together in the way specified to produce the output specified.

To assure the quality of the system, the following are to be considered:

- Scope of testing
- Tools used
- Test platforms
- Methods

Here the scope is designed as the application including all the modules. Debugging tools are provided and hence they are used.

The system has been tested for the following criteria:

- Validation of input for each available data.
- Sequential tests which ensure that the input for the current stage is done, after the completion of the previous stage.
- Consistency of the application, which ensure that the system works properly in the long run.
- Proper Insertion of all values to the appropriate fields in each table is verified.
- Proper updating of all tables' records has been verified.

5.2. IMPLEMENTATION AND RUN

In Parallel run we use both the existing system as well as the proposed system concurrently in different machines. This helps to detect bugs that were hidden during testing. It also helps to identify any new changes that might be required.

- The proposed system is checked for any errors or any bugs. The system is exploited to the full so that any errors creeping up can be identified and debugged.
- The user is introduced to the system, any customization or clarifications with regards to the user requirements are made.
- This also provides an excellent platform to compare the difference and uniqueness of the system in terms of ability.

Parallel run is a process that has to be carried out till the system becomes more reliable and also gives confidence to the users. The project was undertaken in a systematic way and proceeded. The project work, no doubt, will serve as useful software for the users.

Maintenance will be provided by our junior batches that are willing to serve the instruction as much as we were. The software was designed in such a way that the maintenance could be done easily. Also since VISUAL BASIC is a popularly used tool support would be available for a very long time.

As a future enhancement, the backend can be changed to ORACLE changes required for porting the system is very little since the design has been such that the front-end does not depend upon the backend platform heavily.

CONCLUSION

6. CONCLUSION:

With the exposure of the technical knowledge of computers and its languages, whatever we gained is fully applied in the design an implementation of the **TEXTILE MILL MANAGEMENT SYSTEM**.

The developed system has been done to reduce the workload of the staff of the organization. This system has an added advantage of reliability and accuracy.

All the suggestions forwarded in the software proposal have been successfully completed and the final thresholds of the applications have been crossed.

During the design phase of the **TEXTILE MILL MANAGEMENT SYSTEM** many difficulties were encountered. All these difficulties were analyzed deeply and great efforts were taken to bring out an accurate and credible software package.

This user-friendly software has overcome strict and severe validation checks performed using the test data. A great effort was made to attain maximum perfection in documenting the software in a simple, precise and self-explanatory manner.

7. FUTURE ENHANCEMENTS:

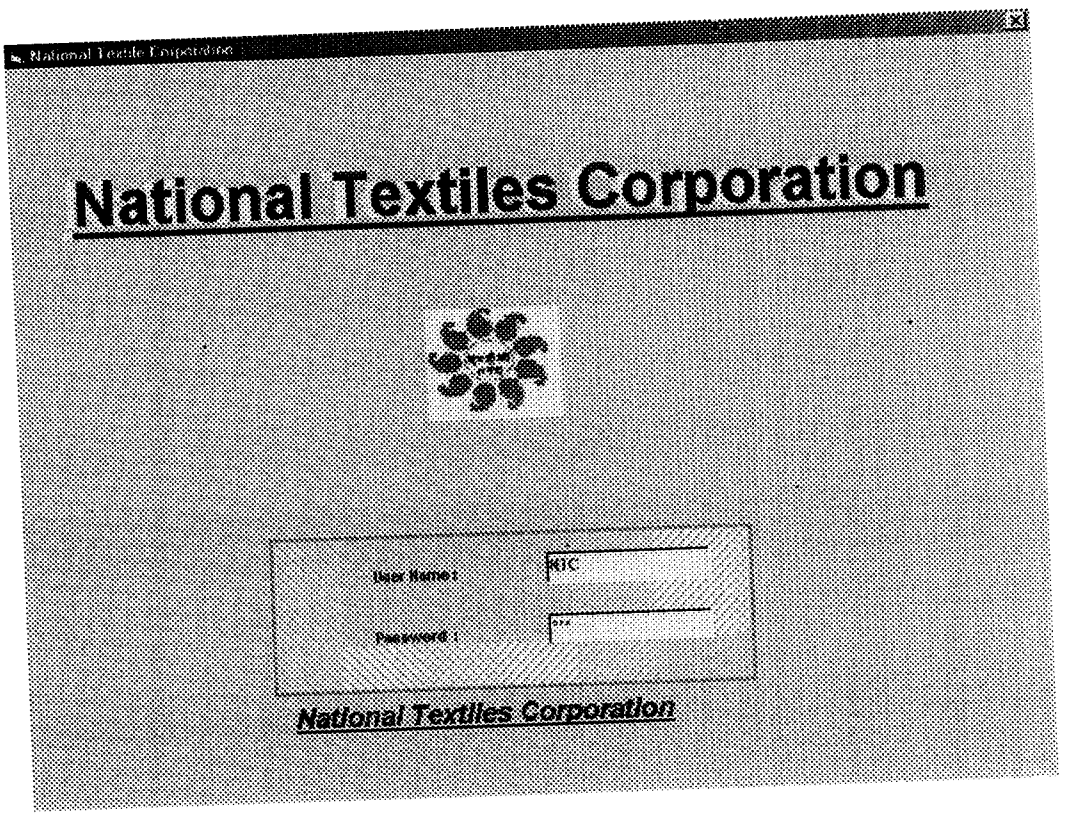
In the future we can improve the screen designs and can increase the number of forms designed for our project, thereby providing more comfort and ease for the users. This helps the company to enter and maintain data in an easier manner. The number of reports can also be increased, thus retrieval of more details in an accurate manner would be possible. This in turn helps the management to view the information about the various departments and their activities in an easier manner through the forms and reports. We can even include another module named "Production Monitoring" and thus providing the entire operations needed for a textile mill in a better manner.

Bibliography:

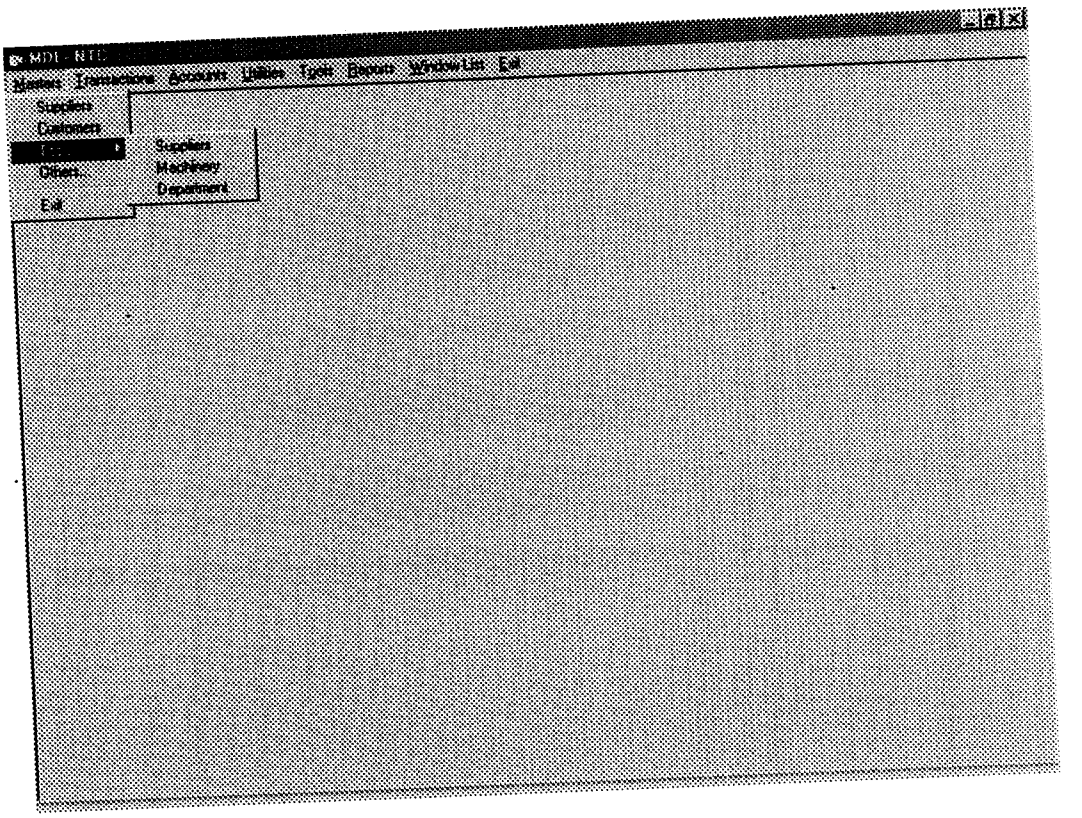
- "Visual Basic 6", Gray Cornel.
- "Visual Basic 6", Greg Perry.
- "Programmers Reference Visual Basic 6 " -2nd Edition, Dan Rahmel.
- "SQL Server 7 –The Complete Reference ",Gayle Coffman.
- "Microsoft SQL Server 7", Ronald. R. Talmage.

APPENDIX

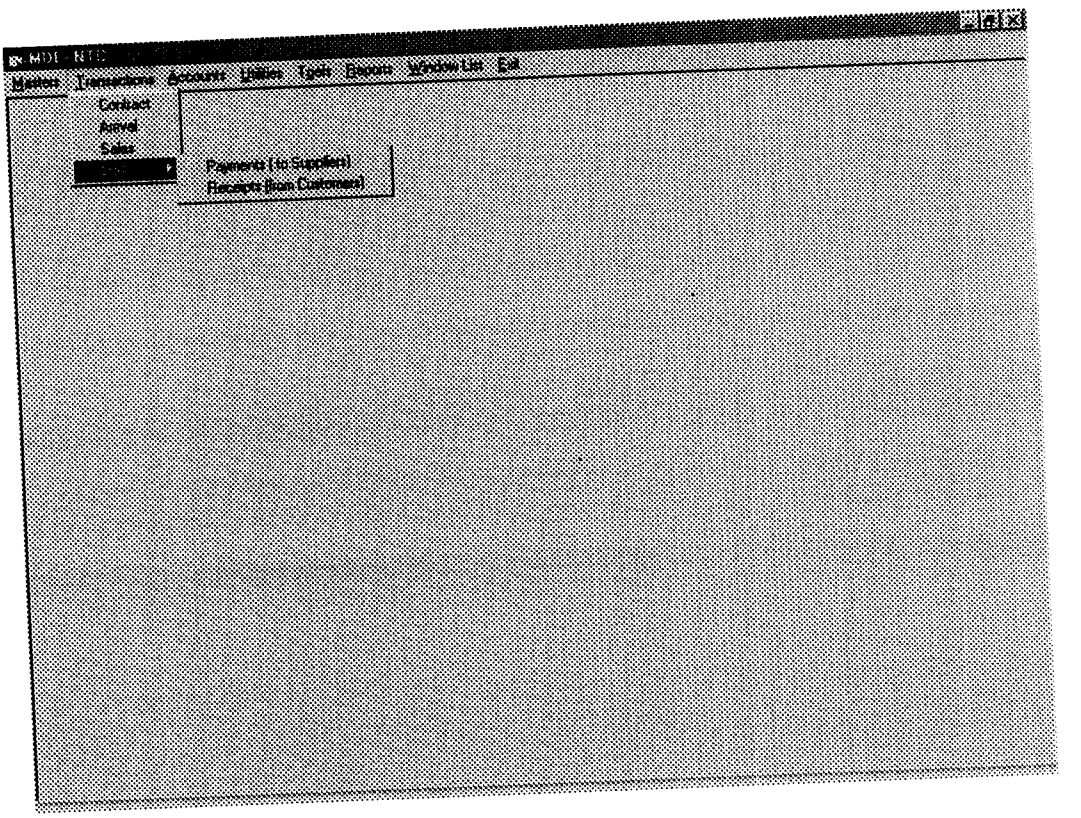
1. USER LOGIN FORM:



