MARKETING DATA ANALYSIS

PROJECT REPORT

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF

M.Sc (APPLIED SCIENCE - COMPUTER TECHNOLOGY)

OF BHARATHIAR UNIVERSITY

Submitted by
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P-962

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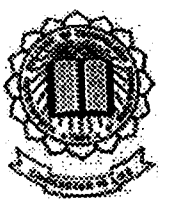

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APRIL 2003

KUMARAGURU COLLEGE OF TECHNOLOGY

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CERTIFICATE

This is to certify that the project work entitled

"MARKETING DATA ANALYSIS"

Done by

P.Ramya
Reg. No – 0137Q0047

Submitted in partial fulfillment of the requirement for the award of the degree of M.Sc (Applied science - Computer Technology) of Bharathiar University.

Professor and HOD

Internal Guide (21/4/200

Submitted to University Examination held on 10/5/03

Internal Examiner (10-5-03)
(ap/cse/kct)

External Examiner

DECLARTION

I here by declare that the project entitled " ***MARKETING DATA ANALYSIS*** " is successfully done at ***STEEL AUTHORITY OF INDIA LIMITED*,** **SALEM** and submitted to **Kumaraguru College of Technology**, Coimbatore afflicted to Bharathiar University as the project work of **M.Sc (APPLIED SCIENCE - COMPUTER TECHNOLGY)**, is a record of original work done by me during my period of study in Kumaraguru College of Technology, Coimbatore – 641 006, under the supervision and guidance of **Mr. R.Dinesh M.S,** *Assistant professor Kumaraguru College of Technology, Coimbatore*. And this project work has not formed the basis of award of any Degree / Diploma / Associate ship / Fellowship or similar title any candidate of any university

Name : P.Ramya

Reg. No : 0137Q0047

Signature: P.Ra

STEEL AUTHORITY OF INDIA LIMITED
A Government of India Enterprise

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Phone : 483021 Fax : 0427 - 482800
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March 29, 2003

CERTIFICATE

Certified that
Ms P Ramya
Final Year M Sc(CT) student of
Kumaraguru College of Technology, Coimbatore
has done a Project on
"MARKETING DATA ANALYSIS"
in Marketing Department
of Salem Steel Plant during the period
from January 2003 to March 2003

K.N Sankarlal

KN Sankarlal
Jr Manager (Trg)

ORGANISATION PROFILE

The project has been doing for Salem Steel Plant, a special steels unit of STEEL **AUTHORITY OF INDIA LIMITED (SAIL).** Steel Authority of India Ltd., India's largest corporate entity, with its five integrated steel plants three special steels plants and a Ferro-alloy plant forms the backbone of the Indian Steel Industry. From ordinary safety pin to sophisticated industrial application Sail is the ultimate for steel with over 50 Products, 1000 qualities and 5000 dimensions, SAIL caters to the stringent and diversified requirements of its wide clientele spread all over the world. The marketing network of SAIL with its stockyards and branches well laid out across the country ensures maximum service to its valued customers.

Salem Steel Plant, special steels of Salem Steel's unit of SAIL, is a world-class producer of stainless steel in India. Salem Steel's customer base spans over 37 countries worldwide.

Quality occupies the summit of Salem Steel's priorities. The products are well accepted in the national and international markets for its top-notch quality. The entire Plant is certified to **ISO 9002** quality assurance system.

Salem Steel Plant pioneered the production of wider width cold rolled stainless steel in India. The Plant has an installed capacity to produce 70,000 tones of cold rolled stainless steel coils and sheets and 1,86,000 tones of hot rolled stainless and carbon steel flat products. Stainless steel Blanking Facility has also been installed to produce coin blanks and circles of various dimensions. "Salem Stainless" as the product is popularly known both domestic and export markets, finds extensive use in applications ranging from needles to nuclear reactors.

Marketing Department

The Products of SAIL are marketed through its Central Marketing Organization (CMO), which enters both domestic and foreign markets. To ensure quality and prompt dispatch of products, different units of CMO, keep in touch with the producing units. CMO operates through an expanded network of stockyards, dockyards, Branch Sales Offices (BSO), consignment agents and extension counters. They help establish Sail's reputation as the marker of the finest steel product in the country

However, at Salem, the products, (Stainless Steel Sheets and Coils) are marketed by its own Marketing Department through its various Branch Sales Offices (BSO) in the country. The Marketing Department has its headquarters at Salem and four Regional Offices at New Delhi (North), Kolkata (East), Mumbai (West) and Chennai (South). Under the Regional Officers there are various Branch Sales Offers (BSO).

The various Branch Sales Offices are:

North : New Delhi and Chandigarh
East : Kolkata and Lucknow
West : Mumbai, Ahmedabad, Baroda and Puna
South : Chennai, Hyderabad, Bangalore and Coimbatore.

ACKNOWLEDGEMENT

Every step that we take and every mile that we cover leaves its mark on our wake in this arduous journey.

I express my sincere thanks to **Dr. K. K. Padmanaban Ph.D**, Principal, Kumaraguru College of Technology, and Coimbatore for his support and for all the resources provided.

I convey my profound sense of gratitude to **Dr. S. Thangasamy Ph.D**, Head of the Department of Computer Science and Applications, Kumaraguru College of Technology, Coimbatore, for his valuable suggestions, eminent guidance and never failing encouragement throughout the course of this project work.

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I would like to thank **Mr. K. Pandian M.E,** Chief Marketing, Steel Authority of India Ltd, (SAIL) for giving me an opportunity to undertake this project.

I would like to register my thanks to all the teaching & non-teaching staff members of the department of Computer Science.

I thank god for his immense blessings to me.

SYNOPSIS

The Project work entitled **"MARKETING DATA ANALYSIS"** is developed in Visual Basic 6.0 for **"SALEM STEEL PLANT "**, Salem. The prime objective of the venture is to develop full-fledged software that fulfils the requirements demand for Marketing Data Analysis.

The task behind the venture is to co-ordinate and brings under one umbrella the widely dissipated function and services rendered by the Marketing. The project keenly concentrates on the Production, Stock, Despatch and Sales.

The Marketing Data Analysis plays an important role in any country's economic development. The propose software assist the authorities in dealing with their proceedings in accordance with the existing rules and regulations.

The system facilitates an easy and user-friendly means to the different users present in the Market. Intense care been provided in each step to handle the software an user friendly one.

The software has the facility to input data through user-friendly input forms which facilitates the easy entry of data. The major outputs are the final reports. The software to be developed will suite the requirement of all similar concerns. In short the software Guarantees flexible handling.

CONTENTS

1. INTRODUCTION

1.1 PROJECT PURPOSE: -

The purpose of the project i.e., **"Marketing Data Analysis"** is been developed to overcome all the limitations in the old manual system. This helps to improve the accuracy of calculations. The advantages of the proposed system are

- ✈ Computation is done at higher speed.
- ✈ Faster retrieval of any stored data.
- ✈ Since all the possible options are given in the menu, it is user-friendly, interactive and it is very useful to the organization.
- ✈ Performs continuous flow of information.
- ✈ Keeps good service and maintenance.

The system design should meet the normalized methodologies for redundancy and reliability. The developed design must be tabulated as data objects with clarity and must be taken in care, that the system is liable for integration of Inventory and Payroll. Also design must be liable for enhancement of the existing system.

The Project purpose is to computerize the Marketing Data Analysis of Salem Steel Company, which is now manual.

1.2 PROJECT SCOPE: -

The Scope of the system is to meet the entire requirement required by the Production Department. To achieve the objective, the system was studied thoroughly. The requirements were collected during the system study.

The developed system should be user friendly should meet all the requirements and importantly should be 100% bug free. The system should be implemented and tested for its output.

The system design should meet the normalized methodologies for redundancy and reliability. The developed design must be tabulated as data objects with clarity and must be taken in care, that the system is liable for integration of Inventory & Production. Also design must be liable for enhancement of the existing system.

The operational structure must be documented, and the online help must be provided for user friendliness. The operational structure must be documented, and the online help must be provided for user friendliness.

Through the use of this technology the gain access to the value of the technology and the benefit of being able to streamline business processes by integrating the core applications such as the Services' Provisioning Platform, Billing and other applications.

1.3 PROJECT DEFINITIONS, ACRONYMS & ABBREVIATIONS: -

The problem of the system is to eliminate the discrepancies of the existing system. Hence the proposed system has the following advantages over the existing system.

Reducing error due to human factor as all the major manipulations are carried by the system itself. The proposed system turns out to the less costly compared to the manual system.

The time factor allows increasing the efficiency of the proposed system. Since less amount of time is taken to print the reports and to prepare the final statement.

Accuracy, Reliability and Efficiency are greatly improved since the functionality of the proposed system excels the former one.

The abbreviations used in this project is

BSO - Branch Sales Office

DANO- Despatch Advice Number.

PKTNO – Packet Number

GRA- Grade

FIN- Finish

THK- Thickness

1.4 PROJECT OVERVIEW

The Project named **"MARKETING DATA ANALYSIS"** is developed for **Salem Steel Plant,** Salem. The project is aimed for computerizing Production. The Production Management should always keep in pace with the development around them. The proposed system is an efficient and reliable system.

The project handles for MARKETING DATA ANALYSIS, which gives the details about the production of Salem Steel Plant.

This package operates in four modules:

- Enquiries and Offers
- Production
- Despatch
- Sales

The product is developed using Visual Basic and Access as its backend, which can be ported to any flavor of the RDBMS required by the client. The system is tested on a true multi-user environment using the latest technology available for testing and confirming with all the required parameters. The system is very user-friendly so the learning curve to switch to it is negligible. The technology used to develop allows you to have the best performance, which can be expected from the software.

2. GENERAL DESCRIPTION:

2.1 PRODUCT PERSPECTIVE

Existing System

The existing Marketing Data Analysis is handled manually and it is almost a tedious task. The existing system needs a lot of manpower to do all sort of manipulations this will surely increase the overall cost of the system.

Up-to-date reports have to be given to the concern users at regular interval. Reports of this type may require a lot reference of items. The user may find difficult with it, if there are a lot of these types of reports.

The reports generated are sending to various departments Head's and to the Executive Directors. Reports are used to identify on which region the sales is high and on which region they have to concentrate more. Decisions are made to improve sales and avoid dumping of stocks by the top-level management people at the monthly meetings.

The human power involved in this process is very high, but the final output is not accurate. It needs more time for even a small calculation and the process will be with errors. Hence the cost estimation and duration will automatically increase in the other side. Hence there is a need for computerization, since they need more materials to store the data collected by them.

Proposed System

The new system is designed with Visual Basic 6.0 as Front End Tool and Oracle 8I as Back End Tool. VB is a menu driven one. Data security is high. Level of abstractions can also be added. Oracle is a powerful RDBMS, so that the relations between tables are maintained with high security Data consistency is preserved. An end user can use this package without getting any help from a technical person because of VB's Graphical user interface (GUI).

The proposed system starts with enquiries. It may be from the customers of from the Branch offices. Anyway the requirements are analyzed and may be accepted or rejected by the management. If the required items are available in the plant stock, then they can be immediately dispatched. Otherwise, an order should be placed for production.

After production the items are dispatched to customers or Brach offices. A direct dispatch requires generation of sales record and an indirect dispatch requires updating of BSO stock. Each dispatch requires reduction in plant stock.

Sales records from Branch offices are received through mail and append with the sales database maintained in the plant. Stock files are also received from the branches to verify them with the stock database in plant. This verification process sometimes shows a mismatch on because of sales return.

Reducing error due to human factor as all the major manipulations are carried by the system itself. The proposed system turns out to the less costly compared to the manual system. The time factor allows increasing the efficiency of the proposed system. Since less amount of time is taken to print the reports and to prepare the final statement.

2.2 PRODUCT FUNCTION

Enquires and Offers: -

The first module comprises of framing enquires and offers. The management analyzes the customer requirements and the branch sales office requirements. If the requirements are satisfied; the enquires are accepted and offers are provided through the "offer number".

