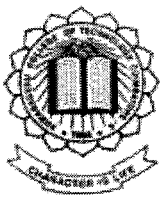

STUDENTS DATABASE MANAGEMENT SYSTEM IN ROOTS INDUSTRIES LIMITED

by

B. KESAVAMOORTHY

Reg.No. 71206631021

of

Department of Management Studies

KUMARAGURU COLLEGE OF TECHNOLOGY

Coimbatore

A PROJECT REPORT

Submitted to the

FACULTY OF MANAGEMENT SCIENCES

In partial fulfillment of the requirements

For the award of the degree

of

MASTER OF BUSINESS ADMINISTRATION

Bonafide Certificate

BONAFIDE CERTIFICATE

Certified that this project report titled **"STUDENTS DATABASE MANAGEMENT SYSTEM"** is the bonafide work of **Mr.B.KESAVAMOORTHY (Reg. No: 71206631021)** who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported here in does not form part any other project report or dissertation on the basis of which a degree or a award was conferred on an earlier occasion on this or any other candidate.

FACULTY GUIDE
Dr.K.CHITRA

DIRECTOR
Dr.S.V. DEVANATHAN

Submitted for the Viva – Voce Examination held on 29-10-2007

INTERNAL EXAMINER

EXTERNAL EXAMINER

Declaration

DECLARATION

I, hereby declare that this project report entitled as " **Students Database Management System** " done in Roots Industries Limited., has been undertaken for academic purpose submitted to Anna University In partial fulfillment of the requirements for the award of the degree of Master of Business Administration. The project report is the record of original work done by me under the guidance of Dr.K.Chitra during the academic year 2007-2008.

I, also here by, that the information given in this report is correct to best of my knowledge and belief.

Place : Coimbatore.

Date : 29-10-2007

B. Kesava Murthy

Signature of the candidate

Certificate

ROOTS

SL. No. : 2249

Date : 22.08.07

PROJECT / INPLANT TRAINING / INTERNSHIP CERTIFICATE

This is to certify that Mr. / ~~Ms.~~ B. KESAVAMOORTHY

MBA-I st year student of KUMARAGURU COLLEGE

OF TECHNOLOGY has ~~done~~ / undergone / a Project / ~~Inplant~~ training / ~~Internship~~ on

"STUDENTS DATABASE MANAGEMENT

SYSTEM" in our ROOTS INDUSTRIES LIMITED during

the period from 19.06.07 to 01.08.07

During this period his / ~~her~~ conduct was GOOD

(KAVIDASAN)
GENERAL MANAGER - CORPORATE HRD.

Executive Summary

EXECUTIVE SUMMARY

The project involves the automation of the students Database Management System. It is mainly concerned with the maintenance of students database in the company. Existing system done by manually, It was take a lot of time for create a single report and a lot of paper done in the existing but proposed system overcome the problem.

Preparation of students database including collection of various details like,

- Number of students doing projects, inplant training, industrial training, institutional training, system study, mini project, industrial visit, and the timing details or the each student.
- Status of the project like yet to start, in progress, completed, incomplete.
- Company details & allotted departments of the each students.

The various toolbar options are:

- Master
- Transactions
- Report
- Exit

The results of the project gives the details of an entire student, project status with date wise, permission, regret, certificate in report view.

Acknowledgement

ACKOWLEDGEMENT

Few people are as fortunate as I have been. Throughout my life I have always benefited from many wonderful people around me, and the last two months of my final project have been no exception. I have many people to be thankful to.

I adore the almighty and extol his glory by paying my contribution of thankfulness for blessing me with all knowledge required to complete this project successfully.

I thank our respected chairman Dr. N. Mahalingam who helped us to undergo this master's degree and acquire a lot of knowledge.

I thank our beloved correspondent Dr. K. Arumugam, for his kind blessings and moral support for carrying out this project.

I express my sincere thanks to our principal Dr. Joseph V. Thanikal for allowing us to carryout this project.

I express my gratitude to our director, for his kind patronage and for his consent to carryout this project.

I take privilege and immense pleasure in expressing my sincere gratitude to my guiding spirit, Dr. K.Chitra, for her in-depth guidance, motivation and encouragement in executing this project right from beginning and making it a success

I am highly obliged to extend my sincere thanks to Mr. Kavidasan , General Manager- Corporate HRD , Roots Industries Limited ., for his effective guidance and valuable support to carryout this project in their premises.

My special acknowledgements and thanks to Department of Management Studies, Faculty Members and my friends for their help and motivation throughout.

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Introduction

CHAPTER -1

INTRODUCTION

1.1 BACKGROUND

The existing system for maintaining students database with more drawbacks like inconsistency of data, repetitive paper work, time consuming reference work, keeping track of transactions are very difficult in the manual systems, It is using and there is a chance of committing mistakes. Inefficiency and formatted results are very difficult to be generated manually. To overcome this problems a computerized system for maintain of students database system proposed. The proposed system enables to maintain all the details of the project student's database in computerized format and to make alternations of record easier and easy reference of records, reduce maintenance of paper records.

1.2 REVIEW OF LITERATURE

Students Information Database (SID)

Rediker (2005)[1] has developed a Students Information System, this system is seamlessly integrates all modules in the Administrator's Plus student information system. The database's flexibility, ease-of-use, 100% customizable report writers, and unsurpassed features make it ideal for public and private schools of all sizes. It collect and manage student and staff information, analyze the school data, produce reports, or quickly generate correspondence and labels.

It saves staff hours on time-consuming data entry and record-keeping. As soon as the staff enters students information into the database, that information appears through all Administrator's modules and deliver data like (scheduling, attendance, discipline, grading, cafeteria, library, health records, tuition billing, admissions, accounting, development, and more).