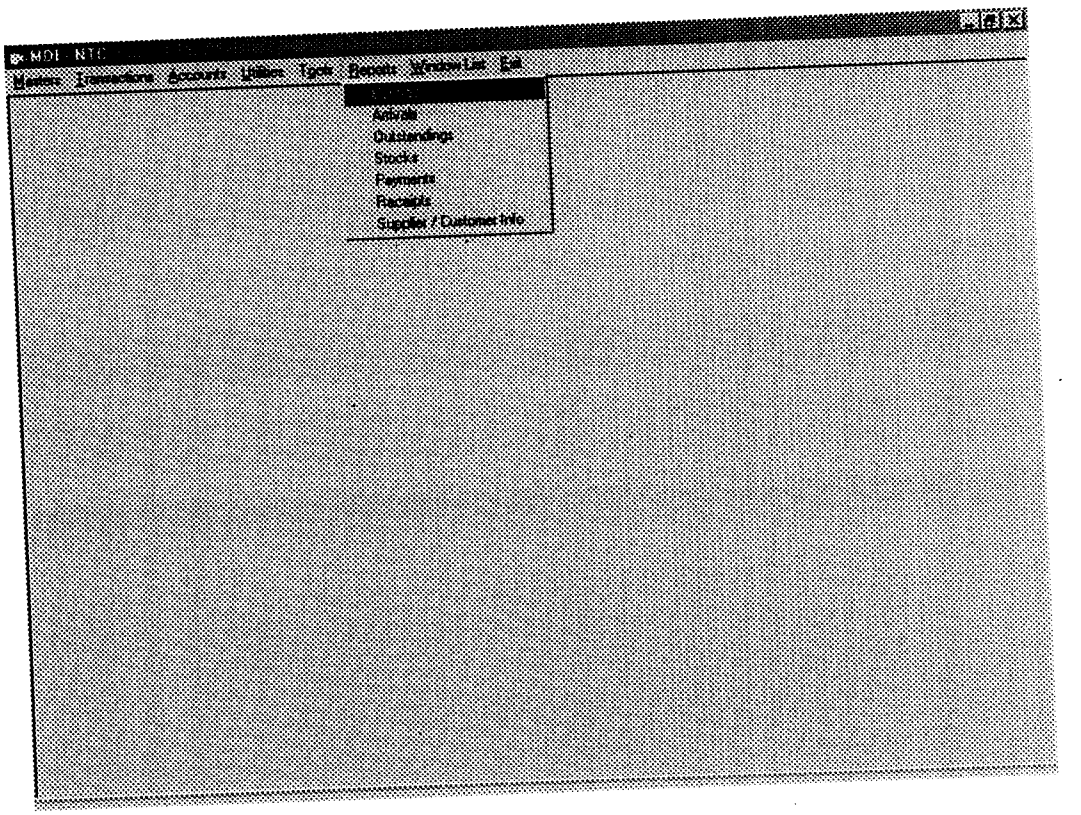
2. MDI FORM SHOWING MASTER MENU:



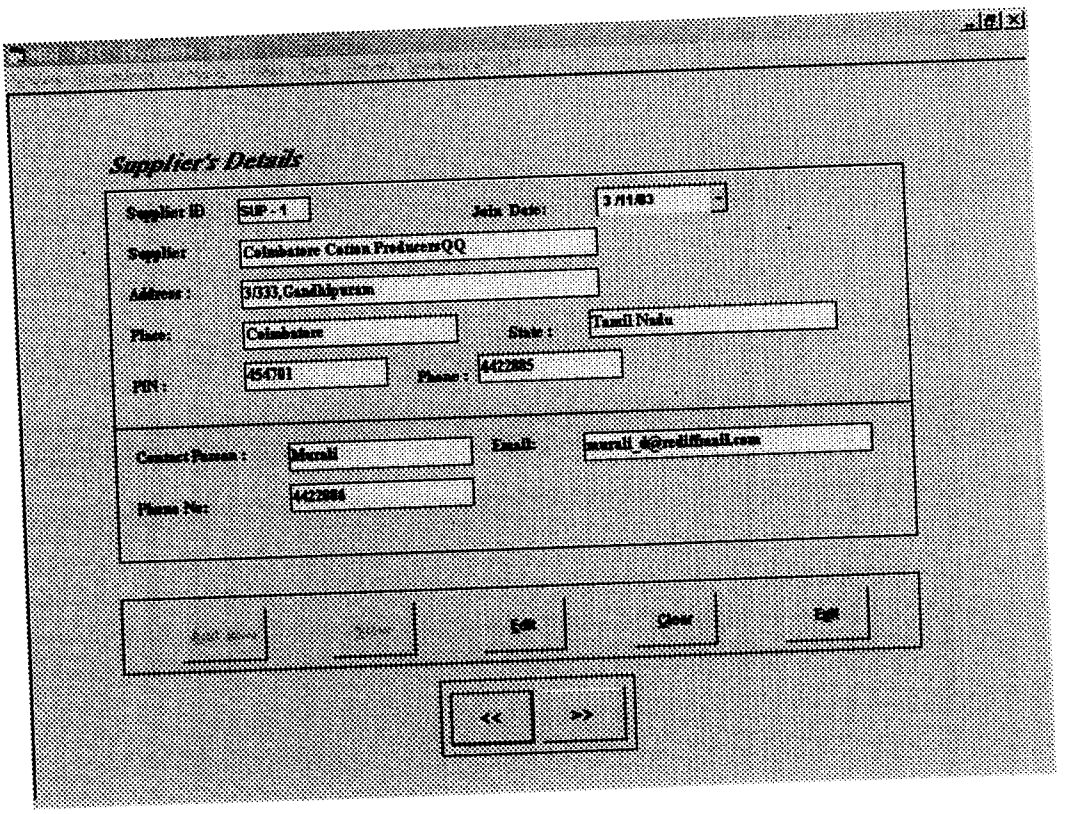
3. MDI FORM SHOWING TRANSACTIONS MENU:



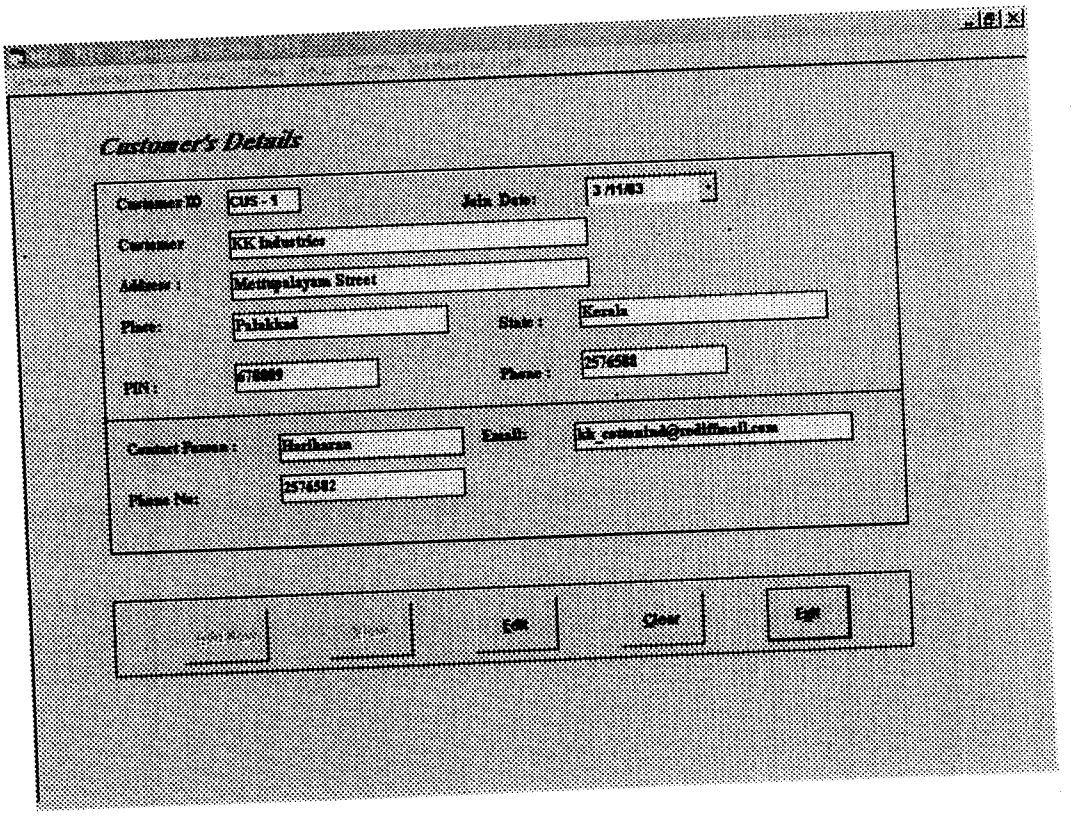
4. MDI FORM SHOWING REPORTS MENU:



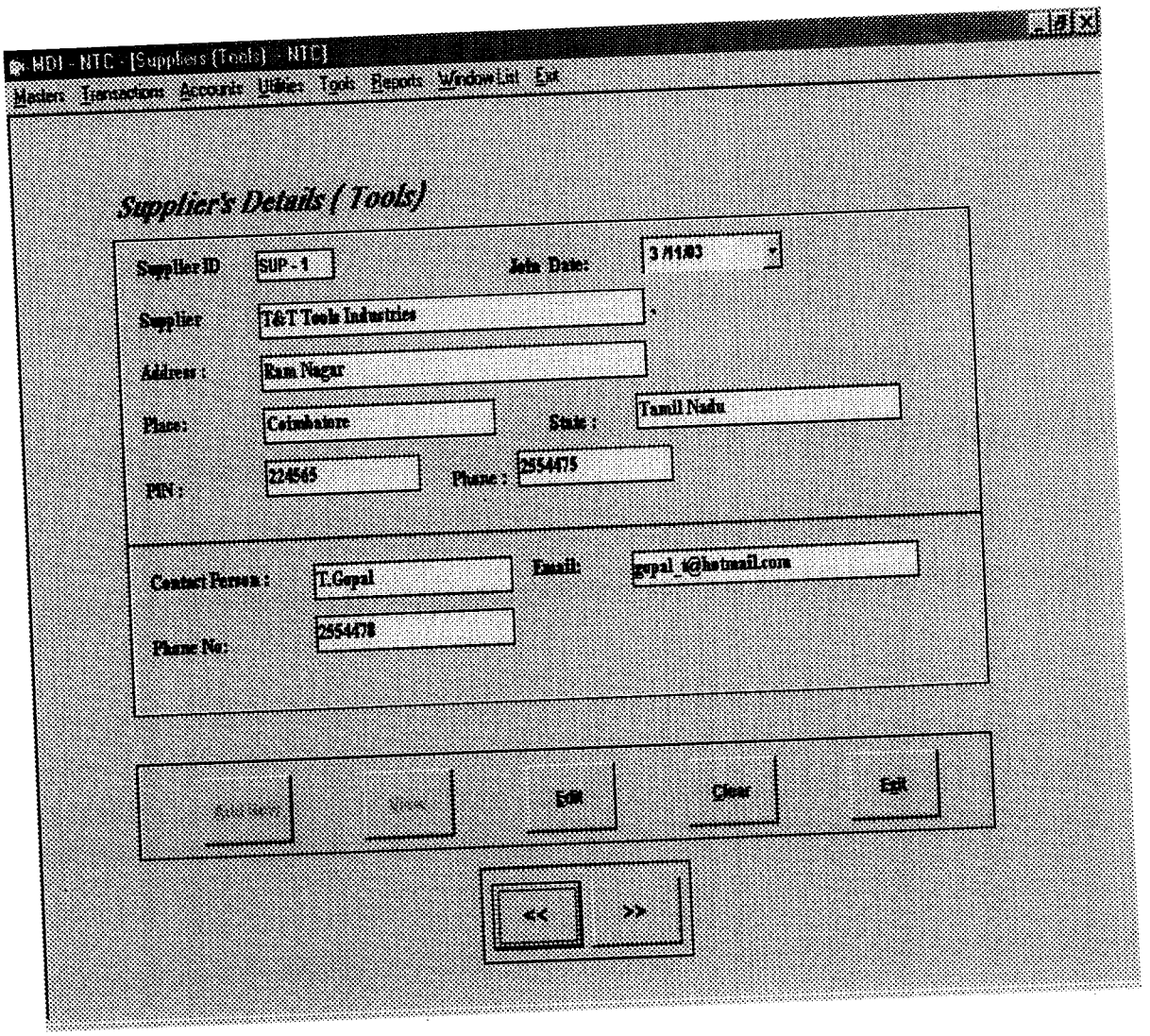
5. FORM SHOWING SUPPLIER DETAILS :(COTTON)



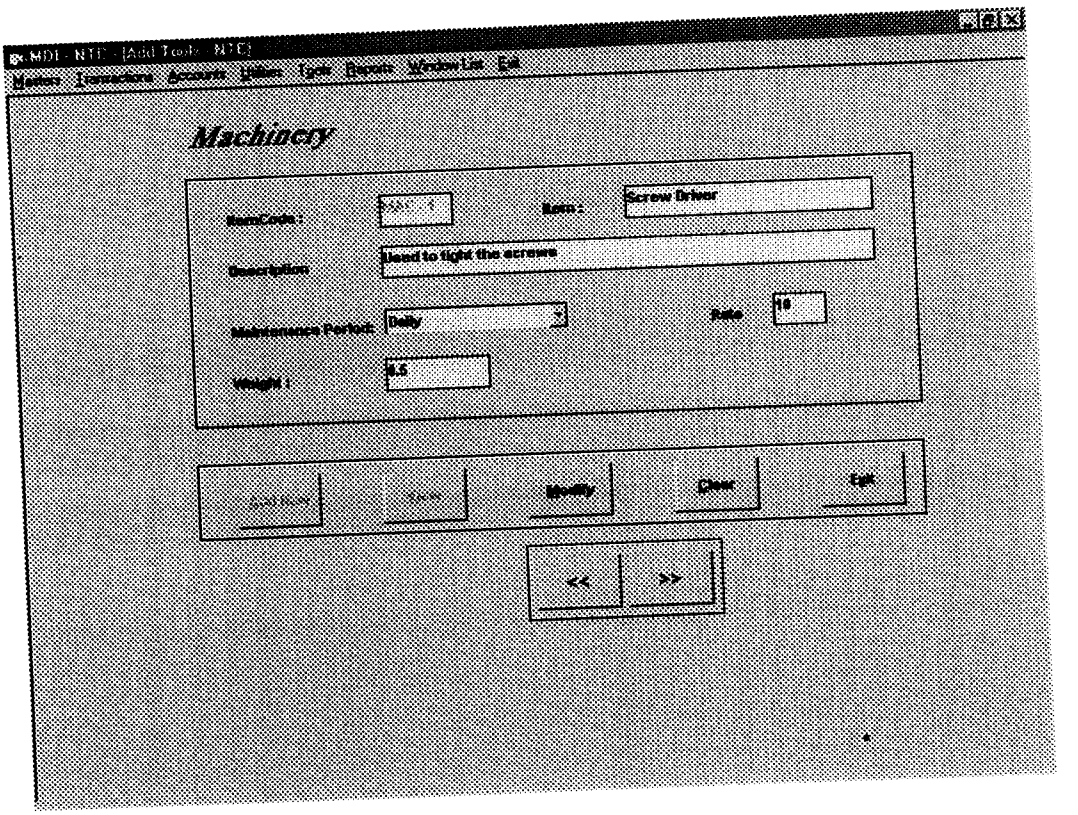
6. FORM SHOWING CUSTOMER DETAILS :(COTTON)



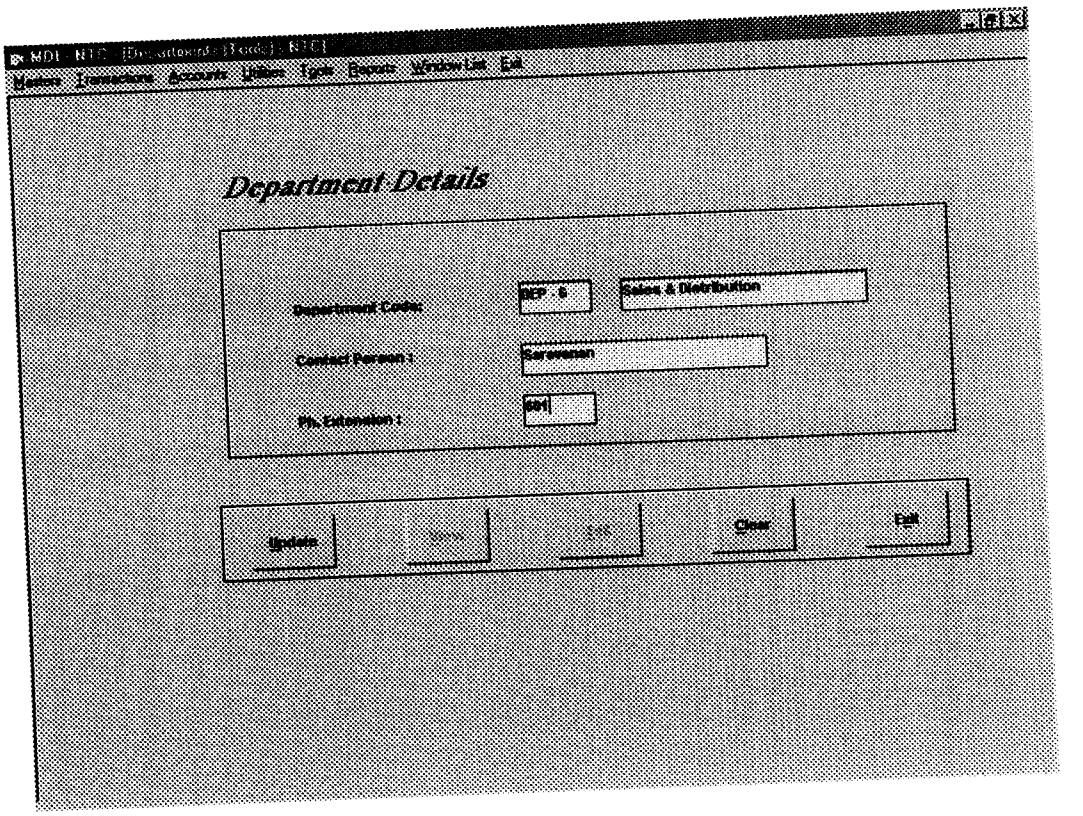
7. FORM SHOWING SUPPLIER DETAILS :(TOOLS)



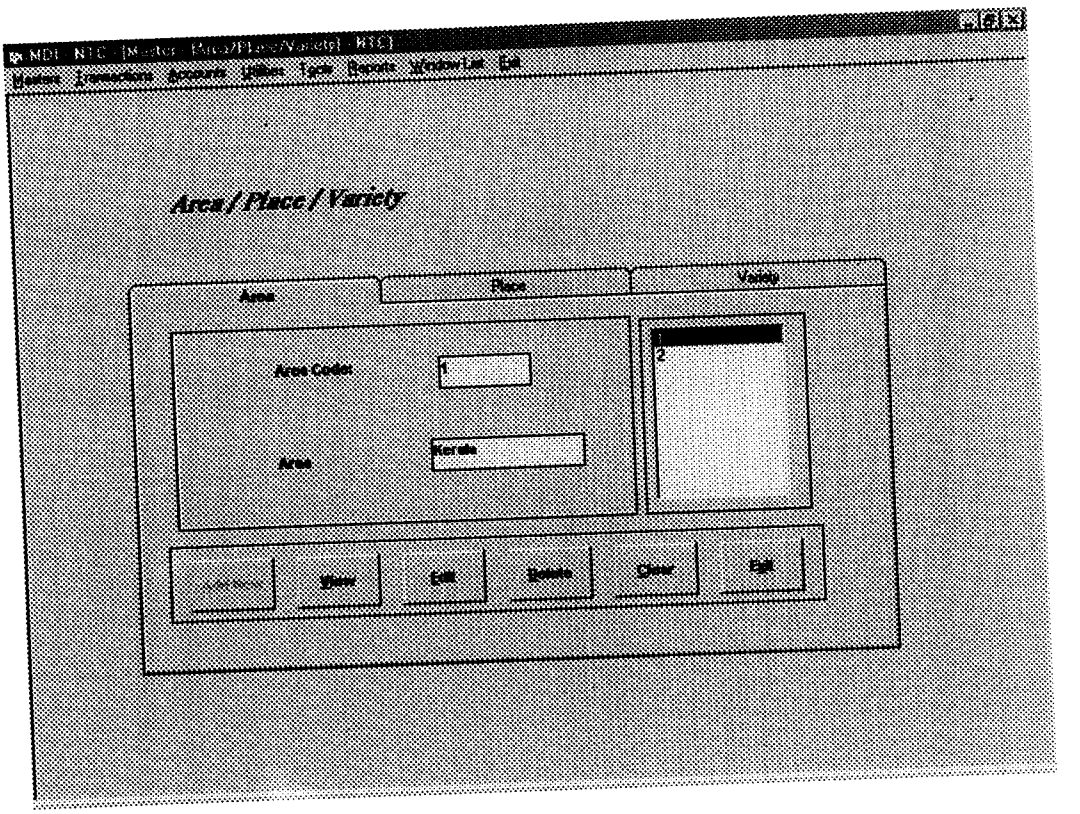
8. FORM SHOWING MACHINERY DETAILS:



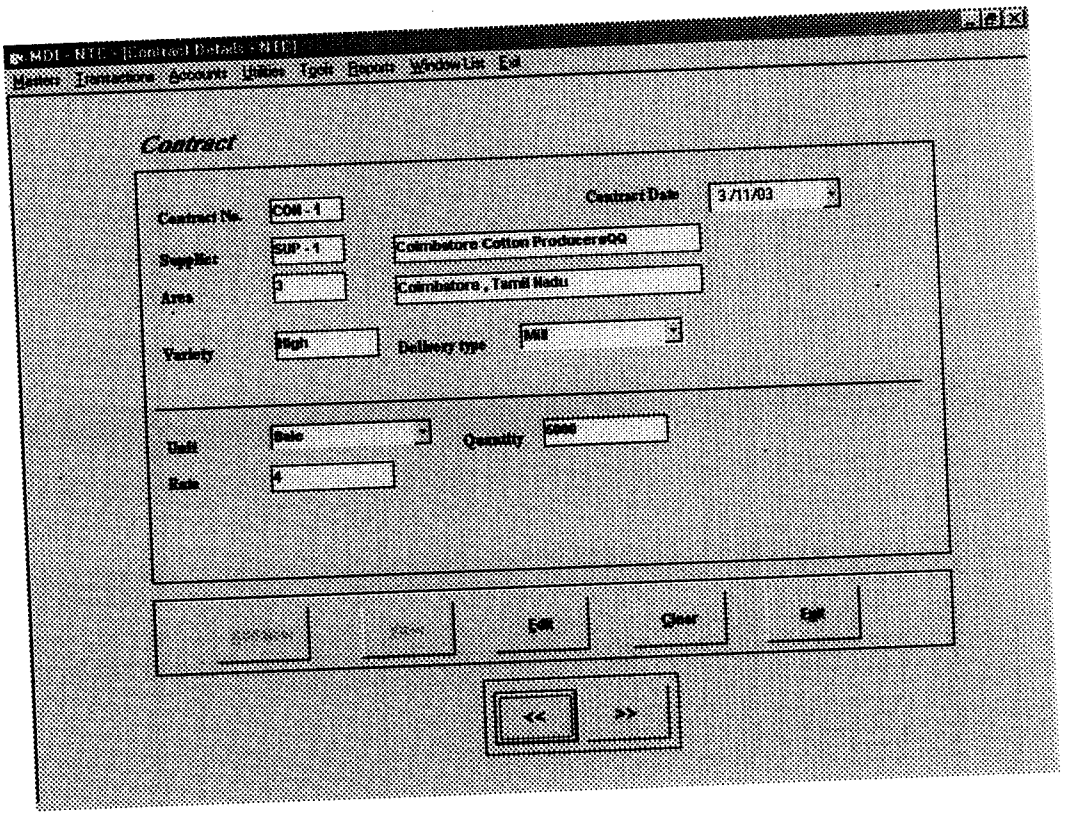
8. FORM SHOWING DEPARTMENT DETAILS:



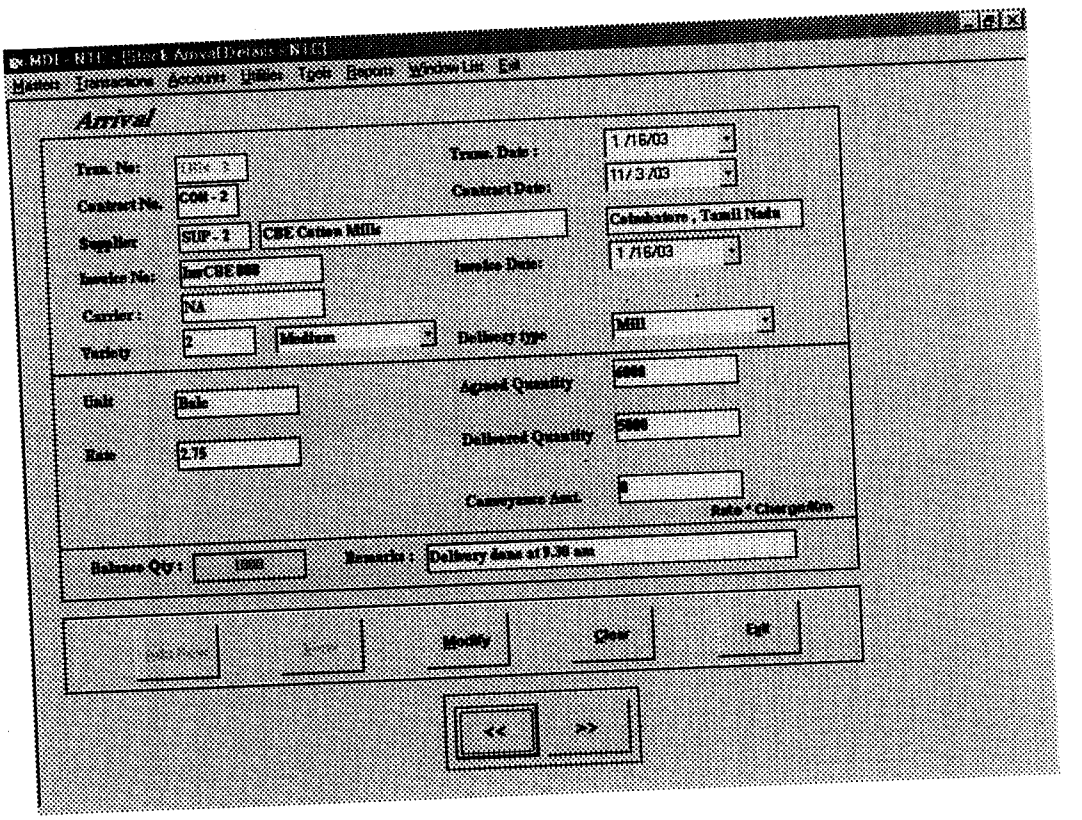
9. FORM SHOWING THE DETAILS OF AREA/PLACE/VARIETY:



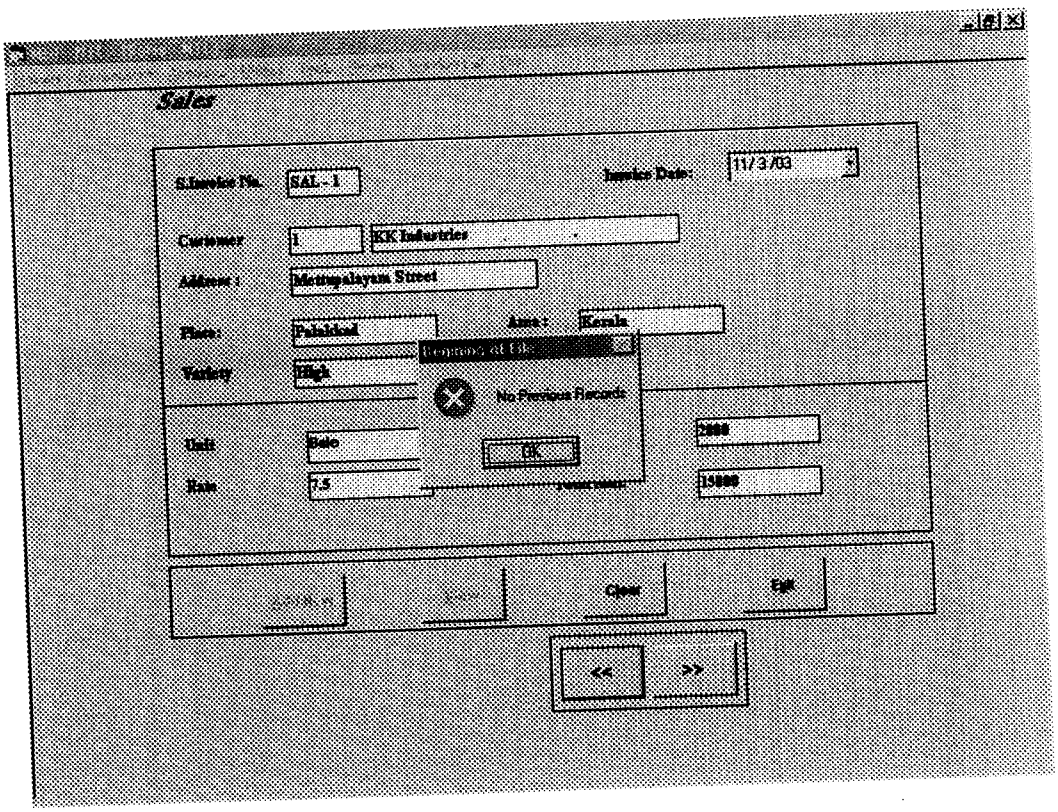
10.FORM SHOWING THE CONTRACT DETAILS: (COTTON)