Enquiries can made either by the Customer or Branch sales offices (BSO). The Customer details are maintained in the Customer Master Table. The branch details are maintained in the BSO-table.

This module consists of tables namely:

- Enquiry-1
- Enquiry-2

Production: -

This is the second module maintained in this package. The productions are completely based on placing orders. The produced products are identified by the packet number and placed in plant stock. The production table consists of the offer number, item no. And other product parameters like grade, thick, length, width and type of the produced item.

Despatch: -

This module comprises of two types of Despatch

- Direct (to customer)
- Stockyard (to Branch Offices)

For each and every Despatch, the products are removed from the plant stock. If the Despatch is done to BSO, the details are added with the stockyard stock. If it is done directly to the customer then sales file is generated. The address details of the customer are retrieved from customer-master table. If the Despatch is to stockyard, the details are retrieved from the BSO table. BSO table maintained in the plant is updated. The key field for reference is the Despatch advice number (DANO).

Sales:

The sales module consists of the following

- Direct sales
- Stockyard Sales

Direct Sales:

If the Despatch is done directly, the headquarters generates the sales file. The price is calculated with the rate table. If the item is sold under Para sales, excise duty is omitted. Otherwise the excise duty is calculated. If there are any sales return a marking is done to identify the rejected packet. The product, which has returned, is stored in the plant stock.

Stockyard Sales:

Sales files are received from the Branch officers via mail on daily basis and are appended with the plant sales file. This requires reduction in the corresponding Bso stock. Customers address details are also received through mail, so that the plant can identify them properly and add new customer details in the customer – master.

2.3 USER CHARACTERISTICS

Accuracy, Reliability and Efficiency are greatly improved since the functionality of the proposed system excels the former one. There is no difficulty in implementing the system. The proposed system is so effective and user friendly. As the code and form design are ready made to the user, it reduces their hardship.

The user of the system is fully aware of the internal working of the system so the users will not face any problems in running the system. When compared to the advantages obtained from implementing the system its cost is affordable. The time taken to generate the code and form design is very less; hence the manpower cost also reduces. Most of the required modifications can be done without much rework.

Technical feasibility centers around the existing system and to what extent its support can be extended to the proposed system. The proposed system requires the technical features, which was already available in the organization. So there is no need for Technical enhancement. So the proposed system is technically feasible.

The functionalities like retrieve, save, clear, exit and add are displayed at the top; hence it makes the appearance of the form as good. Each controls provides its functions, so the user satisfies the user characteristic.

2.4 GENERAL CONSTRAINTS

a. Duration

The time duration required for the project development of the system including the study, analysis, design, testing, implementation and documentation are around four and half month

b. Quality

The quality ensures the life time of the project, so different testing methodologies including problem specification, unit test plan, integration testing, validation testing, acceptance testing are carried out to ensure the quality of the system.

3. SPECIFIC REQUIREMENTS

3.1 FUNCTIONAL REQUIREMENTS

3.1.1 INTRODUCTION

The project has been doing for Salem Steel Plant, a special steels unit of Steel Authority of India Ltd., (SAIL). Steel Authority of India Ltd., India's largest corporate entity, with its five integrated steel plants three special steels plants and a Ferro-alloy plant forms the backbone of the Indian Steel Industry. From ordinary safety pin to sophisticated industrial application Sail is the ultimate for steel with over 50 Products, 1000 qualities and 5000 dimensions, SAIL caters to the stringent and diversified requirements of its wide clientele spread all over the world. The marketing network of SAIL with its stockyards and branches well laid out across the country ensures maximum service to its valued customers.

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3.1.2 LIST OF INPUTS

The input process is to design the input needs into a machine-oriented format. The objective of input design is to create an input layout that is easy to follow and to avoid operator errors. Here we give the login screen more important because, if there is any invalid action is going on the system does not allow the user to activate the project.

Inaccurate input data causes most common errors in data processing, effective input design minimized error made by data entry operators. He the system is designed in such a way do give instructions whenever necessary, and to give error messages when there is an error (both logical and database) in the input.

The formatted input entries, such as *Edit Mask, Radio button, Dropdown List Box,* etc., help the user to enter the required data very easily, without out any knowledge of the system.

Here much care is taken in order to have standardization over the *GUI* based development with some standard set of rules.

The *Menu* based system helps even the *Naive* user to work with the product very easily. The screens are designed in such a way to help the user to get information wherever necessary.

To add item give Menu Command item under main menu. A window will be displayed for Item Entry. The various details about the drug can be entered in field labeled appropriately. These data fields or text boxes are bound to the Data Control linked to Drug items information database. As user clicks one of the four items on the menu control you will see the text displayed in the bound text boxes change accordingly. These menu items are disabled until you press Retrieve.

To add new press menu item Retrieve on the menu control, it will ask about Add New Record?. All other command items will be disabled until you press Save after entering the new record. The various data fields of the record will become empty so that you can enter a new record.

Now you can start typing the appropriate information in the text boxes. To move from one text box / field to another use Tab and Shift Tab keys on the keyboard or use mouse.

To add another record again press menu item Retrieve. An attempt to close the customer record or to move to new record when the text boxes are all empty (null values) will not be allowed. To close customer record press menu item Cancel but after pressing Save Record. You can also select the record by clicking its entry in the grid below. This grid also serves as the list of the items so that you can review the items already filled in.

3.1.3 INFORMATION PROCESSING REQUIRED

The information required for processing is first we should know the user name and password, which will be helpful in entering the main screen. Then we should know all the details how to process the data from the customer. We should place an enquiry and then place order to the company either from direct customer or from branch sales office. Then we send these details to the production department and we make despatch and sales is made. This is the information required for processing the data. The reports are taken at required time.

3.2 PERFORMANCE REQUIREMENTS

3.2.1 SECURITY

As for as security only authorized persons can access the system with the password provided for each user who work on this system. Here privacy is maintained in such a way that only the user who have *Supervisor* rights over the system can work through the system other's can only able to work according to the permission limit given to them

The system used in many software industries is a manual one. i.e. every form should be designed by the programmer individually. The programmer has to follow all the coding standards. Each and every form is important and they are useful in collecting the information about the travel agencies.

The main objective of the Marketing Analysis is to reduce the time-consumed and the routine standard coding involved in the client-server technology. These details will be maintained in the database and they can be retrieved at any time. This process is high security and more reliable.

3.2.2 AVAILABILITY

The outputs from computer systems are required primarily to communicate the results of processing to users. Efficient, intelligible output design improves the systems relationship with the user. The output generated by this proposed system is flexible to the users. As the controls are displayed automatically in the fixed order, the appearance of the form is legible and neat. The caption for the controls and form title are displayed according to the font size and color as fixed.

The product will be available at all times and there is no cause of damage of the system. The efficiency will be increased automatically and it is highly reliable.

The local data structures are examined to ensure that data stored temporarily maintains its integrity during all steps in an algorithm execution. All independent paths through the control structures are exercised to ensure that all statements in a module have been executed at least once. Finally, error-handling paths are tested.

Here the date from previous records has been run on the system. After the results are obtained, the result has been compared with the manual system results. The change over is done after the approval from the System Analyst, Users, Operation Managers and other members of the management.

3.2.3 CAPACITY

The capacity of the project is highly considerable, in which the data are processed in a very less time. The project has a capacity of manipulating of more than a lakh data's with in few minutes.

The software project scheduling identifies the set of project tasks, establish interdependency among tasks, estimates and effort required, assigns people and other resources and develops a time schedule.

Since we have used the oracle as backend we can store a large about of raw data like picture format, so this will be more reliable. Thus the efficiency of the software will be increasing. The capacity could be high in the system.

3.2.4 RESPONSE TIME

The system meets the standards and requirements that are made when system is designed. The system provides data consistency by avoiding manual errors. The system gives very great accuracy, adequacy and timely information. When needed client and customer satisfaction is improved. The response time is reduced. The system is flexible and can be modified. Since the back end tool is Oracle it gives us more security than any other databases. The system makes our work simple. We conclude this project successfully that our project works for all valid inputs.

Computer output is the most important and direct source of information to the user. Efficient, intelligible output design should improve the system relationships with the user and help in decision making. A major form of the output is a hard copy from the printer. Printouts should be designed around the output requirement of the user. The output devices to consider depend on factors such compatibility of the device with the system, response time requirements, expanded print quality and number of copies needed.

3.3 DESIGN CONSTRAINTS

3.3.1 STANDARD COMPLIANCE

DISADVANTAGES OF EXISTING SYSTEM

- Time-consuming process.
- Using manual system can occur error.
- No security.
- To get detail searching is a tedious work.
- Redundancy of records.
- Difficult in Record Maintenance.

ADVANTAGES OF PROPOSED SYSTEM

- There is no routine work of coding
- The basic coding part is generated by the application
- The time consumed is very less
- The company standard is maintained
- Very flexible and easy to use
- User-friendly screens are designed
- Easy steps to a executive project thorough the project

3.3.2 HARDWARE LIMITATIONS

Hardware Configuration

Computer System	:	Pentium II Processor
RAM	:	64 MB
Hard Disk	:	4 GB
Floppy Drive	:	1.44 MB
Monitor	:	Color
Display Card	:	1 MB RAM
Operating System	:	Windows 98

3.3.3 General Interface Requirements

The following process it used to connect the backend with the front end. This way of connecting is very simple and need not give any special process.

```
Public Sub Connection ()
  If cn.State = 1 Then cn.Close
  ls_str = "Provider=MSDAORA.1;User ID=scott;Persist Security Info=False"
  cn.Open ls_str, "scott", "tiger"
  cn.Execute "alter session set nls_date_format='dd/mm/yyyy'"
  cn.CursorLocation = adUseClient
  Set pcmd.ActiveConnection = cn
End Sub
```

According to the project we use oracle as backend, so we use scott as username and tiger as password, and here we convert all dates in the format dd/mm/yyyy..

We can use all type of External interface design with more than one processor, and add printers for taking printed format reports, we can also add all multimedia components for more reliable.

3.3.4 USER INTERFACE SCREEN FORMATS

In the screen we have followed the industrial format. The options present in it are Retrieve, Save, Delete, Clear and Exit. We have used forms, which will not irritate the user at any time. In each and every form we have followed the format that there is no mistakes take place like font name change, different textbox sizes, color, etc.,

The screen formats are clear-cut that even a person who has no knowledge of computer can easily operate in it and enter the data. For the date entries we have used dtpicker, which displays the calendar and the user can select the date.

3.3.5 SOFTWARE INTERFACE WITH OTHER SYSTEM.

Software Specification

Front End	:	Visual Basic 6.0
Back End	:	Oracle 8i
Operating System	:	Windows 98

3.4 TESTING AND IMPLEMENTATION

System Testing

The software and hardware are integrated and a full range of system tests is conducted in an attempt to uncover error at the software and hardware interface.

System testing is series of different tests whose primary purpose is to fully exercise the computer based system. Although each test has a different purpose, all the work should verify that all system elements have been properly integrated and perform allocated functions.

Testing Methodologies

The testing process begins with preparing a plan for the testing of a system. According to this plan, the other activities will be carried out. In this plan, discussions were made regarding the equipment, resources available and how to test the activities. Thus a clear plan has prepared.

A number of software testing strategies has been proposed. All provide the software developer with a procedure for testing and all have the following characteristics:

- Testing begins at the module level and works outward toward the integration of the entire computer based system.
- Different testing techniques are appropriate at different points in time such as Unit testing, Integration testing and Acceptance testing.
- Testing is conducted by the developer of the software and by independent test group.
- Testing and bugging are different activities, but debugging must be accommodated in any testing strategy.

White Box Testing

The test case design method that uses the control structure of the procedural design to drive the test cases. Using the white box testing methods, the software is derived test cases with the following qualities,

1. The test case guarantees that all independent paths within a module have been exercised.
2. The exercises have tested all logical decisions on their true and false sites.
3. All loops at their boundaries and within their operational bounds are tested.
4. The internal data structure tested to ensure their validity.