- Central database: Collect and report all of the school's student and staff information.

- School customizable: Customize the program to meet your school's data collection and reporting needs.

- Search and analyze: Search and report based on any information in the database. Break down the student body by race, gender, age, etc.

- Report writer: Comprehensive report writer lets you create any type of letter, report, label, sophisticated report, or other document.

- Customize reports: Customize any report you need to meet your exact needs.

School Management System (SMS)

Alda (2006)[2] has developed a School Management System, It is a large database system which can be used for managing school's day to day business. SMS allows users to store almost all of their school's information electronically, including information on students, employees, properties, teaching meteorites etc. Most importantly, this information can be easily shared with authorized users, records can be easily searched, and reports can be easily generated. SMS is configurable and can be configured to meet most individual school's needs. It is a multi-user system and can be used by hundreds or even thousands users at same time. It is platform running on a Local Area Network (LAN).

Using SMS, finding student information is just a few seconds away which might have cost hours, or even days, before. At the end of the semester, printing students' statement becomes just a few minutes' job (the speed limitation determined by your printer), but it could be a nightmare without using SMS. If a student is absent, an email or even a short text message could be sent automatically to their parents' email address or mobile phone...

Library Management System (LMS)

Tony John (2007)[3] has developed a Library Management System. It provides architecture and design to the frame work. This deals with the right way of working with software. The language adopted can be C# or VB.Net, MS Access or SQL server of database backend. This software satisfies the requirements such as

- Members Registration
- Books lending data
- Add items (Books, CD etc) to the system
- Readers searching options based on Author name, Book name, etc.

Taking into from the three studies discussed above the researcher has developed Students Database Management System for Roots Industries Ltd.

1.3 STATEMENT OF THE PROBLEM

The existing system had more drawbacks like inconsistency of data, lot of repetitive paperwork, time consuming reference work, keeping track of transactions are very difficult in the manual systems and there is a chance of committing mistakes. Inefficiency and Formatted results are very difficult to be generated manually.
Hence a new system is proposed.

1.4 OBJECTIVES OF THE STUDY

The main objectives of study are:

- To maintain all the details of the project student's database in computerized

- To maintain college details, company details, department details, request details, course details, industrial guide details in the system.
- To make alterations of record easier and easy reference of records.
- To reduce maintenance of paper records.
- To generate need based reports.

1.5 SCOPE OF THE STUDY

This study was conducted for a period of 6 weeks in Roots Industries Ltd. This study was conducted to computerize the students database of the firm and also to find out various other details of the students database this study tries to study in depth, all the factors involving in the Students Database Management System.

1.6 METHODOLOGY

1.6.1 DESIGN

Input Design

Input design is the method by which validation data are accepted from the user. This valid data in turn is stored as operational data in the database.

Features of Input Design

- Input design mainly includes option keys, push buttons which helps in the user to choose the option.
- It helps to add some more data's, which helps it to isolate it from other forms.

Input Forms

- College Master

To maintain college details in this form like college name, college address, contact person, contact number, etc.

- Company Master

To maintain company details in this form like company code and company name.

- Department Master

To maintain department details in this form like department code and department name.

- Course Master

To maintain course details in this form like course code and course name.

- Industrial Guide Master

To maintain industrial guide details in this form like department name and guide name.

- Request Master

To maintain request details in this form like request no and request name.

Output Design

The output design defines the output required and the format in which it is to be produced care must be taken to present the right information so that right decisions are made. The output generated can be classified into 3 categories.

- Output to be stored as files in storage media
- Hardcopy of the output

The screen output essentially displays the generated output on the screen. The results of most the queries are usually displayed on the screen. The provision of generated output to be stored in the file is for future reference and to take hard copies of the same is to provide information to the management and whatever situation demands The most imported and effective way of presenting information is reports.

Output Reports

- Permission Report

Permission report is maintain the permission details and company rules. When, we will give the students name and accepted option in the Requests form automatically display permission report along with students name and other details.

- Regret Report

Regret report is maintain the regret details. When, we will give the rejected option in the Requests form automatically display regret report with regret details.

- Monthly Report

Monthly report will display the details of who are doing project in the company in a particular date.

- Certificate Report

Certificate report will automatically display the certificate details of the particular student, when we will give the input in the Certificate form.

1.6.2 TOOLS USED

Operating System	:	Windows 2000 Professional
DBMS	:	MS-Access
Language	:	Visual Basic for Applications

MS-Access

It supports all the program modules and utilities co-ordinate all Communication between the user and the data in the database. In this sense the back end constitutes the real database management system. Access allows conditional retrieval and manipulation of data, creation, modification and detection of tables.

Create a wide variety of both stand-alone tables and databases that link many tables together.

Add to and edit one database by simply filling in the blank on one computer screen. Search for and display information in an almost endless variety of ways, then print out the results.

Generate printed reports and mailing labels in a variety of sizes and formats.

Automatically performs mathematical calculations on numerical data in our database. Access can incorporate the results of calculations in printed reports, and it can actually store the results in a database for future use in application such as balance sheets, sales, transactions and accounts receivable reports.

- ❖ Supports OLE.
- ❖ Helps in creating tables with primary keys.

- Macros are created using access.
- It acts as a backend for number of GUIs.

Access is a powerful database. It will be simple and yet offers you the tools you need to handle complex data.