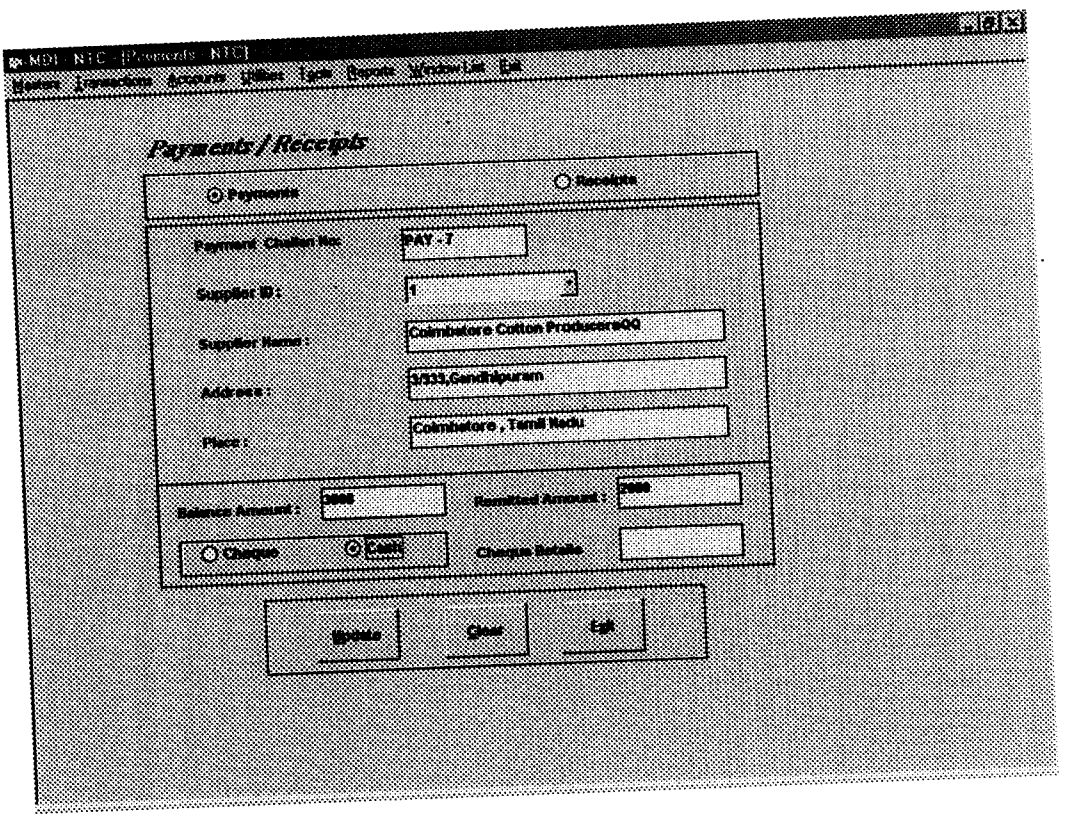
11. FORM SHOWING THE ARRIVAL DETAILS: (COTTON)



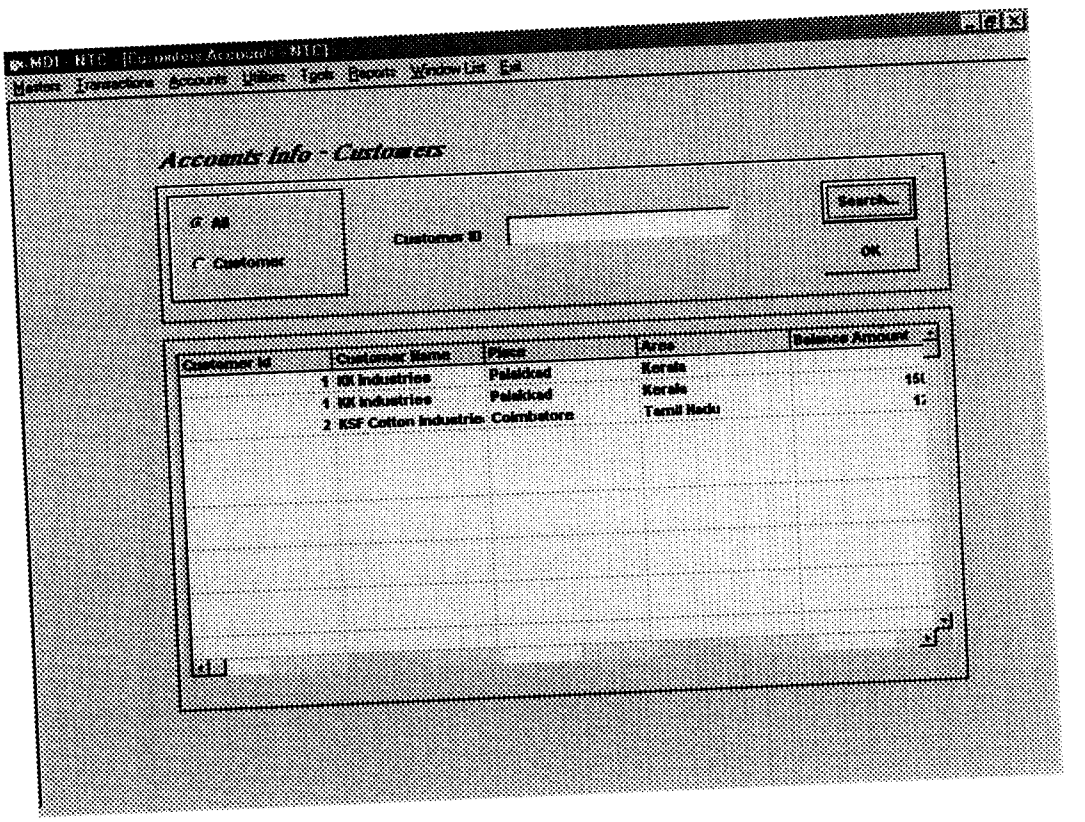
12. FORM SHOWING THE SALES DETAILS: (COTTON)



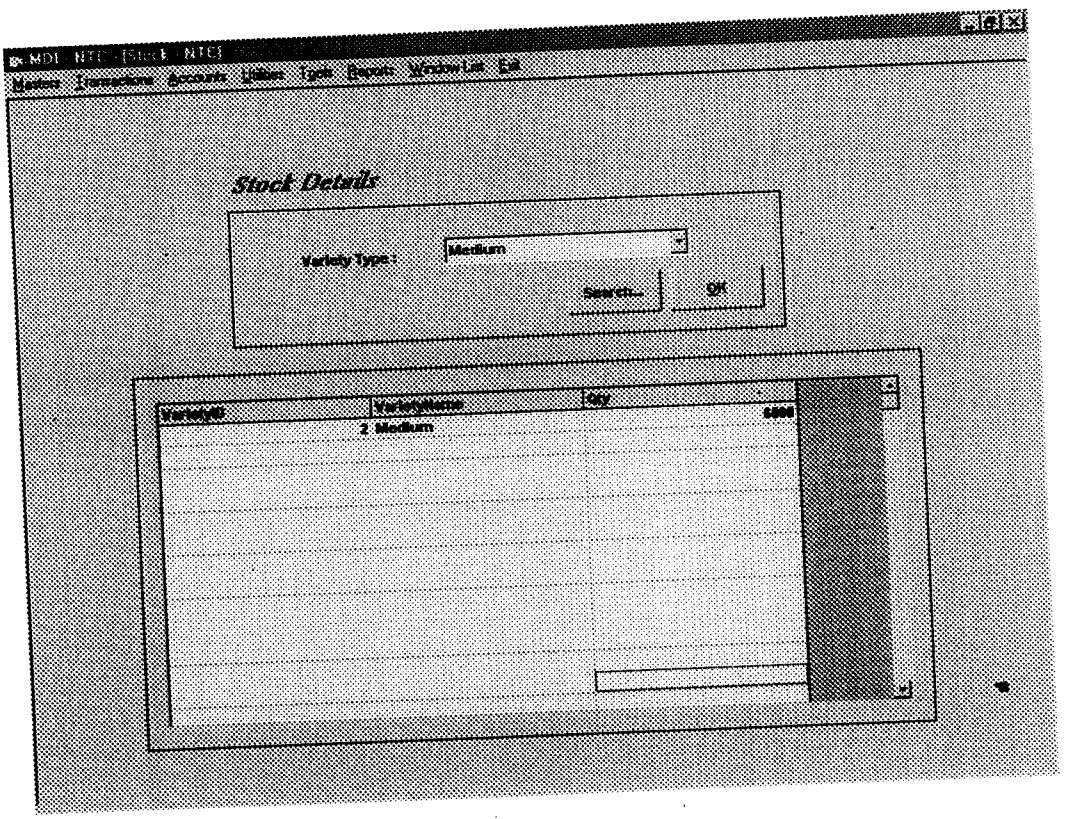
13. FORM SHOWING THE PAYMENTS/RECIEPTS DETAILS:



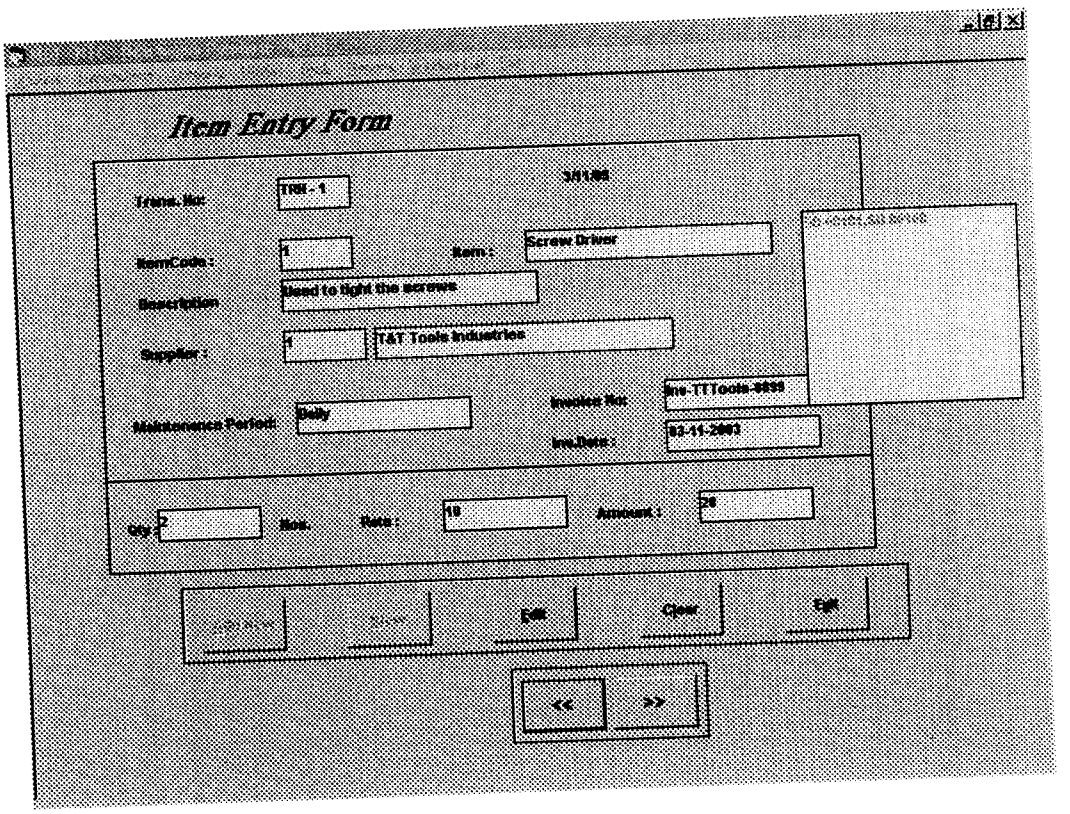
14. FORM SHOWING THE CUSTOMER'S ACCOUNT INFORMATION:



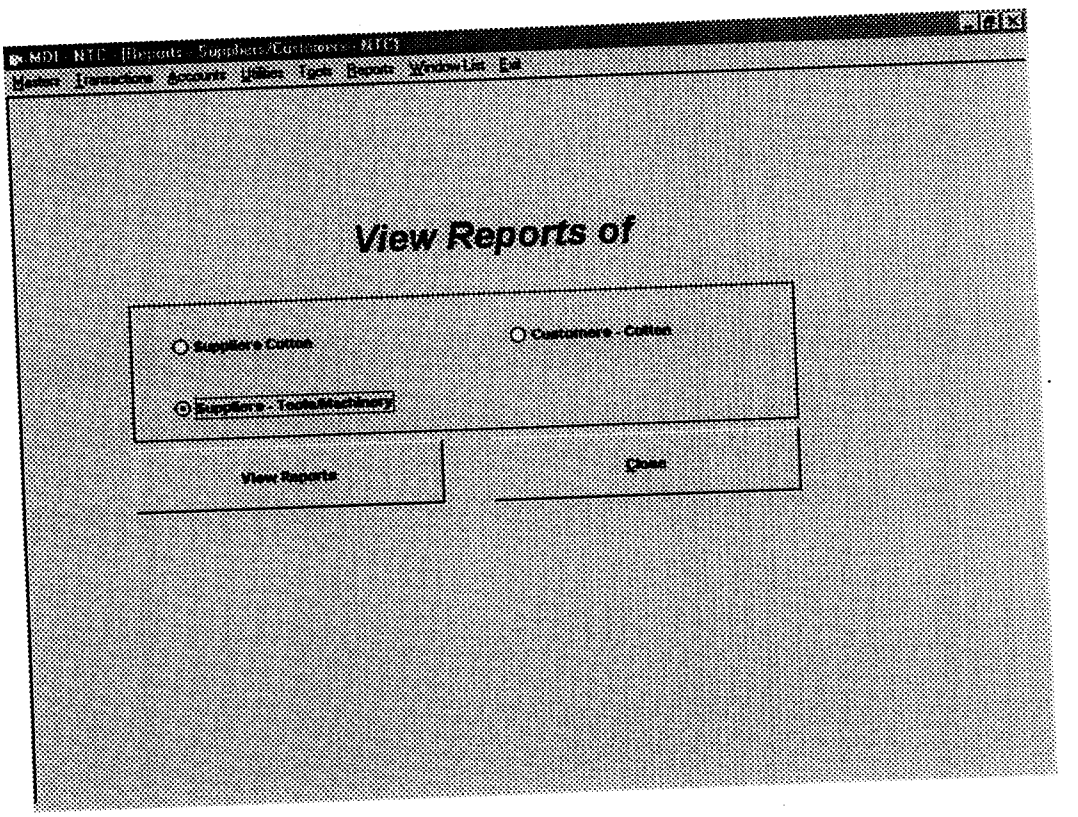
15. FORM SHOWING THE STOCK DETAILS:



16. FORM SHOWING THE ITEM ENTRY INFORMATION: (TOOLS)



17. FORM SHOWING THE REPORT FORMAT:



SAMPLE CODING FOR PAYMENTS AND RECIEPTS (TRANSACTIONS)

```
Private Sub cmbpayrec_KeyPress(KeyAscii As Integer)
cmbpayrec.AddItem ("1")
cmbpayrec.AddItem ("2")
cmbpayrec.AddItem ("3")
cmbpayrec.AddItem ("4")
If KeyAscii = 13 Then
  If Trim(cmbpayrec.Text) = "" Then Call fnmessages("Missing"): Exit Sub
    Dim rssupextract As New ADODB.Recordset
    If Mid(Trim(txtpayrec(0)), 1, 3) = "PAY" Then
     supextract.Open "select * from
[SupplierMaster],[PlaceMaster],[StateMaster],[SuppliersAccountDetailsMaster]
where suppliermaster.supid=SuppliersAccountDetailsMaster.supid and
suppliermaster.supid= " & Trim(cmbpayrec) & " and statecode=areacode and
placecode=placeid", cn, 3, 3
 ElseIf Mid(Trim(txtpayrec(0)), 1, 3) = "REC" Then rssupextract.Open "select *
from[CustomerMaster],[PlaceMaster],[StateMaster],[CustomersAccountDetailsMa
ster] where customermaster.custid=CustomersAccountDetailsMaster.custid and
customermaster.custid= " & Trim(cmbpayrec) & " and statecode=areacode and
placecode=placeid", cn, 3, 3
      End If
      If rssupextract.EOF = True Then Call fnmessages("EOF/BOF"): Exit Sub
       If Mid(Trim(txtpayrec(0)), 1, 3) = "PAY" Then
        txtpayrec(1) = rssupextract("suppliername")
         txtpayrec(2) = rssupextract("address")
          txtpayrec(3) = rssupextract("place") & " , " & rssupextract("area")
          txtpayrec(4) = rssupextract("amount")
       ElseIf Mid(Trim(txtpayrec(0)), 1, 3) = "REC" Then
          txtpayrec(1) = rssupextract("customername")
```

```
        txtpayrec(2) = rssupextract("address")
        txtpayrec(3) = rssupextract("place") & " , " & rssupextract("area")
        txtpayrec(4) = rssupextract("amount")
      End If
      txtpayrec(5).SetFocus
     End If
     End Sub
     Private Sub cmdpayrec_Click(Index As Integer)
Dim str As String
str = Mid(Trim(cmdpayrec(Index).Caption), 1, 2)
Select Case Index
Case 0:                 'ADD NEW/UPDATE
Dim maxid As Integer, nullchk As Boolean
Select Case str
Case "&A":
optpayrec(0).Value = True
 cmdpayrec(0).Caption = "&Update"
 Call clear
  frapayrecentry.Enabled = True
  fraoptpayrec.Enabled = True
  If optpayrec(0).Value = True Then       'payment
  maxid = maxidcreater("PaymentTrans", "paymentno")
  txtpayrec(0) = "PAY - " & maxid
  ElseIf optpayrec(1).Value = True Then   'receipt
  maxid = maxidcreater("ReceiptTrans", "receiptno")
  txtpayrec(0) = "REC - " & maxid
  End If
  txtpayrec(0).SetFocus
  txtpayrec(0).SelStart = 0
  txtpayrec(0).SelLength = Len(txtpayrec(0))
  txtpayrec(0).Locked = True
```

```
Case "&U":
For cnt = 0 To 5
nullchk = fnnullchk(txtpayrec(cnt))
If nullchk = True Then
Call fnmessages("Missing")
Exit Sub
End If
Next
If optbankcash(0).Value = True Then
   If Trim(txtpayrec(6)) = "" Then
      fnmessages ("Missing")
      Exit Sub
   End If
End If
If cmbpayrec.Text = "" Then Call fnmessages("Missing"): Exit Sub
If optpayrec(0).Value = True Then          'payment
Call addrecords("PaymentTrans", frmpayments)
ElseIf optpayrec(1).Value = True Then      'receipt
Call addrecords("ReceiptTrans", frmpayments)
End If
Call clear
cmdpayrec(0).Caption = "&Add New"
frapayrecentry.Enabled = False
End Select
Case 1:                    'VIEW
   framby.Visible = True
   cmdpayrec(0).Enabled = False
   cmdpayrec(1).Enabled = False
   cmdpayrec(2).Enabled = False
   cmdpayrec(4).Enabled = True
  Case 2:                  'EDIT/MODIFY
```

```
Select Case str
 Case "&E":
  cmdpayrec(2).Caption = "&Modify"
  frapayrecentry.Enabled = True
  framview.Enabled = False
  txtpayrec(0).Enabled = False
  cmbpayrec.SetFocus
  Case "&M":
cmdpayrec(2).Caption = "&Edit"
If optpayrec(0).Value = True Then      'payment
Call updaterecords("PaymentTrans", frmpayments)
ElseIf optpayrec(1).Value = True Then  'receipt
Call updaterecords("ReceiptTrans", frmpayments)
End If
 framview.Enabled = True
framview.Visible = True
 cmdpayback.SetFocus
 frapayrecentry.Enabled = False
End Select
Case 4:                    'CLEAR
 cmdpayrec(0).Enabled = True
 cmdpayrec(0).Caption = "&Add New"
 Call clear
 Case 5:                   'EXIT
 cmdpayrec(0).Caption = "&Add New"
 fraoptpayrec.Enabled = False
 Call endfn(frmdepartments)
 End Select
  End Sub
 Private Sub clear()
  For cnt = 0 To 6
```

```
txtpayrec(cnt) = ""
Next
cmbpayrec.clear
End Sub
Private Sub Form_Load()
fraoptpayrec.Enabled = False
frapayrecentry.Enabled = False
End Sub

Private Sub optbankcash_KeyPress(Index As Integer, KeyAscii As Integer)
If KeyAscii = 13 Then
   If Index = 0 Then
      txtpayrec(6).Enabled = True
      txtpayrec(6).SetFocus
      mode = "Cheque"
   ElseIf Index = 1 Then
      mode = "Cash"
      cmdpayrec(0).SetFocus
  End If
 End If
 End Sub
 Private Sub optpayrec_Click(Index As Integer)
  Dim rssupcustid As New ADODB.Recordset
  Select Case Index
     Case 0:    'payments
        Label2(5).Caption = "Payment  Challan No: "
        Label2(0).Caption = "Supplier ID :"
        Label2(1).Caption = "Supplier Name :"
        Label2(2).Caption = "Address :"
        Label2(3).Caption = "Place :"
        txtpayrec(0) = maxidcreater("PaymentTrans", "paymentno")
```

```
    txtpayrec(0) = "PAY - " & txtpayrec(0)
Case 1:    'receipts
   Label2(5).Caption = "Receipt No: "
   Label2(0).Caption = "Customer ID :"
   Label2(1).Caption = "Customer Name :"
     txtpayrec(0) = maxidcreater("ReceiptTrans", "receiptno")
     txtpayrec(0) = "REC - " & txtpayrec(0)
     txtpayrec(0).Enabled = True
  End Select
End Sub
Private Sub txtpayrec_KeyPress(Index As Integer, KeyAscii As Integer)
If KeyAscii = 13 Then
 If Trim(txtpayrec(Index)) = "" Then Call fnmessages("Missing"): Exit Sub
   Select Case Index
     Case 0:
       cmbpayrec.SetFocus
       Dim rsaccount As New ADODB.Recordset
       If Mid(Trim(txtpayrec(0)), 1, 3) = "PAY" Then   'payment to supplier
       rsaccount.Open "Select distinct(supid) from SuppliersAccountDetailsMaster
 where amount<>0", cn, 3, 3
       ElseIf Mid(Trim(txtpayrec(0)), 1, 3) = "REC" Then 'receipt to customer
       rsaccount.Open "Select distinct(custid) from
 CustomersAccountDetailsMaster where amount<>0", cn, 3, 3
       End If
       If rsaccount.EOF Then
         MsgBox "No OutStanding Balance", vbCritical, "Accounts"
         Exit Sub
       Else
       cmbpayrec.clear
         While Not rsaccount.EOF
```