Black box testing

The black box testing methods focused on the functional requirement of the software. Therefore, black box testing enables the software engineer to derive the sets of input condition as that will exercise all the functional requirements for a program. The black box testing is not an alternative to the white box testing, but it is a complementary approach that is likely to uncover a different class of errors that white box methods. The black box testing attempts to find errors in the following categories,

1. Incorrect or Missing functions have been tested.
2. Interface errors are mostly focused.
3. Errors in data structure or external database access are pointed.
4. Performance errors are validated.
5. Initialization and termination errors are also tested.

i) Unit Testing

Unit testing is verification effort made on the smallest unit of software design. The unit testing is always *White-Box* oriented and the step can be conducted in parallel

for modules. Boundary conditions are tested to ensure that the module operates properly at boundaries established to limit or restrict processing.

Unit testing is considered an equivalent to the coding step. After, the source level code has been developed, reviewed and verified for correct syntax. Unit test case design begins since a module is not a stand-alone program.

The local data structures are examined to ensure that data stored temporarily maintains its integrity during all steps in an algorithm execution. All independent paths through the control structures are exercised to ensure that all statements in a module have been executed at least once. Finally, error-handling paths are tested.

ii) Integration Testing

Integration testing is a systematic technique for constructing the program structure while at the same time conducting tests to uncover errors associated with interfacing. The objective is to take unit-test modules and build a program structure that has been dictated by design.

iii) Top-Down Integration

This method is an incremental approach to the construction of program structure. Modules are integrated by moving downward through the control hierarchy, beginning with the main program module. The module subordinates to the main program module are incorporated into the structure in either a depth-first or breadth-first manner.

iv) Acceptance Testing

Acceptance testing involves planning and execution of functional tests. Performance tests and stress tests to verify the implemented system satisfy its requirements. Acceptance tests are typically performed by the quality assurance and customer organizations. Depending on local circumstances, the development group may or may not be involved in acceptance testing.

Implementation Procedures

After the management has given the approval of the design phase, report for this project, further the development activities are preceded.

The major activities done in this project are

Pre - Implementation

- Planning
- Equipment acquisition
- Program preparation

Post - Implementation

- Change over plan
- Change over Method

i) Planning

In this plan, the details regarding the availability or need for the equipment, resource available and how to test the activities are mentioned.

ii) Equipment Acquisition

According to the above plan, thm(.U necessary equipment and computer system installed.

iii) Program Preparation

The most important development activity is preparation to computer program needed for the system.

The system flowcharts, Input charts, Output charts are transferred into program. In each stage of preparation the program have been tested and errors are corrected if any. All necessary measures are also falls into account while testing the program.

iv) Change Over Plane

The change over method is the process where the existing system is to be replaced by the new computerized system.

The following changes are made during the change over plan:

- Change over plan has to be made carefully so as to minimize the problem that may arise from human errors.
- The activities to be performed during the change over plan have to be identified and the responsibilities should be assigned to individuals in the organization.

v) Change Over Method

Here the date from previous records has been run on the system. After the results are obtained, the result has been compared with the manual system results. The change over is done after the approval from the System Analyst, Users, Operation Managers and other members of the management.

The direct changeover is suggested because

- It completely replaces the old system.
- No problem from employees.
- They are already installed.

4. OTHER REQUIREMENTS

4.1 OPERATIONS REQUIRED BY THE USER

The package 'MARKETING DATA ANALYSIS' has got many advantages that are capable of satisfying user's needs. The operating instructions are given, in order to enable the user to handle the package without any difficulty. As the system nears completion, the analyst must find the necessary materials for training and user during training all parties should learn how the system operates. They may bring major change to the users job – introducing new colleagues and equipment that may cause anger, anger resistance and sabotage to the new system. Small group seminars and one-on-one sessions work best for the training of the supervisors and managers.

Very first form of this project is a Password form, which provides security for this project. The user can use the project only after entering the valid password. To start with, the user is prompted with a menu window. The popup menu gives the main options, from which the user selects his choice. The main options given to the user are Enquiries, Production, Despatch, Sales, Stock, and Reports.

When the user selects the 'Enquiry' menu, 3 bars appear – Enquiry 1, Enquiry 2 and Enquiry Modification. This enquiry module is used to receive the customer and BSO requirements. Production module is used to make production entries. Dispatch module makes dispatch entries and updates plant stock and BSO stock. It also generates sales file in case of direct dispatch. Sales module requires file formation in order to append the records received from Branch Offices to the Main file. Stock option displays the current stock in the plant as well as in the Branch Offices.

System Design

SYSTEM DESIGN

5.1TABLE DESIGN

Table Name: BSOTB

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Bso	Number (6)	Primary Key	Branch sales office
B_name	varchar(20)	Not Null	Branch name
Street	varchar(20)	Not Null	Street name
City	varchar(15)	Not Null	City
Pin	Number (6)	Not Null	Pin code
State	varchar(20)	Not Null	State
Phone	Number (15)	Not Null	Phone no.
Mail	varchar(20)	Not Null	Mail id
Status	Char (1)	Not Null	Status

Table Name: CUST

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Pcode	Number	Primary Key	Product code
Bso	varchar(20)	Not Null	Branch sales office
B_Name	varchar(20)	Not Null	Branch name
Street	varchar(20)	Not Null	Street name
City	varchar(15)	Not Null	City name
Pin	Number (6)	Not Null	Pin code
State	varchar(20)	Not Null	State
Phone	Number (15)	Not Null	Phone no.
Mail	varchar(20)	Not Null	Mail id
Cpname	varchar(20)	Not Null	Customer name
Status	Char (1)	Not Null	Status

Table Name: DESPATCH

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Dano	Number	Primary Key	Despatch no.
Ddate	Date	Not Null	Despatch date
Pktno	varchar(5)	Not Null	Packet no.
Ofno	varchar(6)	Not Null	Offer no.
Itmno	varchar(15)	Not Null	Item no.
Status	Char (1)	Not Null	Status

Table Name : ORDR

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Offnum	varchar(5)	Primary Key	Offer no.
Itmnum	varchar(5)	Not Null	Item no.
Rdate	Date	Not Null	Order date

Table Name :PLANTSTOCK

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Pktno	varchar(5)	Primary Key	Packet no.
Pwt	Number (7,2)	Not Null	Packet weight
Des	varchar(5)	Not Null	Despatch
Dtp	Date	Not Null	Despatch plant stock
Status	Char (1)	Not Null	Status

Table Name : ENQ1

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Dest	varchar(20)	Not Null	Despatch
Code	varchar(10)	Not Null	Code
Edate	Date	Not Null	Enquiry date
Noitem	Number	Not Null	Item no.
Offnum	Number (5)	Primary Key	Offer no.
Status	Char (1)	Not Null	Status

Table Name: PROD

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Pktno	number(6)	Primary Key	Packet no.
Dtp	Date	Not Null	Despatch plant stock
Ofno	varchar(6)	Not Null	Offer no.
Itmno	varchar(6)	Not Null	Item no.
typ	varchar(7)	Not Null	Type
Grd	varchar(5)	Not Null	Grade
Fin	varchar(3)	Not Null	Finish
Thk	Number (7,2)	Not Null	Thick
Widt	varchar(7)	Not Null	Width
lngt	varchar(7)	Not Null	Length
Edge	varchar(9)	Not Null	Edge
Pwt	Number (7,2)	Not Null	Packet weight
Qly	varchar(7)	Not Null	Quality
Des	varchar(25)	Not Null	Despatch
Sta	varchar(5)	Not Null	Status
Status	varchar(5)	Not Null	Status

Table Name: ENQ2

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
Offnum	varchar(5)	Primary Key	Offer no.
Itmnum	varchar(5)	Not Null	Item no.
Typ	varchar(7)	Not Null	Type
Grd	varchar(5)	Not Null	Grade
Fin	varchar(3)	Not Null	Finish
Thk	Number (7,2)	Not Null	Thick
Widt	varchar(10)	Not Null	Width
Lngt	Number (7,2)	Not Null	Length
Edge	varchar(9)	Not Null	Edge
Pwt	Number (7,2)	Not Null	Packet weight
Rdate	Date	Not Null	Quality
Seg	varchar(9)	Not Null	Segment
Pn58	varchar(5)	Not Null	Pn 58
Status	Char (1)	Not Null	Status

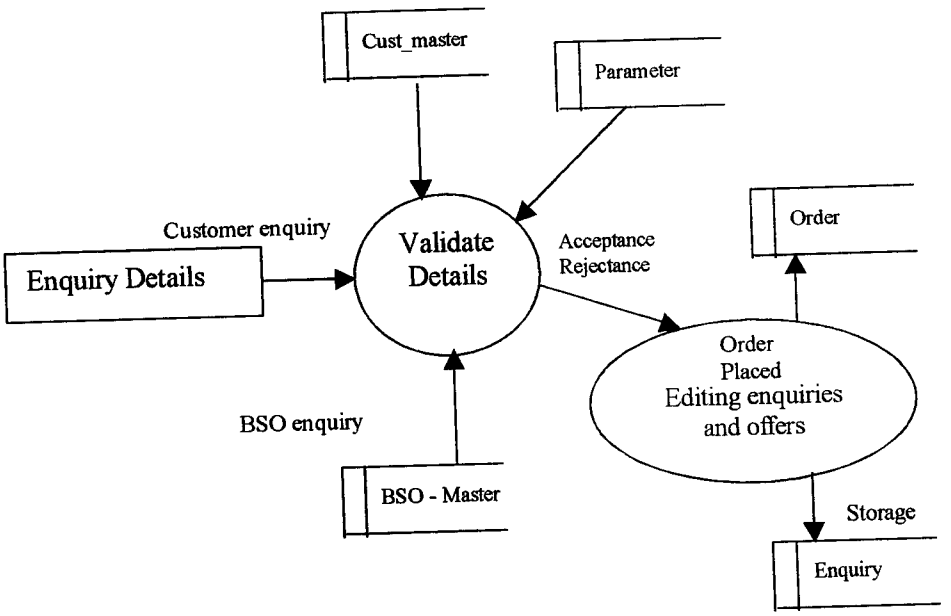
Table Name: SALES

NAME	DATA TYPE	CONSTRAINT	DESCRIPTION
bso	varchar(5)	Not Null	Branch sales office
Dodate	Date	Not Null	Delivery date
dono	Number (7,2)	Not Null	Delivery no.
doitemno	Number (7,2)	Not Null	Delivery item no.
pktno	Number (7,2)	Primary Key	Packet no.
pcode	varchar(7)	Not Null	Packet code
Status	varchar(1)	Not Null	Status