Visual Basic for Applications

Microsoft Visual Basic for Applications is a macro-language version of Microsoft Visual Basic that is used to program Windows applications and is included with several Microsoft applications. While there isn't a clear distinction as to what constitutes Access features versus programming-related features (some features appear in both such as properties that appear in Access property sheets), generally Access features are those features that don't require the user to write Microsoft Visual Basic for Applications

Windows 2000 Professional

Windows as an operating system has been developed from a basic GUI like window 2000 and window NT. Both provide a common goal i.e. ease to use and manageability by the user. While window is focused on making computer easy for anyone, using a wide range personal and business application on the desktop and portable computers windows 2000 professional has emerged as a powerful desktop operating system for catering complex business needs. Application programmers for developing scientific and financial application also use it. Windows 2000 professional provides a high level of reliability, protection and security.

It can be used as a powerful computational tool for faster operation and real time application. The configuration including a CPU, Floppy Disk Drive, Hard Disk Drive, an operator control and input devices.

1.6.3 TOOLS FOR ANALYSIS

Tools are used in system analysis. Tool like Data Flow Diagram.

1.7 LIMITATIONS

- Operations are time consuming, whenever a need of search arises the process evolves search through the paper.

- Readability of records is constrained. All the records may be handled or written by the same person. So the format will be different resulting in loss.

1.8 CHAPTER SCHEME

- Chapter One deals with Introduction, It includes Background, Review of literature, Statement of the problem, Objectives of the study, Scope of the study, Methodology, Limitations and Chapter scheme.

- Chapter Two deals with Organization Profile, It includes History of the organization, Management, Organization structure, Products profile and marker potential, Competitive strength of the company and Description of various functional areas.

- Chapter Three deals with Macro-Micro Analysis, It includes the prevailing scenario with respect to the industry and the company selected for the study to be briefly discussed in National & International level.

- Chapter Four deals with System Analysis, Design and Development, It includes Existing System Study , Proposed System, System Configuration, Input Design, Output Design, Table Design, and Data Flow Diagram.

- Chapter Five deals with Testing like System Testing, White Box Testing and Black Box Testing.

Organization Profile

CHAPTER-2

ORGANISATION PROFILE

2.1 HISTORY OF THE ORGANISATION

Mr.K.Ramaswamy, a master degree holder in Automobile Engineering from Lincoln Technical Institute, promoted the Roots group. Its corporate office is at Coimbatore extending the philosophy of quality to all spheres of its activity, this group becomes the market leader in India for its flagship product viz. AUTOMOBILE HORNS.

The company diversified to manufacture the indigenously developed high frequency wind tone horns and later started the promotion of various pneumatic and electrical horns since 1973. Start from 3,600 horns sales in 1978-1979, the sales have touched 2 million horns recently.

The quality policies of the Roots Industries Limited are:

- International Quality Standards products,
- Safe to the society and workmen,
- Quality in: Doing and Thinking

2.1.1 SISTER CONCERNS

The entire sister concerns of roots pursue diverse interests and excel in specific infrastructure and skill sets, yet as a unified whole, they represent the true face of Roots. The group comprises of 5 important manufacturing units with the state of the art

CAM / CAD / EDP / Quality Assurance centers with advanced equipment.

- **ROOTS AUTO PRODUCTS PRIVATE LIMITED (RAPPL):** RAPPL as it is fondly known had the unique distinction of being the first (P) Ltd., Company to be started by Mr.Ramaswamy, The founder and managing director of Roots. RAPPL specializes in Air Horns. Today it is the largest manufacturer of Air horns. Today it is the largest manufacturer of Air Horns catering mainly to the replacement market in India. Its diverse product range is used in heavy vehicles and earthmovers.

- **ROOTS MULTICLEAN LIMITED (RMCL):** The genesis of Roots Multi-Clean Ltd., Due to the vision of the promoter of Roots group of company about the requirement of sophisticated cleaning equipment in the country following the globalization of business and entry of Multinationals who had very high standard of house keeping. RMCL is the rote representative in India and SAARC countries for the Hako Werke gmbh & company's entire range of cleaning equipment.

- **ROOTS CAST PRIVATE LIMITED (RCL):** Roots Cast was started in the year 1985 to cater to the captive aluminium and Zinc pressure dye cast components requirements of Roots group of companies for manufacture of automobile accessory. It was formerly known as Aruna Auto Castinga (P) Ltd., (AAC).Roots Cast is supported in its activities with specialized services like CAD / CAM from the ERC cell of Roots and its metrology lab for test facilities and calibration.

- **ROOTS PRECISION PRODUCTS (RPP):** Roots Precision Products were established in 1987 to address the In-house tooling needs of the diverse industries in the Roots group RPP, acts as a one stop solution for tooling and precision machining. Its equipment line-up includes some of the best CNC machines from conventional tool room machines. All this coupled with design-excellence with Auto CAD and Pro-Engineer software.

- **POLYCRAFT:** Polycraft the company was established in 1988 to manufacture high precision plastic components. Though it usually catered to the Roots group alone, Polycraft has now expanded its operations; The company under takes job orders and has become a market-conscious player.