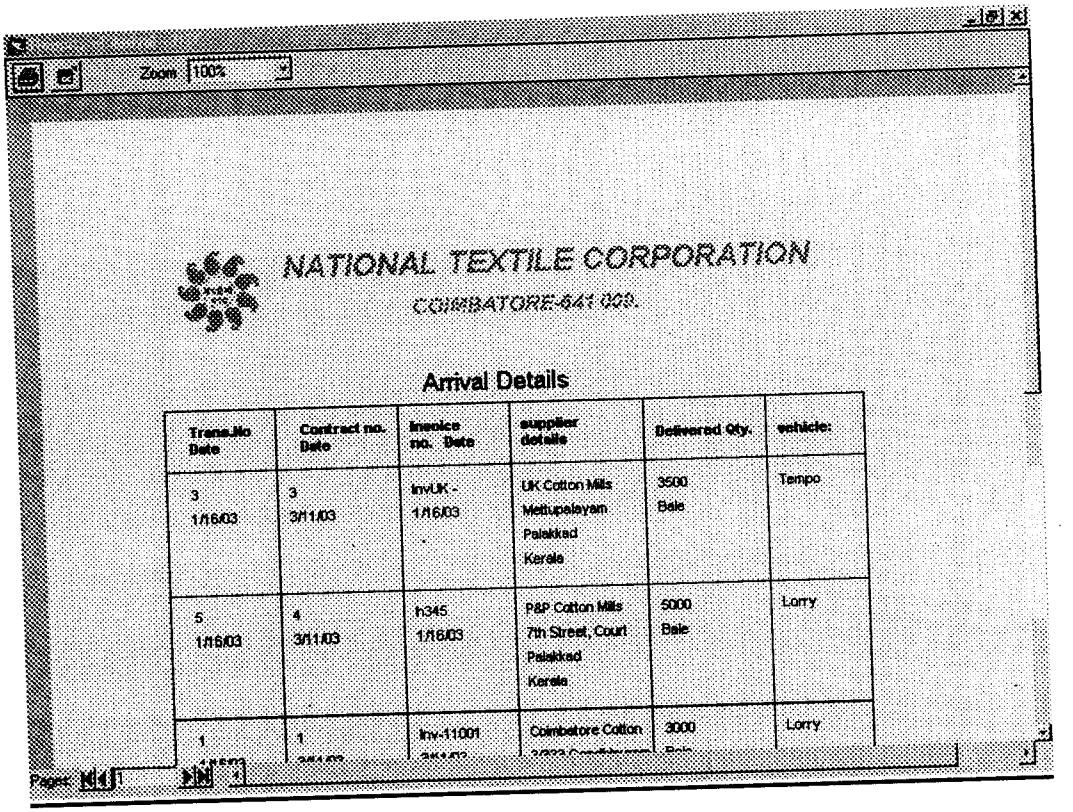
```
            cmbpayrec.AddItem rsaccount(0)
            rsaccount.MoveNext
          Wend
          cmbpayrec.SetFocus
        End If
      Case 5:
        If CDbl(Trim(txtpayrec(5))) > CDbl(Trim(txtpayrec(4))) Then
        MsgBox "Cannot Exceed Balance Amount To Pay", vbCritical, "Excess
Amount"
         Exit Sub
         End If
         optbankcash(0).SetFocus
       Case 6:
         cmdpayrec(0).SetFocus
    End Select
  Else   'keyascii<>13
  Select Case Index
  Case 5:
     KeyAscii = intonly(KeyAscii)
  End Select
  End If
  End Sub
```

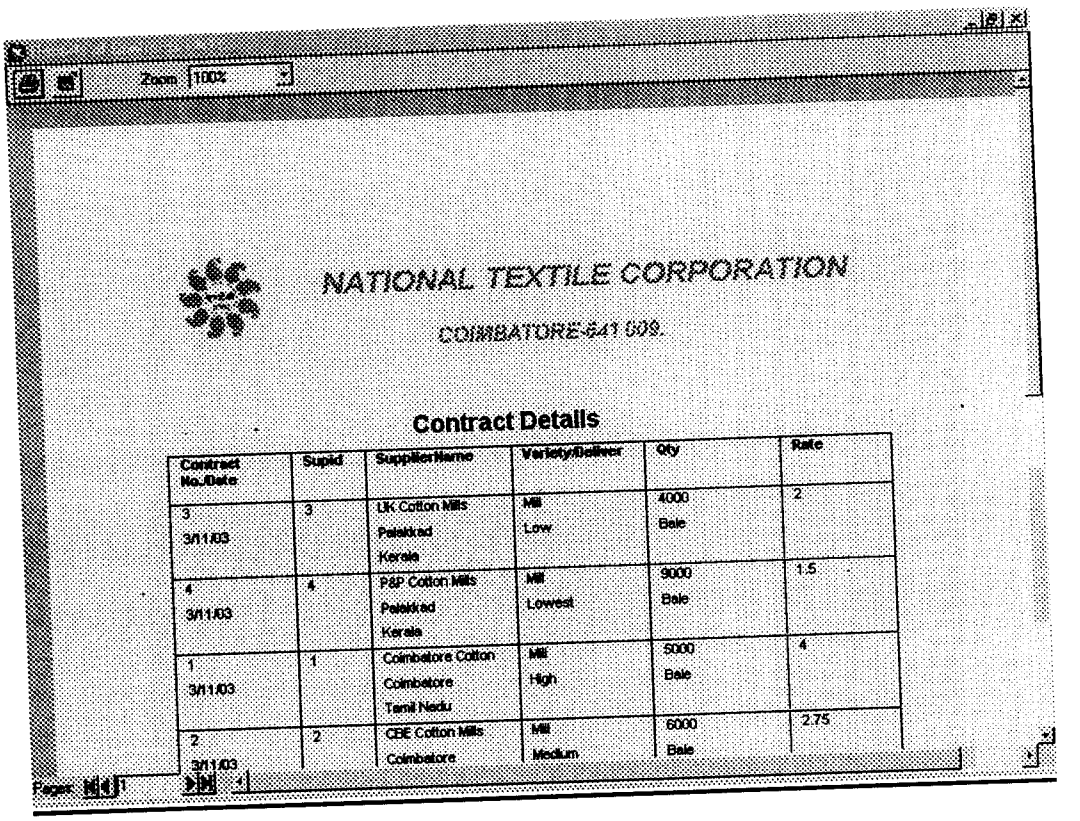
SAMPLE CODING FOR STOCKLIST

```
Private Sub Form_Activate()
Dim rsview As New ADODB.Recordset
rsview.Open "select * from [StockMaster],[VarietyMaster] where
stockmaster.varietyid= varietymaster.varietyid and qty<>0", cn, 3, 3
If rsview.EOF = True Then
  MsgBox "No Stock Items Private Sub cmbvariety_KeyPress(KeyAscii As
Integer)
If KeyAscii = 13 Then
   If Trim(cmbvariety) = "" Then Call fnmessages("Missing"): Exit Sub
   cmdsearch(0).Enabled = True
   cmdsearch(0).SetFocus
End If
End Sub
Private Sub cmdsearch_Click(Index As Integer)
Dim section As Integer
Dim rsview As New ADODB.Recordset, rshead As New ADODB.Recordset
section = 4       'StockList
Set rshead = cn.Execute("ExtractForGridView " & Trim(section) & "")
Select Case Index
Case 0:
rsview.Open "select varietymaster.varietyid,varietyname,qty from
[StockMaster],[VarietyMaster] where stockmaster.varietyid=
varietymaster.varietyid and varietymaster.varietyname= '" & cmbvariety & "'", cn,
3, 3
If rsview.EOF = True Then
Call fnmessages("EOF/BOF")
Exit Sub
```

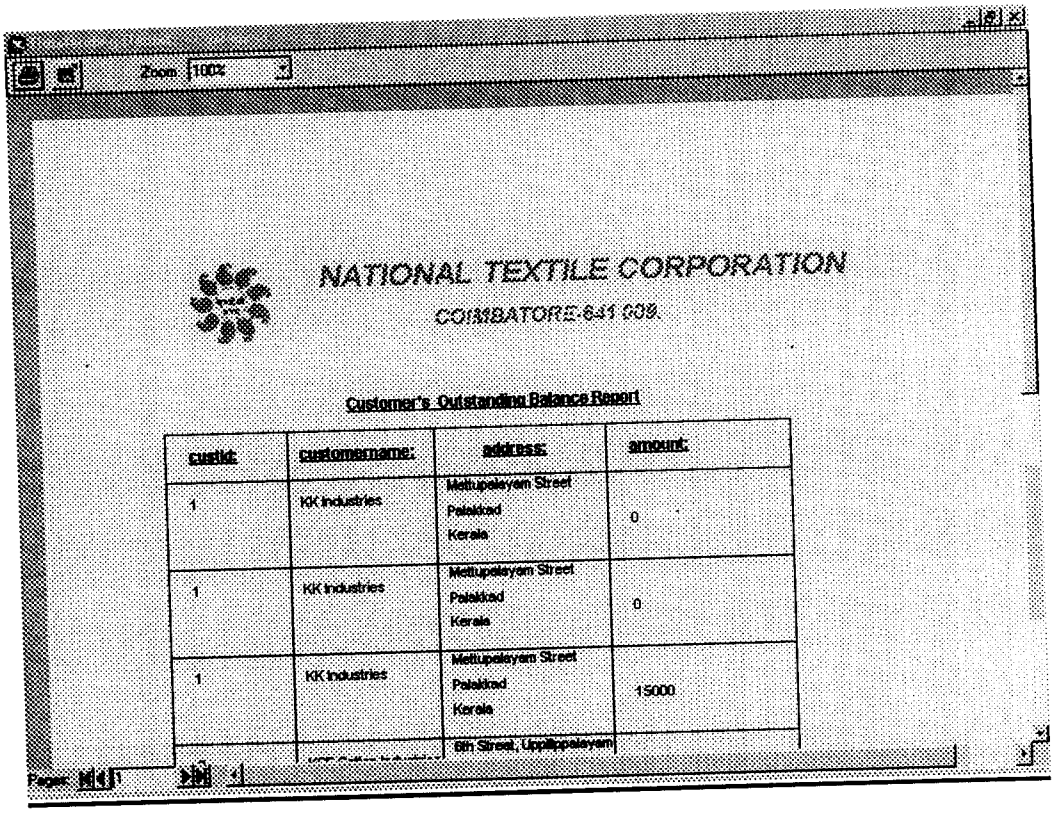
```
End If
Dim frow As Integer
MSFlexGrid1.Refresh
frow = 0
 MSFlexGrid1.row = frow
For cnt = 0 To 2
 MSFlexGrid1.col = cnt
 MSFlexGrid1.Text = rshead("Description")
 MSFlexGrid1.ColWidth(cnt) = 2500
 rshead.MoveNext
 Next
 row = 0
 Dim total As Single
 While rsview.EOF = False
  row = row + 1
  MSFlexGrid1.row = row
  For cnt = 0 To 2
  MSFlexGrid1.col = cnt
  MSFlexGrid1.Text = rsview(cnt)
  Next
  rsview.MoveNext
  Wend
  Case 1:
  MDITextiles.Picture1.Visible = True
  Unload Me
  End Select
  to Show", vbCritical, "Stock"
     If (MsgBox("Do you Want to Sign a New Contract???", vbCritical + vbYesNo,
  "New Contract???") = vbYes) Then
     Unload Me
     frmcontract.Show
```