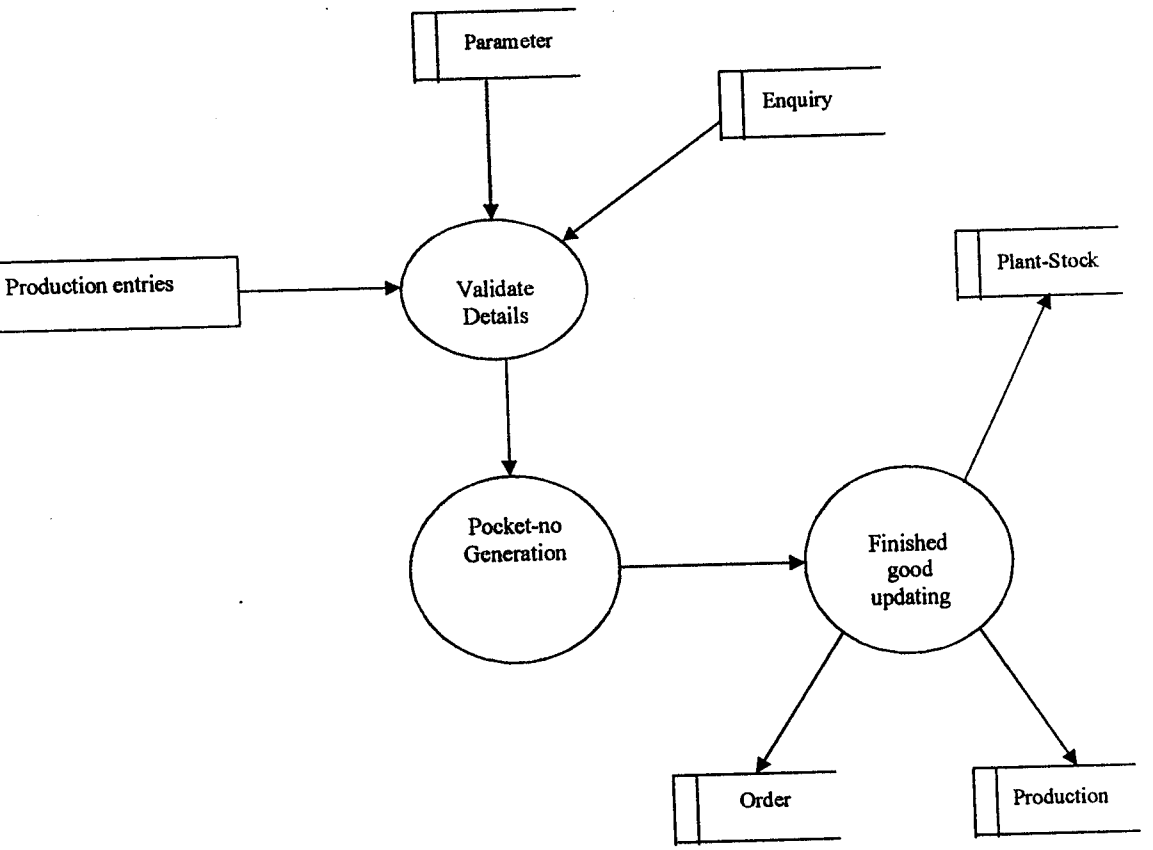
Data Flow Diagram

5.2 DATA FLOW DIAGRAM:

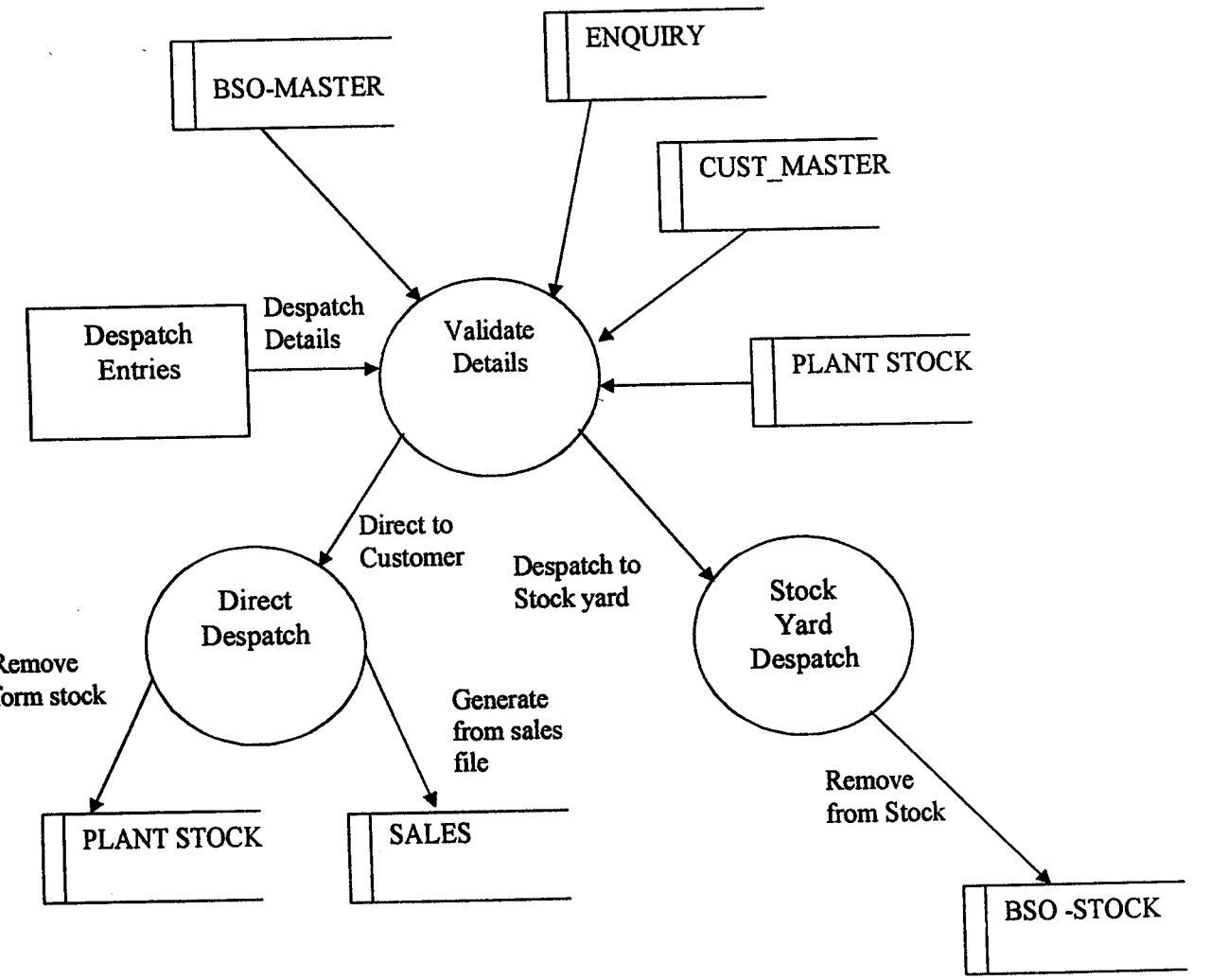
DFD FOR ENQUIRES AND OFFERS



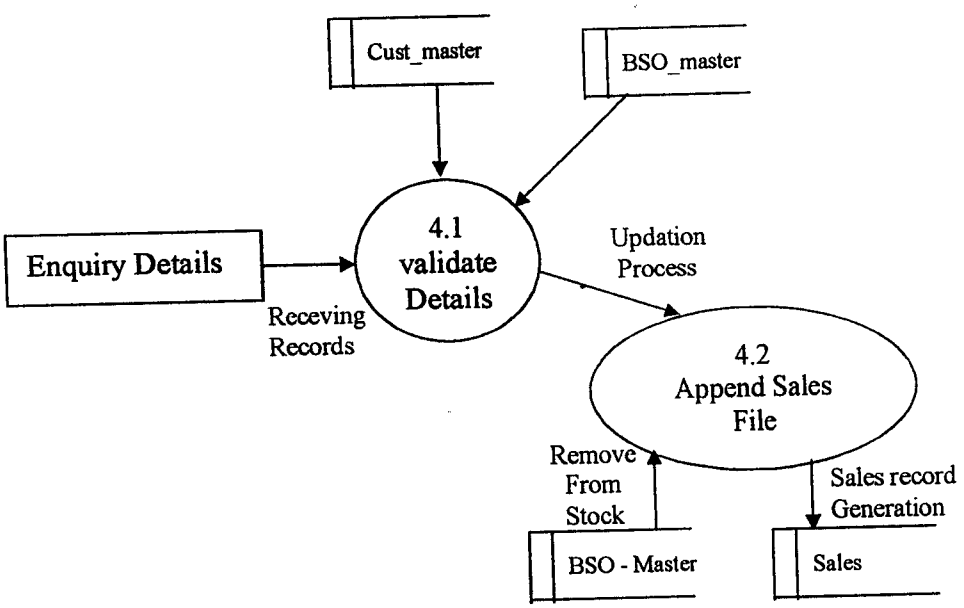
DFD FOR PRODUCTION



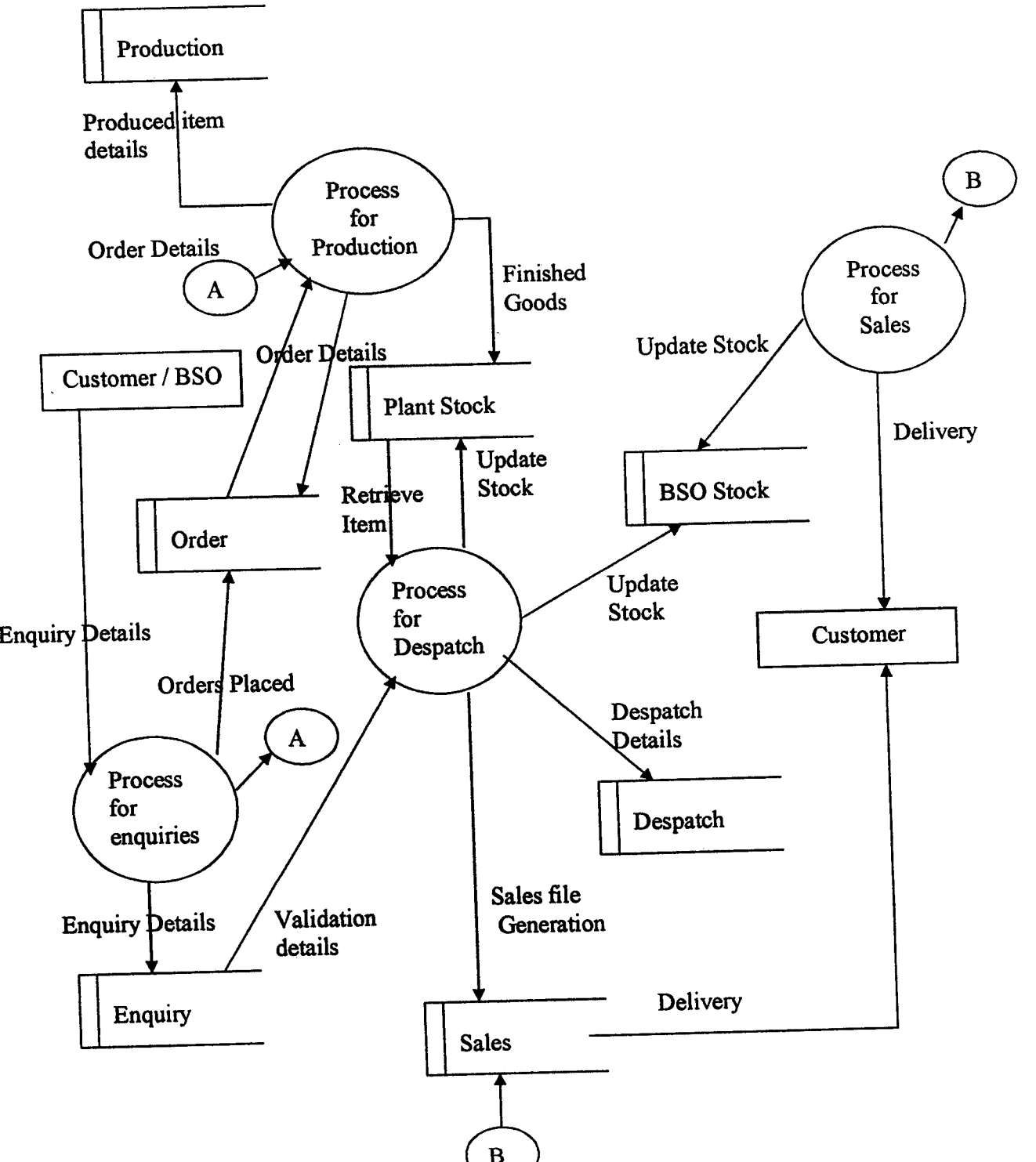
DFD FOR DESPATCH



DFD FOR SALES



AN OVER ALL DATA FLOW DIAGRAM



6. CONCLUSION

Any projects success depends on its efficiency (i.e.) the factors, by which it reduces time, cost, labor, etc.,

This project work is successful because

- The system has been developed or designed to be very user friendly.
- The provision for generating all possible information is allowed.
- The various documents are generated.