2.2 MANAGEMENT

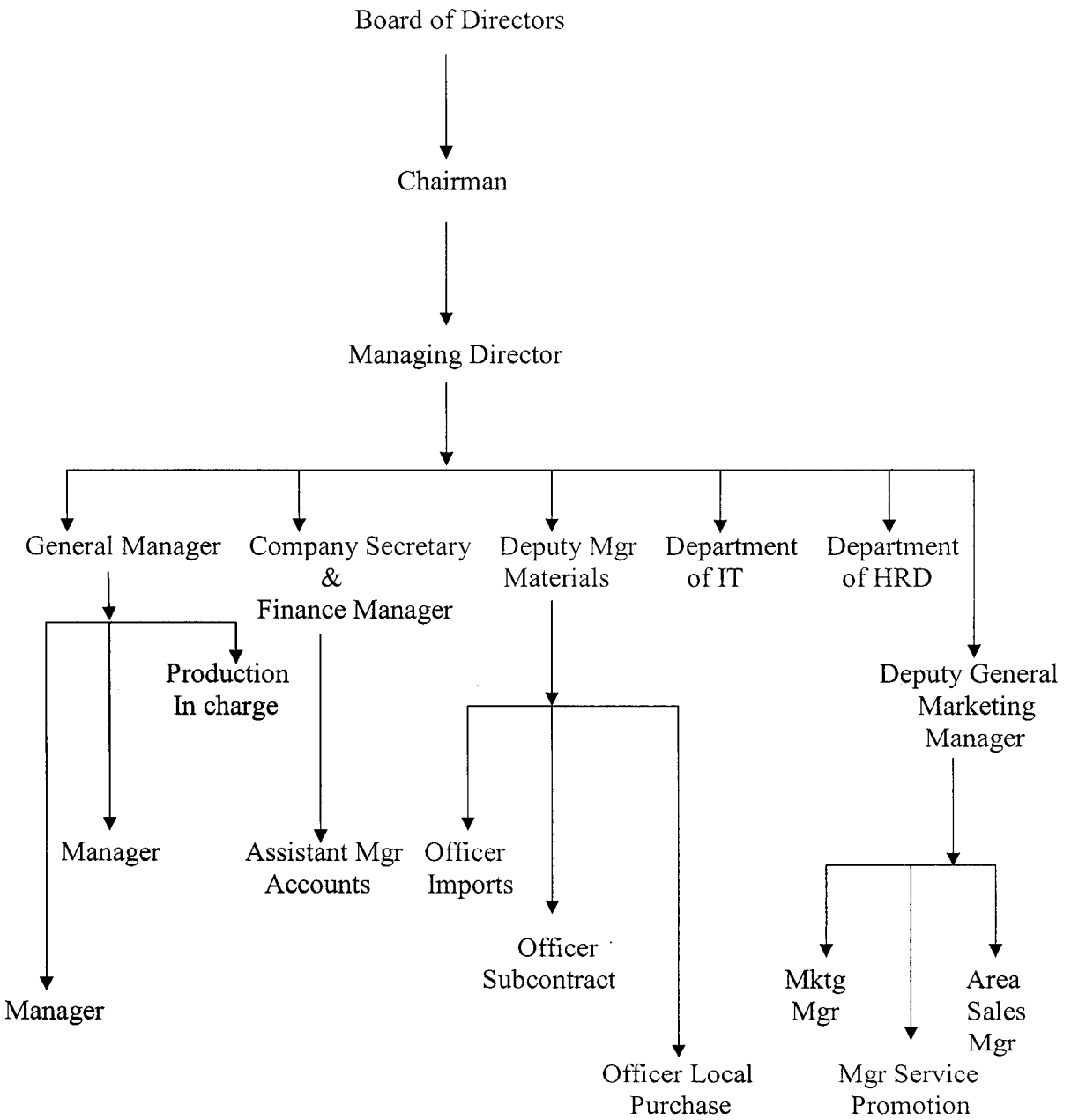
ROOTS Industries Ltd., is managed by an excellent team of path-breakers, chief among them being the Chairman, Mr. K. RAMASWAMY, a Master's Degree Holder in Automobile Engineering from Lincoln Technical Institute, USA.

The company credo is echoed in his own words,

"At ROOTS, we believe that if something is worth doing, it is worth doing well. And this attitude is reflected in every realm of our activities. As a customer, you naturally expect the best. We are fully geared, in spirit and method, to meet your requirements."

He is supported by technical and administrative people, experts in their own field, who together strive to maintain the highest quality quotient in all of ROOTS' products.

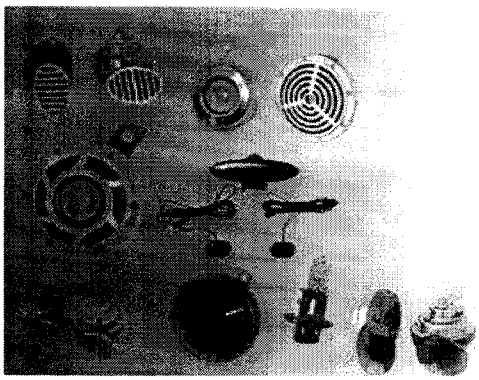
2.3 ORGANIZATION STRUCTURE



2.4 PRODUCTS PROFILE AND MARKET POTENTIAL

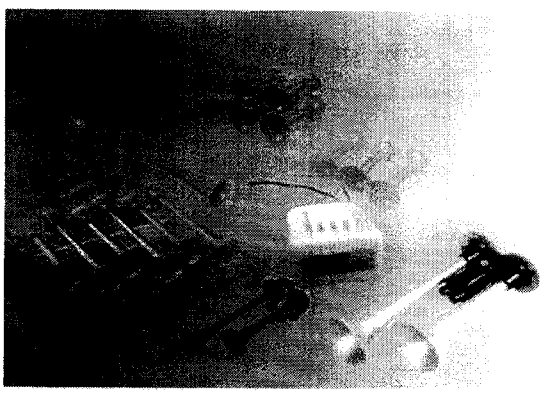
- ❖ Products Profile

2.4.1 Electric horn



In the beginning, they did not realize that they would make such an impact. Slowly but surely, the reverberations were felt far and wide. Indian automobile market responded to our call. Soon the global market too followed suit. Roots horns, in a very short span of time, they got a place of pride in millions of vehicles across the globe.