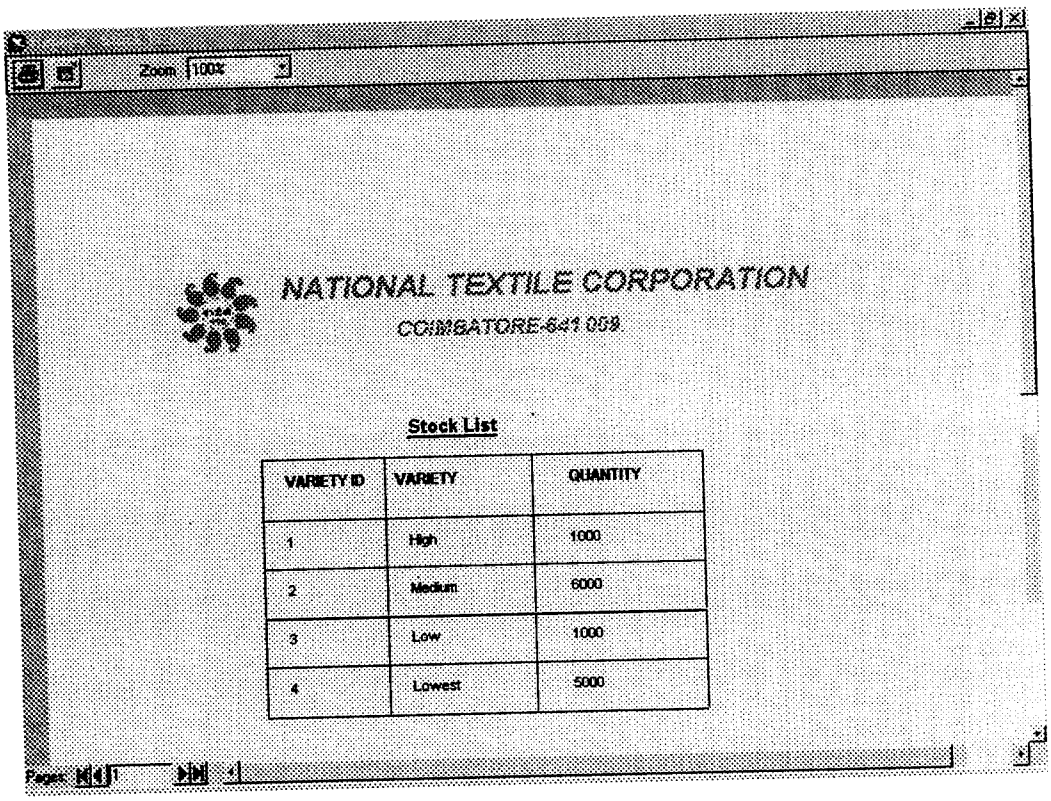
```
    Exit Sub
End If
Else
Call addtocombos(rsview, cmbvariety, rsview("varietyname").Name)
cmbvariety.SetFocus
End If
End Sub
Private Sub Form_Load()
cmdsearch(0).Enabled = True
End Sub
```


Zoom 100%
NATIONAL TEXTILE CORPORATION
COIMBATORE-641 028.
Arrival Details
Trans.No Date
Contract no. Date
Invoice no. Date
supplier details
Delivered Qty.
vehicle:
3 1/16/03
3 3/11/03
InvUK - 1/16/03
UK Cotton Mills Mettupalayam Palakkad Kerala
3500 Bale
Tempo
5 1/16/03
4 3/11/03
h345 1/16/03
P&P Cotton Mills 7th Street, Court Palakkad Kerala
5000 Bale
Lorry
1
1
Inv-11001
Coimbatore Cotton
3000
Lorry
Page: 1



Contract No./Date	Supid	Supplier Name	Variety/Deliver	Qty	Rate
3 3/11/03	3	LK Cotton Mills Palakkad Kerala	Mil Low	4000 Bale	2
4 3/11/03	4	P&P Cotton Mills Palakkad Kerala	Mil Lowest	9000 Bale	1.5
1 3/11/03	1	Coimbatore Cotton Coimbatore Tamil Nadu	Mil High	5000 Bale	4
2 3/11/03	2	CBE Cotton Mills Coimbatore	Mil Medium	6000 Bale	2.75


Zoom 100%
NATIONAL TEXTILE CORPORATION
COIMBATORE-641 028.
Customer's Outstanding Balance Report
custid: customername: address: amount:
1 KK Industries Mettupalayam Street Palakkad Kerala 0
1 KK Industries Mettupalayam Street Palakkad Kerala 0
1 KK Industries Mettupalayam Street Palakkad Kerala 15000
6th Street, Uppilipalayam
Page: 1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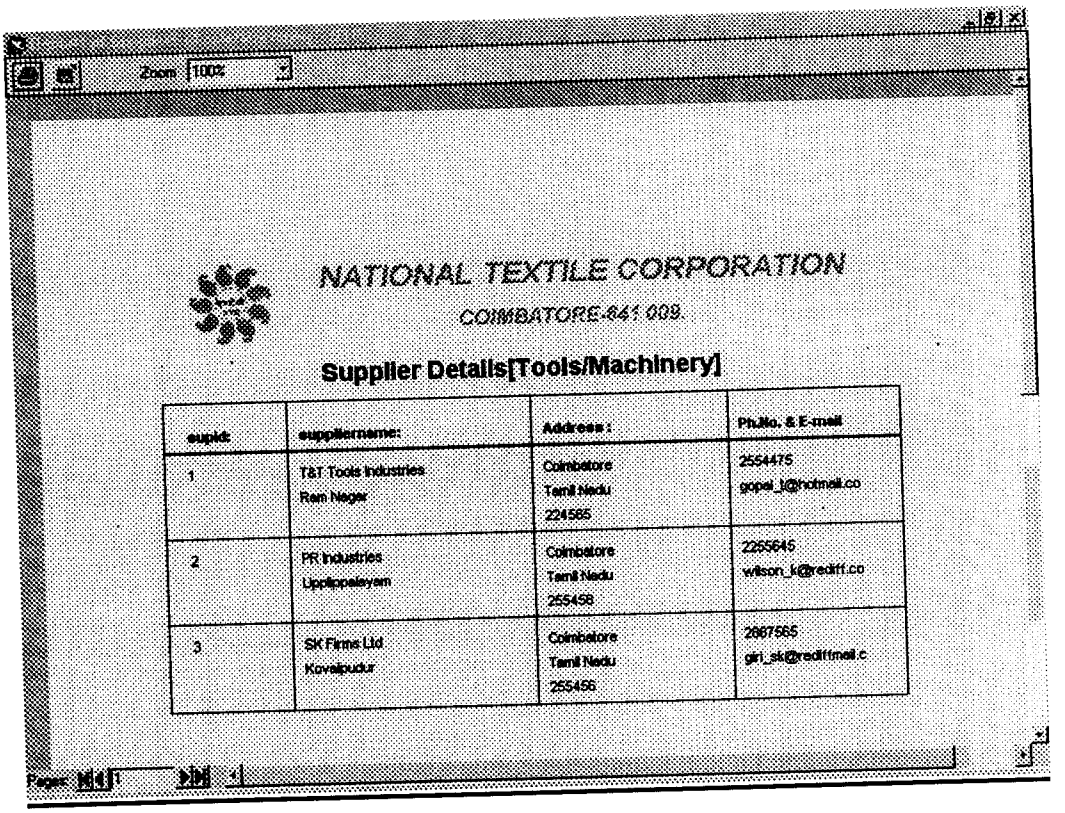
NATIONAL TEXTILE CORPORATION
COIMBATORE-641 059
Stock List
VARIETY ID
VARIETY
QUANTITY
1
High
1000
2
Medium
6000
3
Low
1000
4
Lowest
5000
Page:


Zoom 100%
NATIONAL TEXTILE CORPORATION
COIMBATORE-641 009.
Supplier Details[Tools/Machinery]
suppid
suppliername:
Address :
Ph.No. & E-mail
1
T&T Tools Industries
Ram Nagar
Coimbatore
Tamil Nadu
224565
2554475
gopal_t@hotmail.co
2
PR Industries
Uppilipalayam
Coimbatore
Tamil Nadu
255458
2255645
wilson_k@rediff.co
3
SK Firms Ltd
Kovaipudur
Coimbatore
Tamil Nadu
255456
2667565
giri_sk@rediffmail.c
Page:

Zoom 100%

NATIONAL TEXTILE CORPORATION

COIMBATORE-641 009

Customer Details

Custid	Customer Name	Address :	Ph.No. & E-mail
1	KK Industries Mettupalayam Street	Palakkad Kerala 678009	2576588 kk_cottonind@rediff
2	KSF Cotton Industries 6th Street, Uppilipalayam	Coimbatore Tamil Nadu 457554	2455855 kkm_ksf@yahoo.co
3	TTK Cotton Mills T. Nagar	Madras Tamil Nadu 225541	2557899 bala_ttk@yahoo.co
4	LGB Cotton Mills 3th Street, Opperaiklara Veedi	Madras Tamil Nadu	2258947 balakrishnan@hot

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