This is to summarize, this system is a well developed on satisfying all the requirements of the users with best performance. The system has been designed in a menu driven form that makes the user's task easy.

Though the present system is a well performing one, performance will still increase if the power consumption and office expenses are computerized. The various timely reports by this project would be more useful for the users of the concern department. Hence they can improve the efficiency of utilized for maintaining the service reports.

7.FURTHER ENHANCEMENT

Since system / Component is being sourced from different vendors, a module can be included for a analysis of a price, quality, service, guarantee period etc., A proposal has been made to the management of Salem Steel Plant, Salem, that graphical oriented can be produced. So a graphical module can be developed and implemented.

Further Scope Developments

- There is no routine work of coding
- The basic coding part is generated by the application
- The time consumed is very less
- The company standard is maintained
- Very flexible and easy to use
- User-friendly screens are designed
- Easy steps to a executive project thorough the project

8. BIBLIOGRAPHY

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- Elias M.Awad, "SYSTEM ANALYSIS AND DESIGN",Techmedia Publications.
- Eric winemiller, David Jung, "VISUAL BASIC 6- SUPER BIBLE", Tehmedia pub., 1998.
- Ivan Bayross, "ORACLE, Handbook",BPB Publication.
- Roger Pressman, "SOFTWARE ENGINEERING",McGraw Hill Publications.