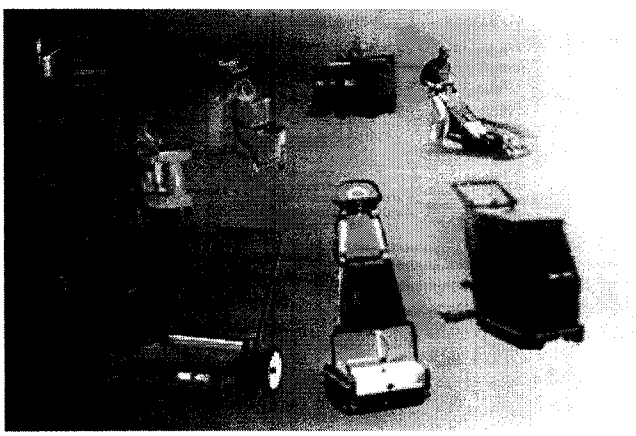
2.4.2 AIR Horns



Commercial transportation plays a crucial role in the economic development of nations. Roots Air Horns ensures safe and smooth passage of thousands of heavy vehicles on the move. Roots Auto Products Private Limited (RAPPL), the largest supplier of Air Horns in India caters to the needs of several OEMs: Ashok Leyland, Caterpillar India and JCB Escorts. Roots Air Horns also find a place of pride in Passenger vehicles, Trucks, Earth Moving equipment, Material Handling equipment, etc.

Roots Air Horns are exported to countries in North America, Europe, Middle East, Africa and SAARC region.

2.4.3. Cleaning Machines

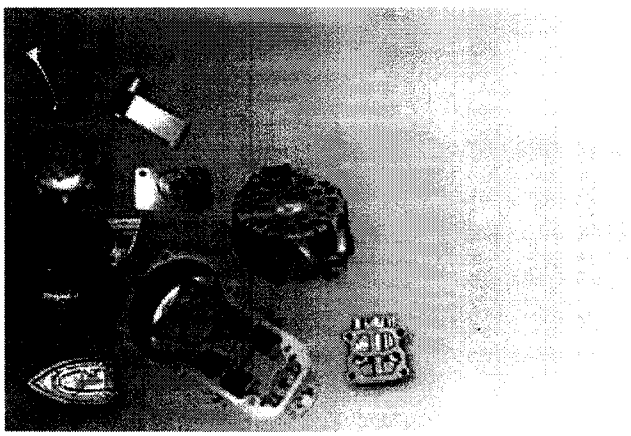


The genesis of Roots Multiclean Ltd., (RMCL) is due to the vision of the promoter of Roots group of company about the requirement of sophisticated cleaning equipment in the country following globalization of business and entry of Multi Nationals who have very high standard of house keeping. RMCL, situated in the suburbs of Coimbatore, is a Joint Venture with Hako Werke Gmbh & Co., Germany. It commenced manufacture of cleaning equipment in early 90s at its modern factory located amidst natural greenery.

RMCL is the sole representative of Hako Werke Gmbh & Company's entire range of cleaning equipment for India and SAARC countries. To improvise and facilitate a better service to its customers, RMCL has established Regional offices in all

The superior quality products and the added advantage of good after sales service has established the company as the country's largest manufacturer of floor cleaning equipment.

2.4.3 Casting

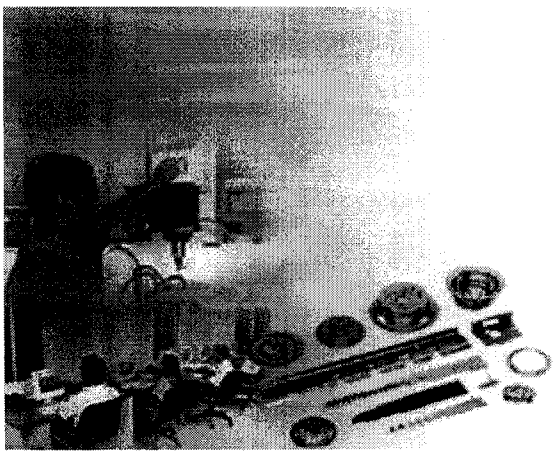


Roots Cast Pvt. Ltd., (RCPL) (formerly known as Aruna Auto Castings Private Limited) was established in 1984 to meet the captive requirements of the Roots group. With its ever probing eye on the needs of the market, the company in the late 80s expanded its operations to manufacture High Pressure Die Cast Aluminium and Zinc components to the exacting needs of various customers in Automobile and Textile Industries with a high degree of Quality and Perfection.

RCPL, now has established itself as a major player in the die cast component manufacturing thanks to the expertise built in the core activities like tool design, tool making and pressure die cast component manufacturing.

RCPL supplies **machined castings and sub-assemblies** as per customer requisitions.

2.4.5 Precision Products



Roots Precision Products was established in 1987 to address the in-house tooling needs of the diverse industries in Roots group. Owing to continuous improvement and investment into better resources, the company has become self-sufficient. It is catering to the needs of various industries. RPP acts as a one-stop solution for tooling and precision machining.

2.4.7 Poly Products

Roots Polycraft (PC) was established in1988 to manufacture precision plastic components It is equipped with latest microprocessor Injection moulding machines to maintain consistent process parameters

Over the years, Polycraft has gained skills and unique techniques to manufacture small and medium size components for Automotive, Pump, Textile, and Medical Industries besides meeting the captive requirements of Roots Group. Being fully equipped to provide the best service, Polycraft has satisfied customers who have helped augment its technological advances.

The Company's commitment towards the customer is demonstrated with quality products and service. This has resulted in continuous growth and product diversification. The process is closely monitored with proven techniques to obtain consistently good quality parts.