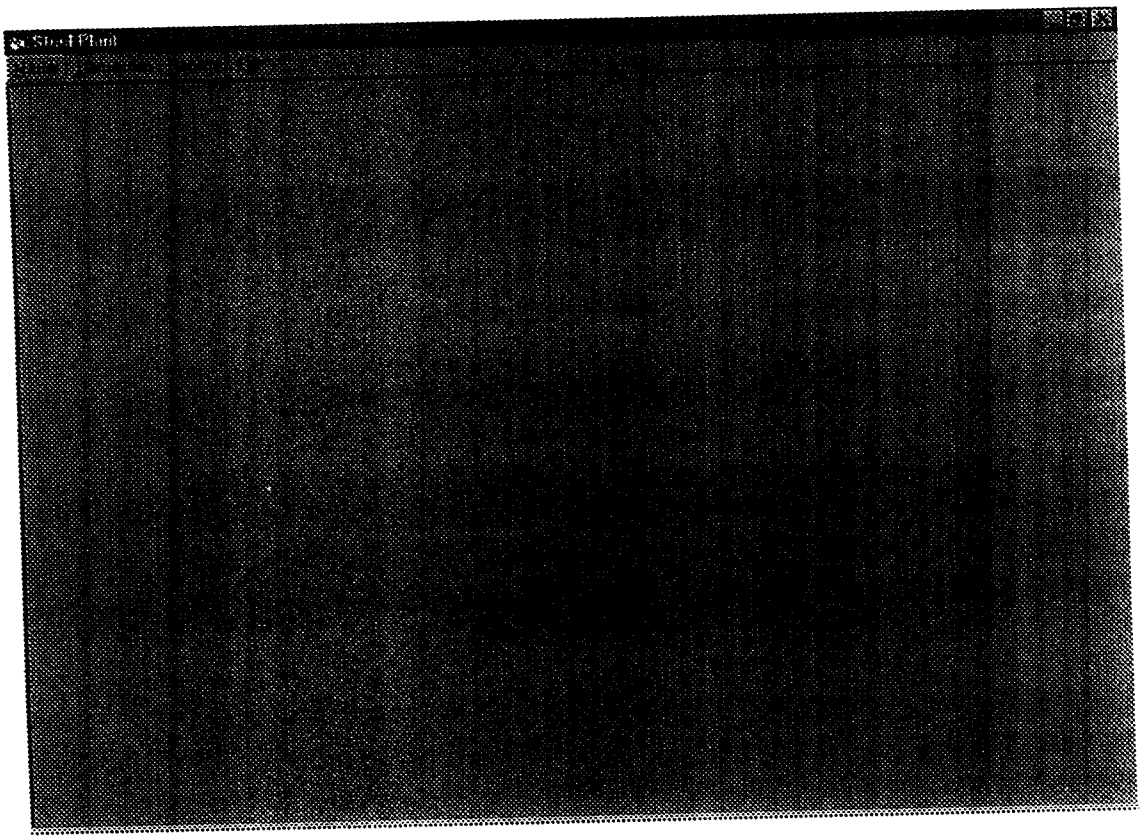
Website

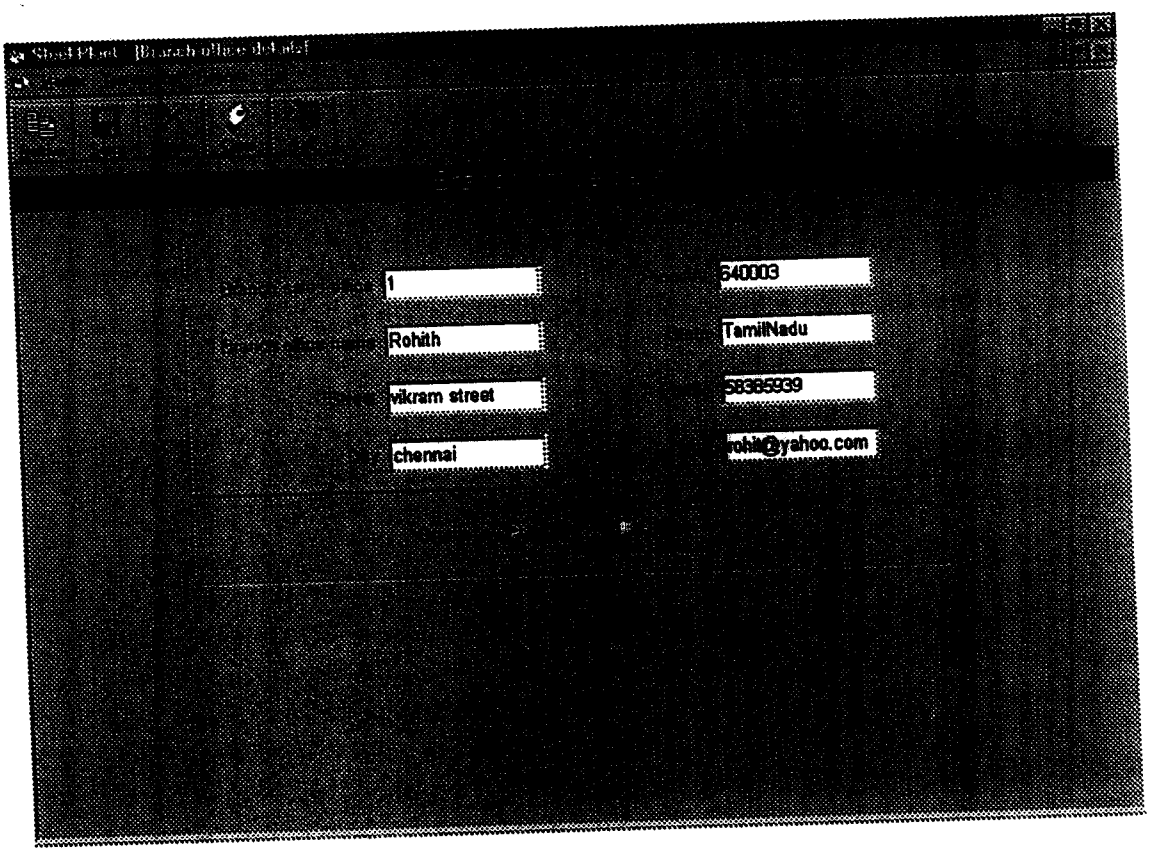
- www.sail.co.in

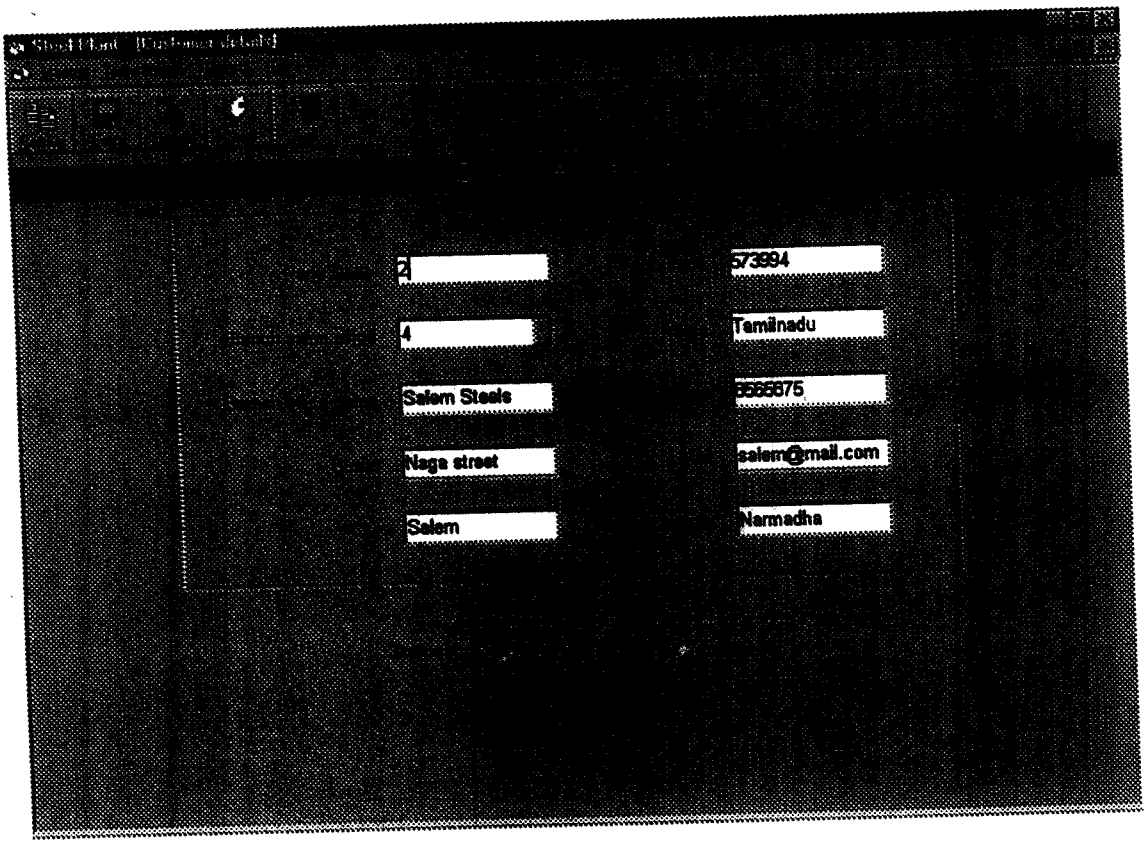
Appendix

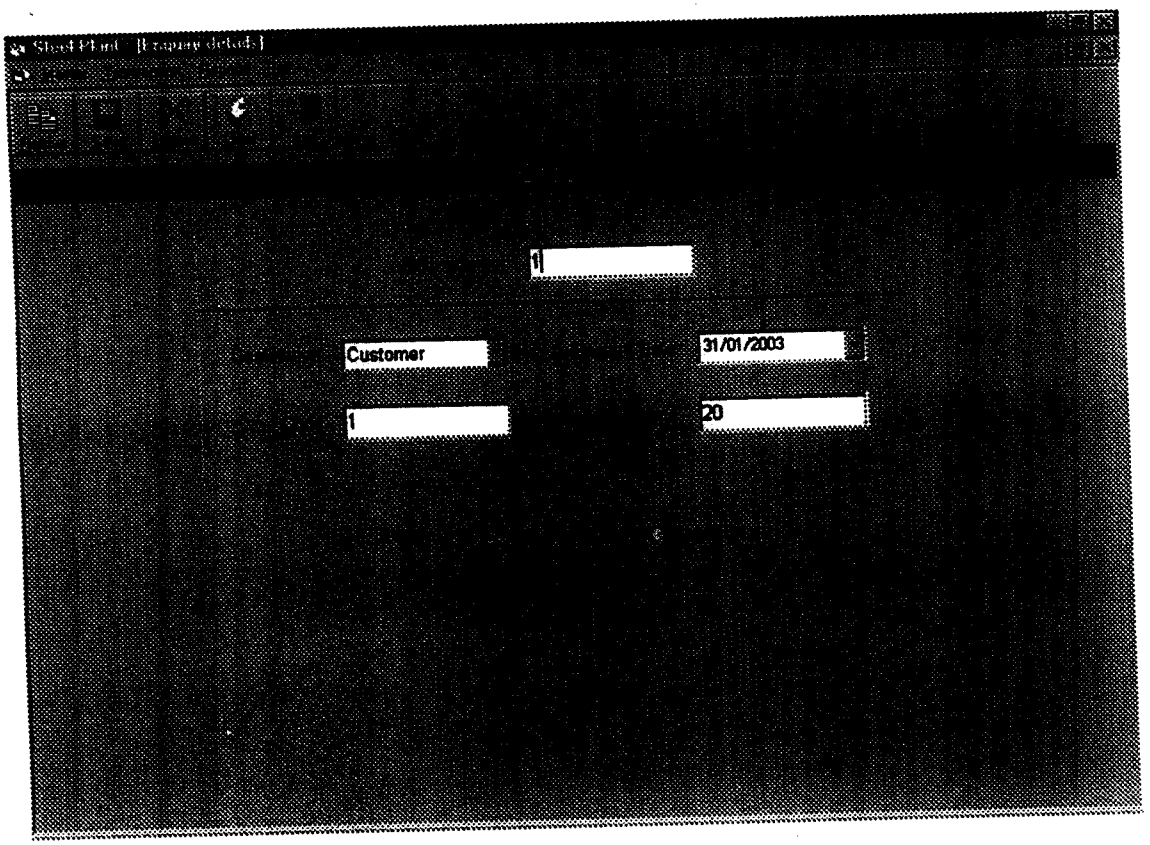
APPENDIX

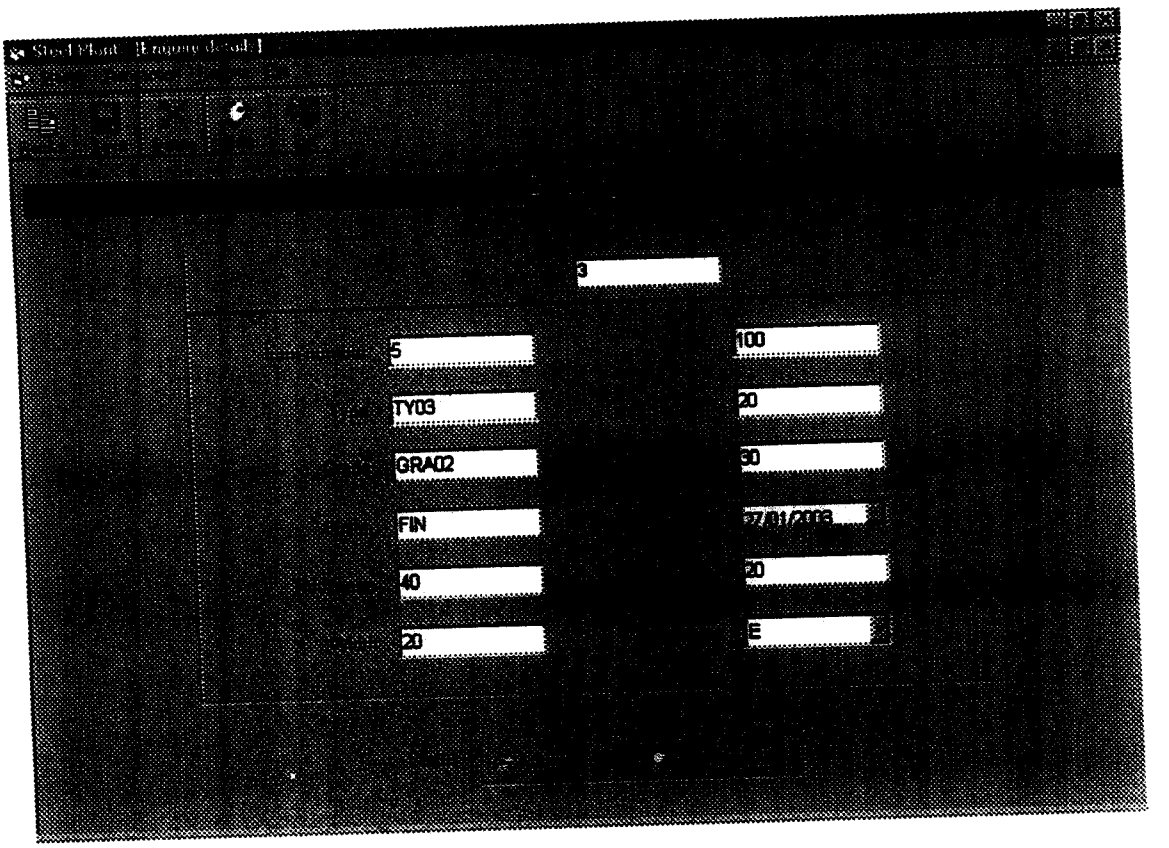
Sample Screens

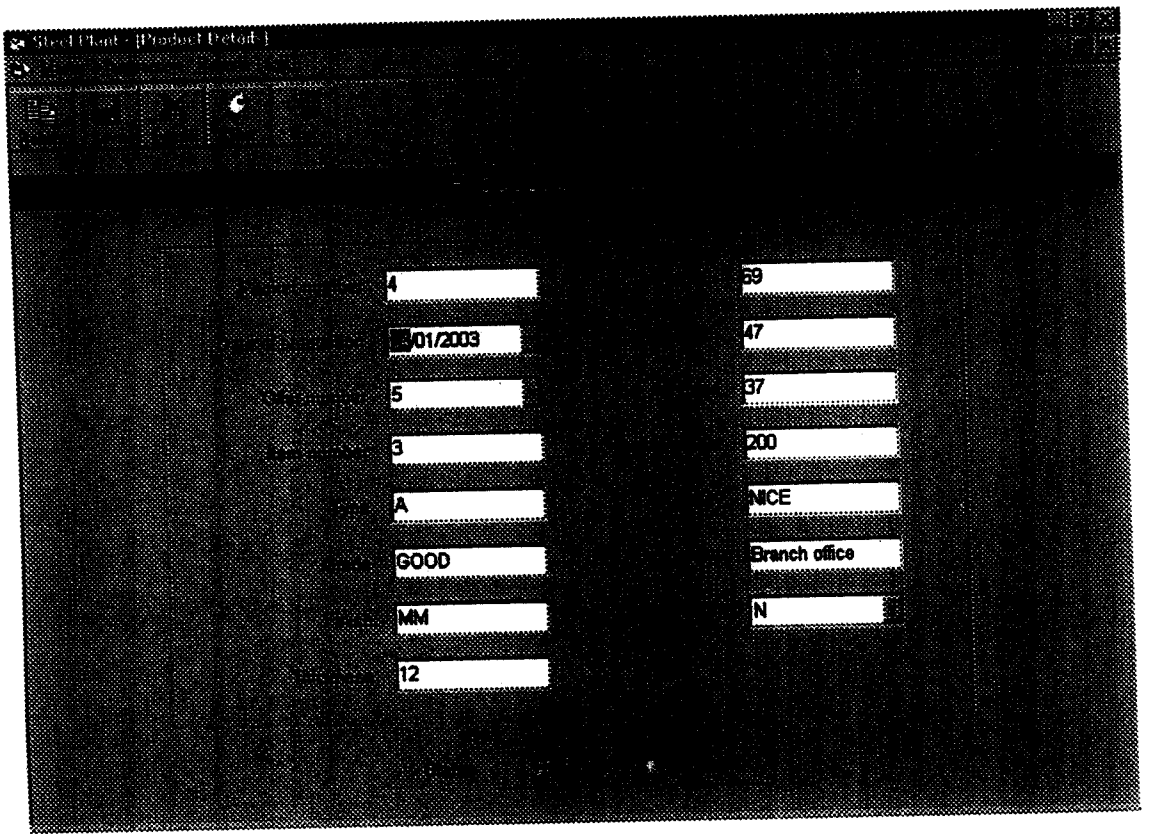


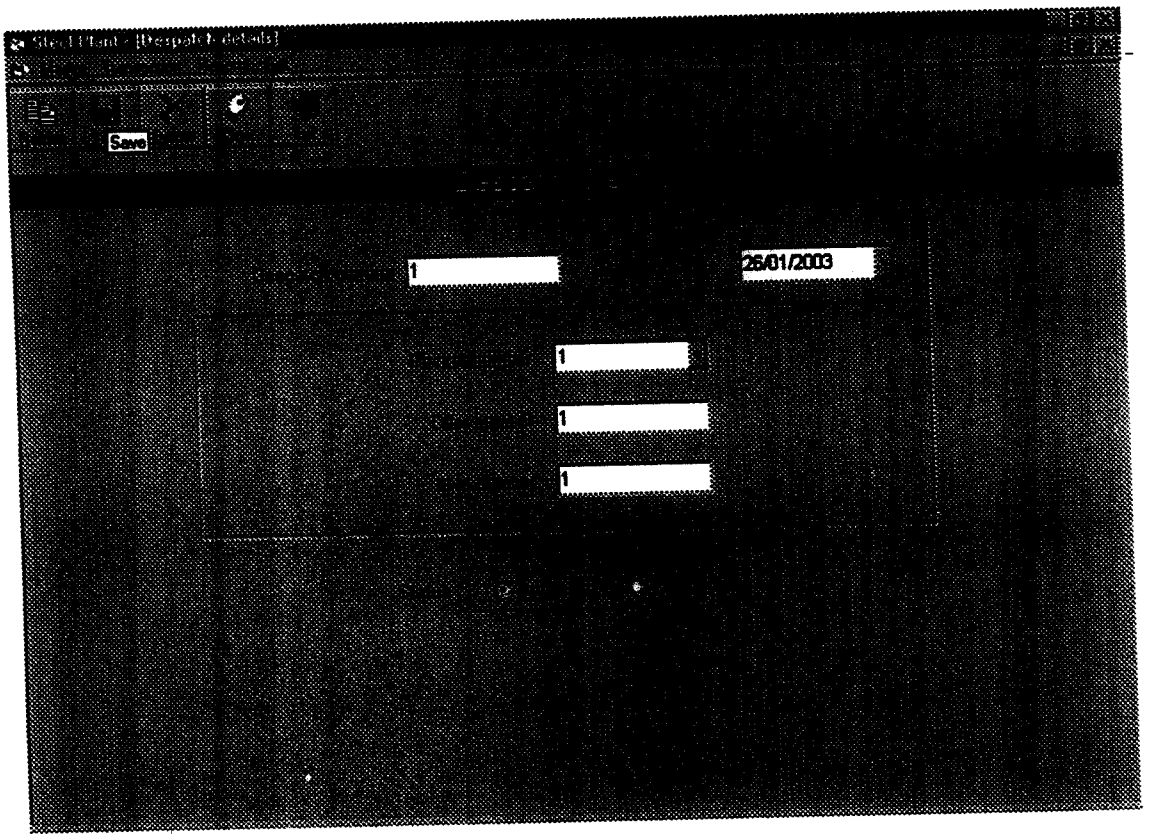

1
Rohith
vikram street
chennai
640003
TamilNadu
58385939

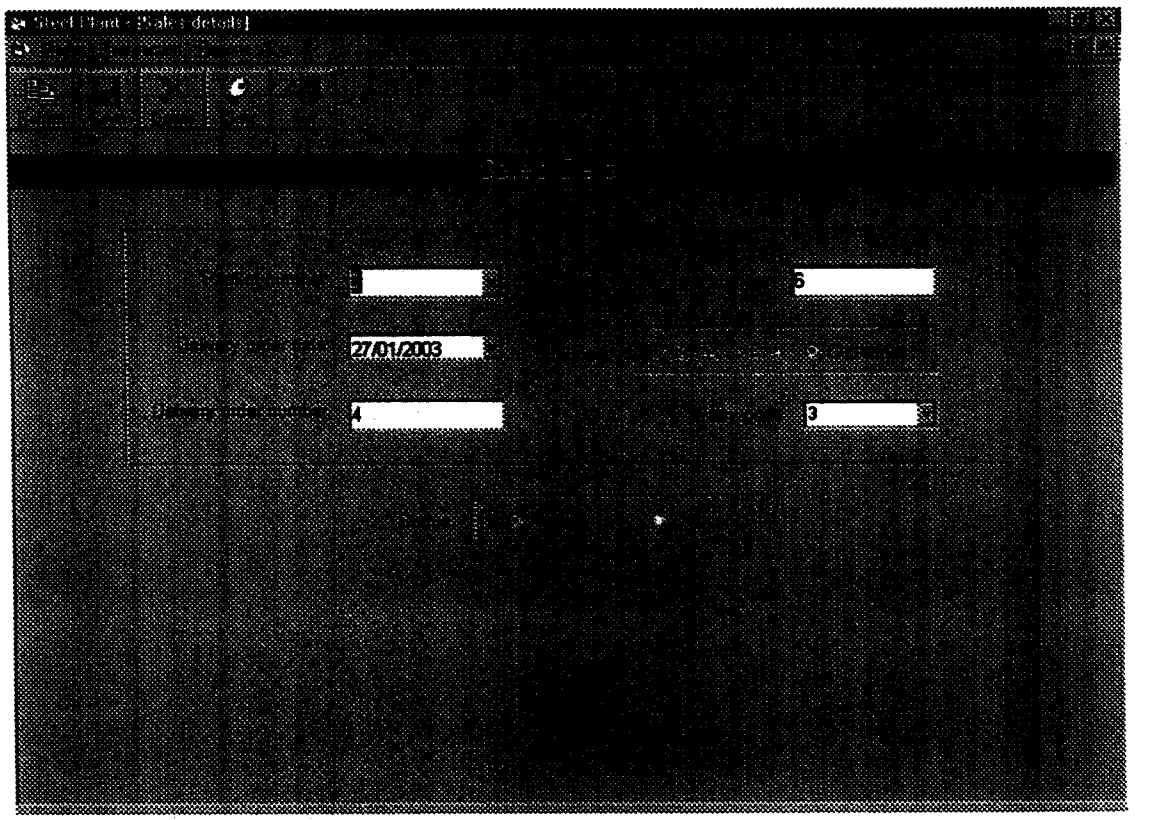

2
4
Salem Steels
Naga street
Salem
573994
Tamilnadu
Narmadha


1
Customer
31/01/2003
1
20

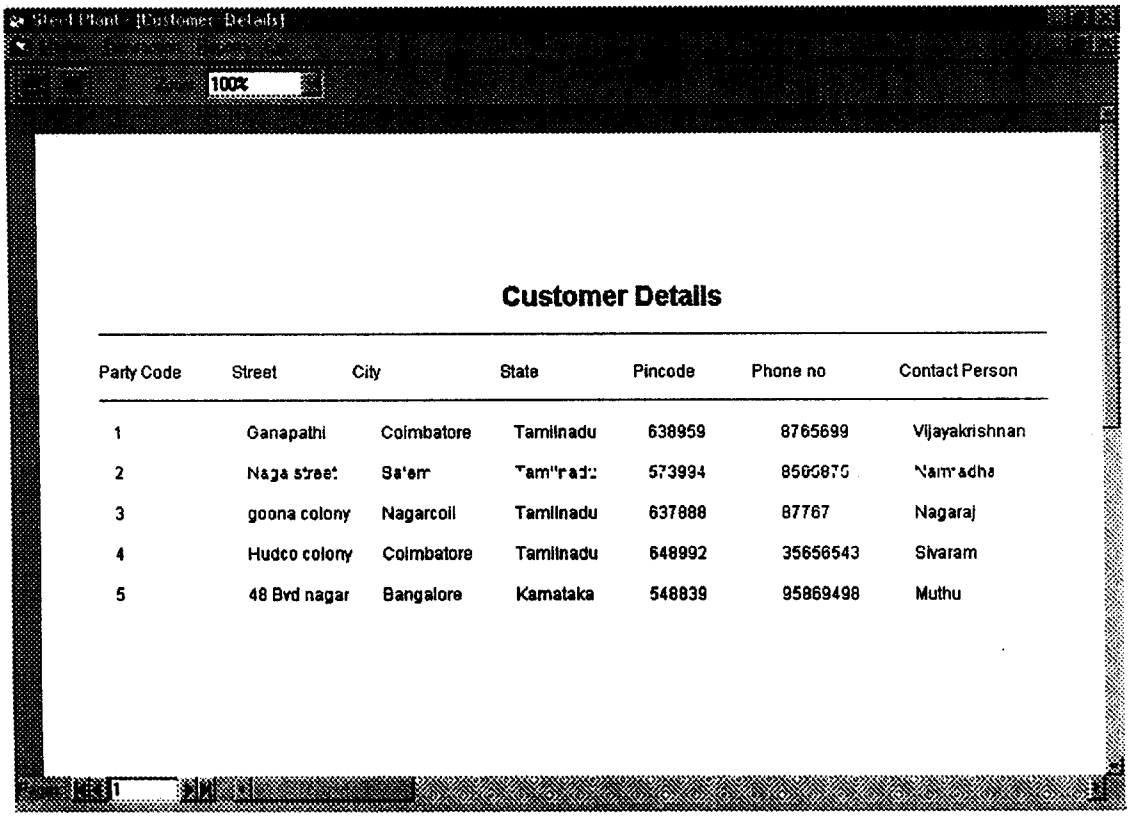

3
5
100
TY03
20
GRA02
80
FIN
40
20
E


4
01/2003
5
3
A
GOOD
MM
12
59
47
37
200
NICE
Branch office
N


Save
1
25/01/2003
1
1
1

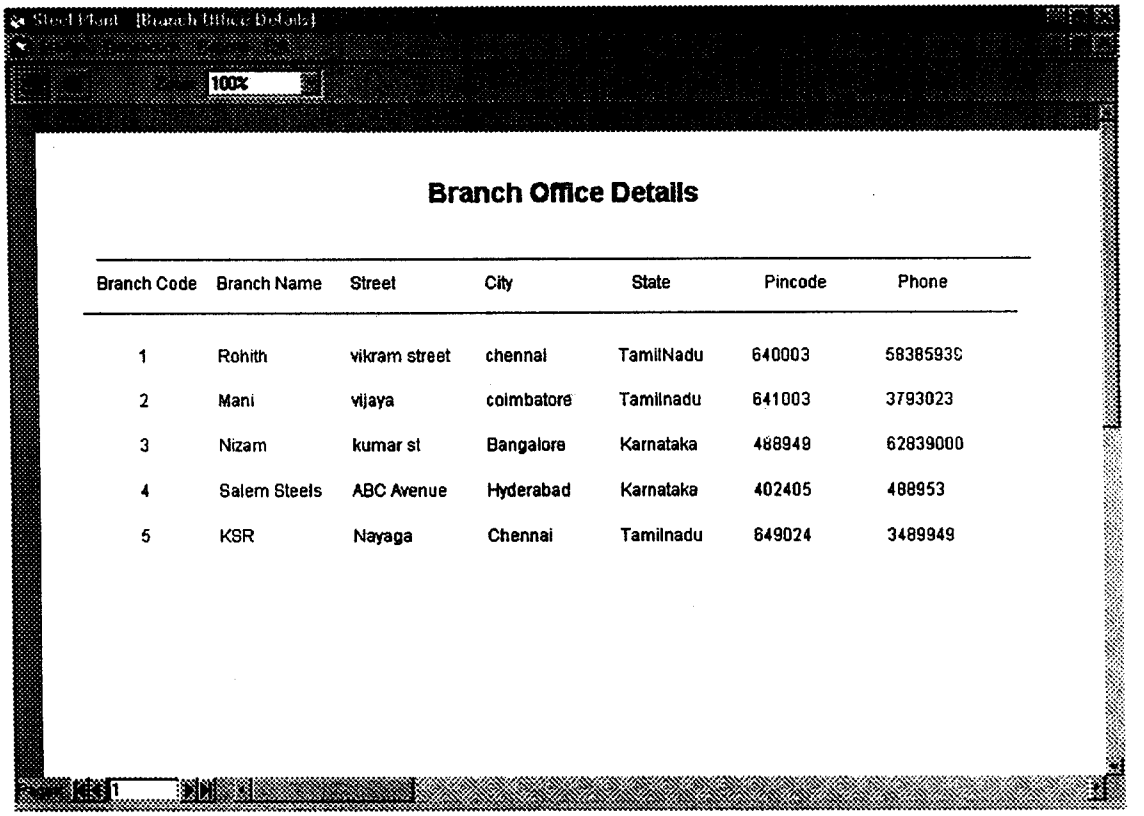

27/01/2003
4
3

Sample Reports



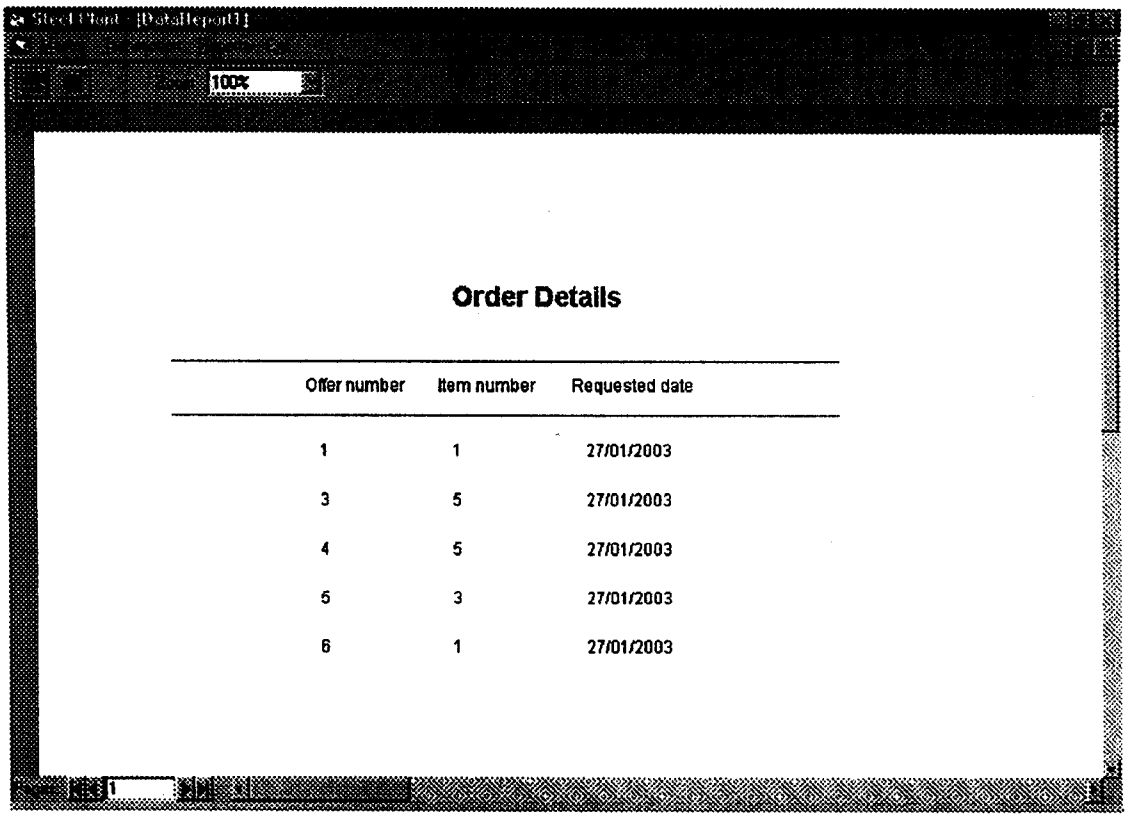
Customer Details

Party Code	Street	City	State	Pincode	Phone no	Contact Person
1	Ganapathi	Coimbatore	Tamilnadu	638959	8765699	Vijayakrishnan
2	Naga street	Salem	Tamilnadu	573994	8566875	Namradha
3	goona colony	Nagarcoil	Tamilnadu	637888	87767	Nagaraj
4	Hudco colony	Coimbatore	Tamilnadu	648992	35656543	Sivaram
5	48 Bvd nagar	Bangalore	Karnataka	548839	95869498	Muthu