❖ **Market Potential**

The company is a leading supplier to the entire major vehicle manufacturer that include Mercedes Benz, Mitsubishi lancer, Mahindra & Mahindra, Toyota, Fait Uno and Siena, TELCO, TVS Suzuki, Kinetic Honda, etc.

Their major part of product is export to various countries and has shown a tremendous growth in this part, Within a span of four years the export turnover has increased from Rs. 4 millions to Rs. 35 millions. The company has also acquired European homologation approvals for their Horns from EC/ECE countries to enter in these markets. It is the only Indian company to satisfy the exact standards of the Japanese customers and enter into the Japanese market and capturing 25% of its Exports.

2.5 COMPETITIVE STRENGTH OF THE COMPANY

Roots is leading Original Equipment Supplier to major vehicle manufacturers like Daimler Chrysler, Mitsubishi, Mahindra & Mahindra, Toyota, Fiat, Telco, TVS, Kinetic etc. The technical collaboration with Robert Bosch S.A of Spain starting from 1995 has strengthened the R&D activities and increased Roots technical competence to

Roots Multiclean Ltd., (RMCL) is a joint venture with Hako Werke GMBH & Co; Germany is one of the largest cleaning machine manufactures with global operations. RMCL is the sole representative in India and SAARC Countries for Hako Werke's entire range of cleaning equipment.

The quality of RMCL products is so well established that Hako buys back a major portion for their global market.

RMCL also represents several global manufacture of cleaning products and is gearing itself up to provide customized, total cleaning solution.

2.6 DESCRIPTING OF VARIOUS FUNCTIONAL AREAS

2.6.1 Human Resource Department

Human Resource Department is a management function that helps managers recruit, select, train and develop members for an organization. Obviously HR Department is concerned with the people's dimensions in organization. The functions and principles are applied to developing, maintaining and remunerating employees in organization. Mr.Kavidasan (Head Corporate HRD) heads this department

- **Personal Culture**

The Management has been encouraging and promoting a very informal culture "Personal Touch" sense of belonging, enabling employees to become involved and contribute to the success of the company. The top management also conscientiously inculcates values in the people.

- **Work Environment**

Special and conscious efforts are directed towards house keeping of the highest older. Renovation and modernization of office premises and office support systems are carried out in an on going basis.

❖ Training

Roots believe in systematic training for employees at all levels. As a part of the organizational development efforts, training programs are being conducted. In-house for employees at all levels I addition staffs are also sponsored for need bared training programs at leading management at leading management development institutes.

❖ Total Quality Management

Customer focus is not merely a busy word but it has become an important factor of everyday work and has got internationalized into the work environment. There is an equal emphasis on internal focus leading to greater team efforts and better cross functional relationship.

❖ Quality Circle Movement

To ensure worker participate and teamwork on the shop-floor, RII, has a very effective quality circle movement in the organization. As on today RII, has there operating quality circles having 24 members and some of them have own awards at different conventions and competitions.

Through interaction with workman in their sections a process of two-way communication has been initiated and valuable feedback has been received on worker feelings, perception, problems and attitude. Simultaneously management has communicated the problems faced by them and the plants to overcome these problems.

- **Good Morning Assembly (GMA)**

The management aims in operator's mental & physical fitness and it is ensured through the GMA. The operators and shift supervisor, assemble before the 1st shift beginning and do occupation of fitness exercise, discuss about the Quality safety &

Production aspects of the previous shifts and take quality / safety oath.

Personnel Activities

To see that discipline of coordinal industries relationship are maintained, incase of any disputed it is the duty of HR manager to see yeast the matter in settled amicably.

An HRD manager plays the role of liaison officers between the management of the workers.

- Recruitment
- Induction training of placement
- Attendance and leave regulation
- Performance Appraisal

Methodology

- Aptitude
- Intelligence test
- Personal Interview
- Achievement Test
- Group Discussion
- Attitude Test

2.6.2 Finance Department

Finance is the lifeblood of business. Finance is that business activities which is concerned with acquisition and conversation of capital funds in meeting the financial needs and overall objectives of business enterprises. The main function of this dept is to provide finance to various departments. The Finance General Manager Mr.K.Ravi controls the finance department.

The turnover of the company in 2005 is Rs.6337 (in lacs).Currently the organization has a working capital of its 8/9 crores. There are 25 employees in finance department.

- **Material Cost**

  40% of material cost is need for TVS Company

  60% of material cost is needed for Home Appliances

- **Advertisement Cost**

  In 1993 the advertising cost is 15%, now the advertisement cost is only 1%.

2.6.3 Purchase Department

Purchasing procedure varies with different business firms but all of them follow a general pattern in the purchase and receipts of materials and payment obligations. The purchase department takes care of all cash and credit purchase. The materials are purchased placing orders based on indent raised from the stores. A ledger is maintained in the regard. The purchase orders are sent to the supplier. The purchase orders shall contain a clear description of the products, drawing number, quality, Rate, Delivery, Schedule, Terms payment, mode of dispatch and other relevant data.

The following steps are followed for purchasing of material:

1. The concerned department that is in need of a particular material with give a purchase requisition slips to the stores department.
2. The storekeeper of the material is available in stores they will cancel the purchase requisition and provide the material to the concerned department.
3. If it is not available in stores in stores the storekeeper will forward the purchase requisition to the purchase manager in the purchase department.
4. In the purchase requisition slip the following things must be mentioned.

2.6.4 Quality Department

Quality Control – The vision statement of Roots is "Vision of Roots is to become a model company providing value to our customers. It is imperative that we give more than what we take from our customers and the society. Our products must serve our customers beyond their expectations".

Quality Policy

One of the quality policies of the ROOTS stands as,

- ❖ Quality is respect for people
- ❖ Quality is constancy of purpose
- ❖ Quality is global entry
- ❖ Prosperity through quality

The other quality policy speaks as follows.