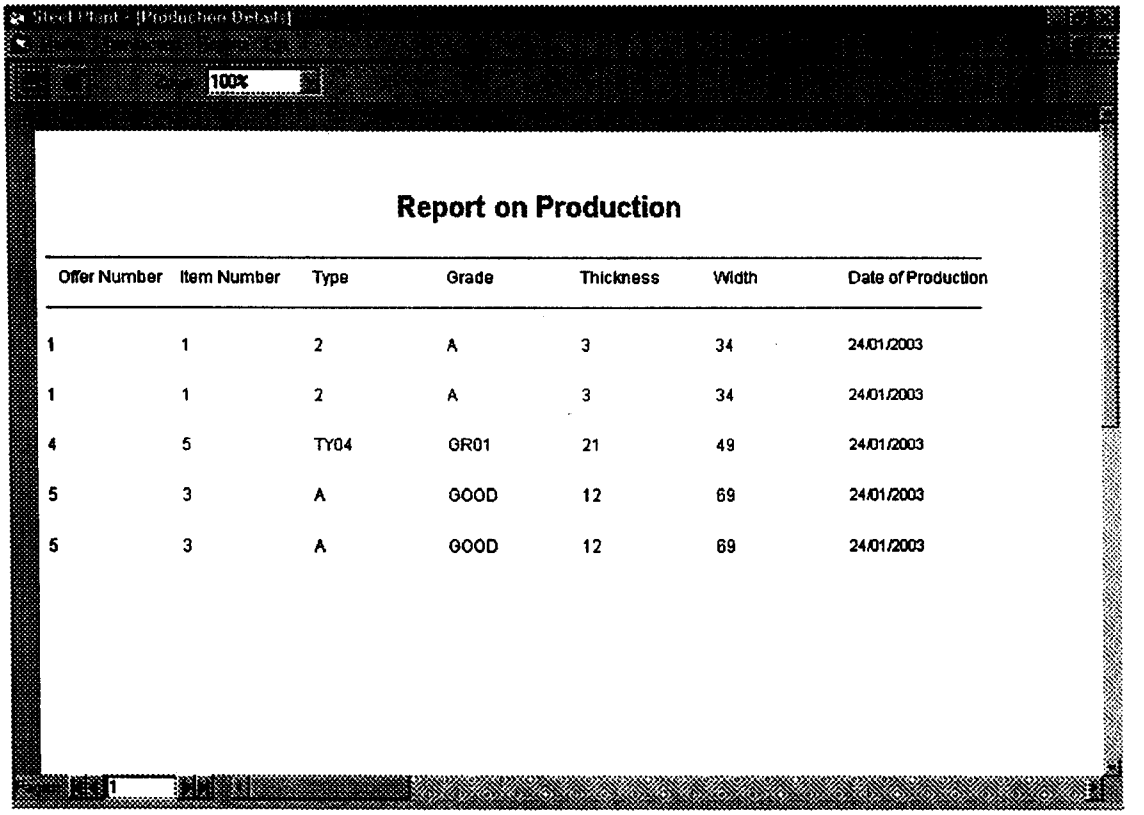
Branch Office Details

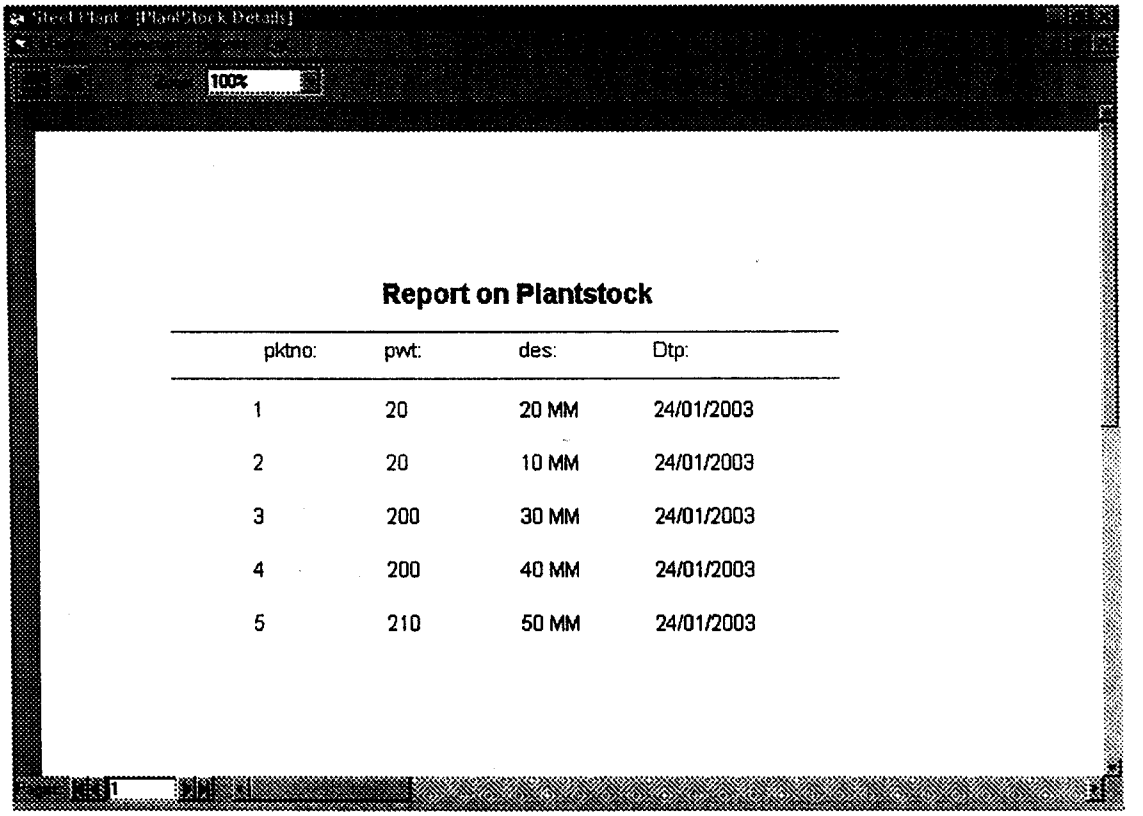
Branch Code	Branch Name	Street	City	State	Pincode	Phone
1	Rohith	vikram street	chennai	TamilNadu	640003	58385939
2	Mani	vijaya	coimbatore	Tamilnadu	641003	3793023
3	Nizam	kumar st	Bangalore	Karnataka	488949	62839000
4	Salem Steels	ABC Avenue	Hyderabad	Karnataka	402405	488953
5	KSR	Nayaga	Chennai	Tamilnadu	649024	3489949



Order Details

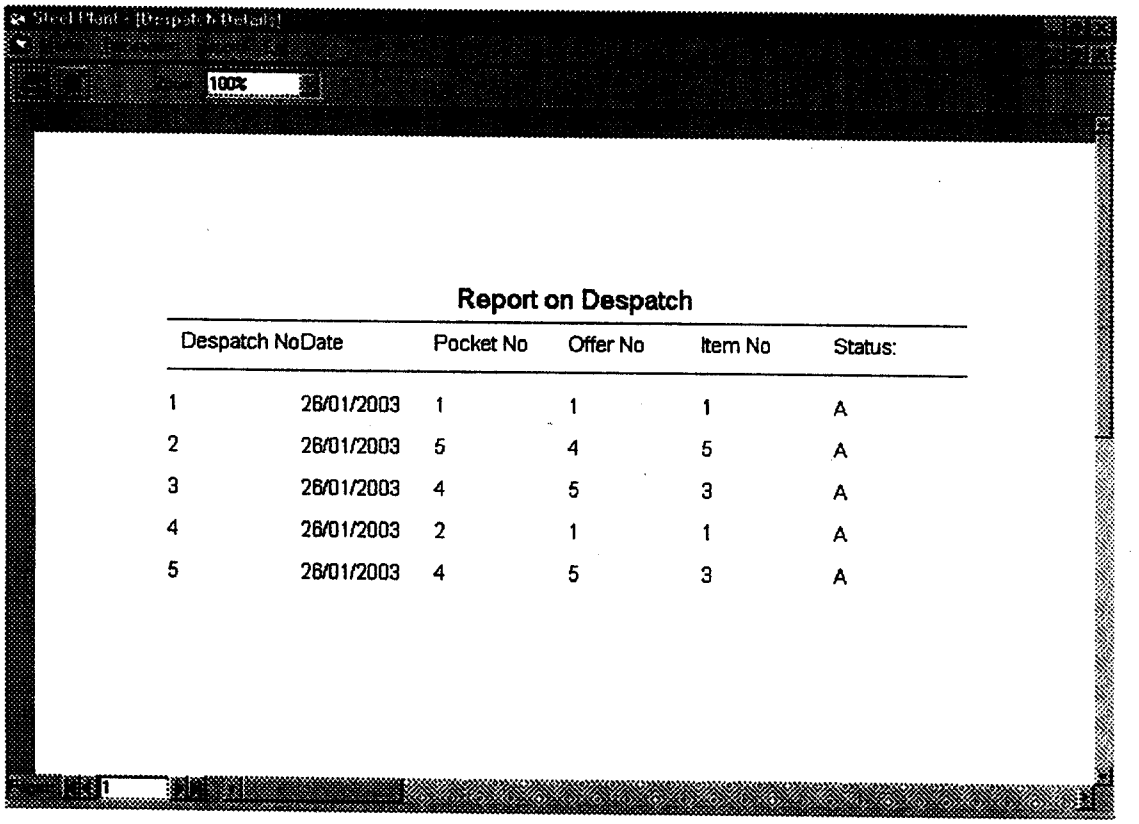
Offer number	Item number	Requested date
1	1	27/01/2003
3	5	27/01/2003
4	5	27/01/2003
5	3	27/01/2003
6	1	27/01/2003


100%
Report on Production
Offer Number Item Number Type Grade Thickness Width Date of Production
1 1 2 A 3 34 24/01/2003
1 1 2 A 3 34 24/01/2003
4 5 TY04 GR01 21 49 24/01/2003
5 3 A GOOD 12 69 24/01/2003
5 3 A GOOD 12 69 24/01/2003
1



Report on Plantstock

pktno:	pwt:	des:	Dtp:
1	20	20 MM	24/01/2003
2	20	10 MM	24/01/2003
3	200	30 MM	24/01/2003
4	200	40 MM	24/01/2003
5	210	50 MM	24/01/2003



Report on Despatch

Despatch No	Date	Pocket No	Offer No	Item No	Status:
1	26/01/2003	1	1	1	A
2	26/01/2003	5	4	5	A
3	26/01/2003	4	5	3	A
4	26/01/2003	2	1	1	A
5	26/01/2003	4	5	3	A