"We are committed to provide world – class products and services with due concern for the environment and safety of the society". This will be achieved through:

- ❖ Continuous improvement
- ❖ Technology Up gradation
- ❖ Cost Reduction
- ❖ Total Employee Involvement

2.6.5 IT Department

In IT department FoxPro package was used earlier, Intranet facility accessible to all authorized officers with a very effective package called LOTUS NOTES, a means of communication through fiber optic cables: Fax replaced paper.

This package includes the mailing facility among the 170 employers. In the organization and also it have the options of reservation of rooms for their meeting, to know the status of the room etc., QMS documents are available and It's being view by all the employers but the information can't be altered them only the authorized officers can change them.

The organization uses the ERP (Enterprise Resource Planning) which all the different models are present and it's being customized. IT delicates in the concern. There are different models in the ERP. They include:

- ❖ PPC (Production Planning Control)
- ❖ Sales
- ❖ Purchase
- ❖ Manufacturing
- ❖ Inventory

- Shop Floor Control
- Engineering Change Order
- Lot Tracking

65 clients are equipped with Pentium processors and other with 486 processors.

2.6.6 Marketing Department

In the roots marketing is basically done for the cleaning products, Varity of Horns, etc. General Manager Mr. Raja Gopal head of the department.

Clients for RMCL in the Public Sector

- BHCL
- NTPC
- BEL
- BARC
- Ministry of Defense
- Municipality Corporation
- IOCL
- HPCL
- Clients for RMCL in the Private Sector
- RELIANCE
- HYUNDAI
- LMW
- Ashok Leyland
- MICO
- FORD
- MAHINDRA
- TOYOTA KIRLOSKAR

Sales Promotion Activities

- Participating in International Marketing Exhibitions
- Direct domes in Industries
- Advertising

Macro – Micro Analysis

CHAPTER-3

MACRO - MICRO ANALYSIS

The Macro & Micro analysis of Auto parts industries in economic growth, competitive strength, career growth, opportunities etc in domestic and foreign countries are briefly discussed below;

India is the Largest Three Wheeler Market in the World, 2nd Largest Two Wheeler Market in the World, 4th Largest Passenger Vehicle Market in Asia, 4th Largest Tractor Market in the World, and 5th Largest Commercial Vehicle Market in the World. So, all vehicles need safety part of air horns, electric horns, etc.

Future Macro Economic Drivers

- High GDP growth rate
- India's huge geographic spread –Mass Transport System
- Increasing Road Development, Golden Quadrilateral
- Increasing disposable income with the service / rural agriculture sectors
- Cheap & easy financing schemes
- Replacement of aging passenger and commercial vehicles
- Graduating from motorcycles to passenger vehicles
- Growing Concept of Second Vehicle in Urban Area

Opportunity to source from India

India as an Auto Manufacturing Hub like (A large domestic market, Growing significance of exports, Developed components and materials base Among the best in labour economics)

Standing tall

The auto component sector is on a growth trajectory as is evident by the fact that auto components have been designated as a "Thrust Sector" by the Government of India under the EXIM Policy. The Indian Department of Commerce is now set to aggressively promote export of auto components through a specific sectoral strategy.

The size of the global auto component industry is $1.2 trillion with most of it located in high cost countries. Global purchases of components by international vehicle manufacturers are currently estimated to be $45 billion. However, the role of outsourcing is constantly increasing.

Furthermore, the problem of high rejection rates which plagued the domestic auto ancillary industry has been overcome. This is reflected in the number of overseas deals concluded by the domestic industry amidst stiff competition from other Asian countries.

The government has extended various fiscal incentives and policy measures which too has helped the industry.

Trends of Automobile Components

Critically, outsourcing of automobile components that have relatively high engineering and design content from suppliers in low cost countries like India, is rapidly gaining momentum. It is estimated that in the next 10 years the auto components industry will reach $33-40 billion.

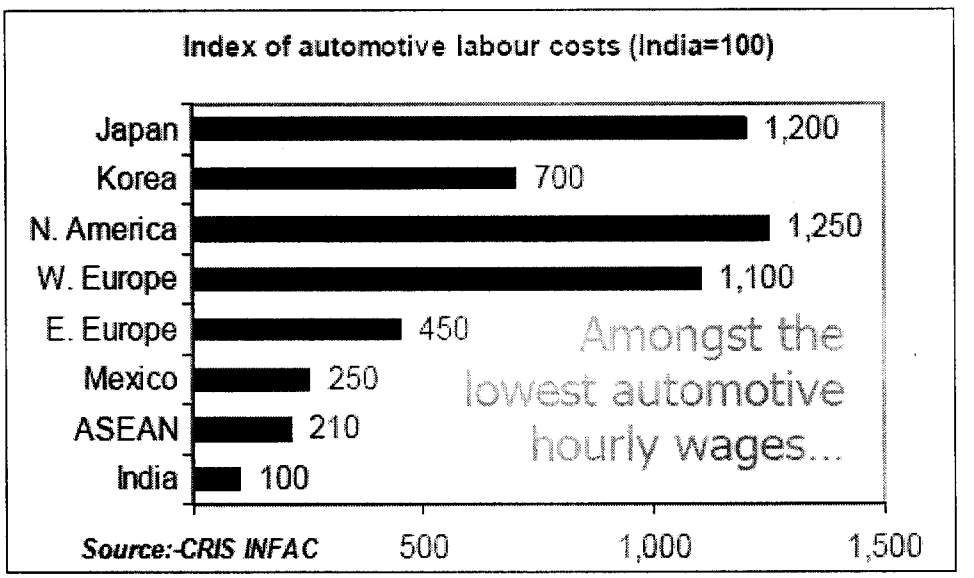
Going by the current trends in the domestic automotive industry and as stated above, it is expected that the indigenous demand for auto components will also reach $13-15 billion in the next 10 years and about USD 20-25 billion would be exported. To meet the combined demand from domestic and international customers the industry will have to make significant incremental investment.

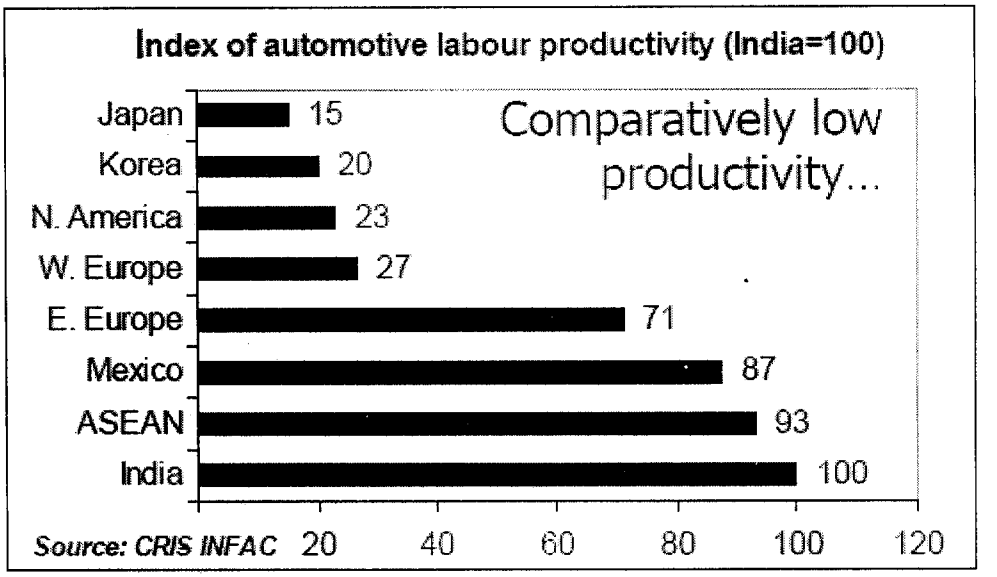
Hence, the Indian auto component industry is poised to achieve a prominent position in the global market and will in all probability be a major driver of growth and employment in the domestic economy.

Considering the recent figures, whereby domestic demand is increasing by about 15 per cent over the previous year and exports by over 25 per cent, the above estimates, while undoubtedly challenging, appear achievable.

To, conclude, the auto-components sector in India appears well revved up to speed on from here on the success-track.

India : Among the best in labour economics India




Index of automotive labour productivity (India=100)
Japan
Korea
N. America
W. Europe
E. Europe
Mexico
ASEAN
India
15
20
23
27
71
87
93
100
Comparatively low productivity...
Source: CRIS INFAC
20
40
60
80
100
120


Availability of skilled labour (Score on 10)
India
US
Germany
Japan
France
Thailand
UK
Mexico
China
Indonesia
7.6
7.6
7.1
6.8
6.5
5.7
5.0
5.0
4.3
3.3
But 2nd to none in skill availability...
0.0
2.0
4.0
6.0
8.0
10.0
Source: IMD Competitiveness Year Book 2005

Opportunity to source from India

- There is a growing demand for auto components
- Total production '2004: Approx. $ 6.73 billion
- Exports 2004 : Approx. $1.4 billion. (CAGR of 19% -last 6 yrs)
- In the next 10 years the auto components industry will reach $33-40 billion.(Estimate)
- Indigenous Demand : $13-15 billion
- Export Demand : $20-25 billion

So, the finally conclusion of automobile components industry have bright future in India.

System Analysis, Design and Development

CHAPTER-4

SYSTEM ANALYSIS, DESIGN AND DEVELOPMENT

Analysis is a detailed study of various operations performed by a system and their relationships within and outside the system. One aspects of analysis is defining the boundaries of the system and determining whether a candidate system should consider other related systems. During analysis data is collected on the available files, decision points and transactions handled by the present system.

4.1 Existing System Study

The system study gives the structure and functioning of existing system gives the idea for the design of the new systems. This will correct the pit falls of the existing systems. It is helpful to understand and study the entire existing systems and its performance.

4.1.1 Drawbacks of Existing Systems

- Inconsistency of data.
- Lot of repetitive paperwork.
- Time consuming reference work.
- Keeping track of transactions are very difficult in the manual systems, It is tiring and there is a chance of committing mistakes.
- Inefficiency

4.1.2 Problem Specification

The problem facing of existing system like Enormous amount of time consumption for doing things, Operations are time consuming, whenever a need of search arises the process evolves search through the paper, Paper records are easily damaged with time and The life time of paper records are very that it easily get damaged. It faces the risk of loss of data.

4.2 Need for New System

4.2.1 Need for Computerization

Although data processing system that involved computer, performs same functions as those of manual processing. The difference is extremely significant.

Computer oriented data processing systems are often called Electronic Data Processing. The importance of computerized data processing is realized when the following factors are considered.

- Speed
- Accuracy
- Ease of Communication

The system is capable of processing and analyzing a large volume of data with a short time but the computerized system has the capability of retrieving any data in the shortest possible time which can be either visualized with the help of visual display unit or be printed out by incorporating a printer to the system.

4.3 Proposed System

Speed is the word of the movement in today's busy world. The proposed system is carefully designed to provide more flexibility with regard to existing system. The proposed system has more advantages and it avoids more disadvantages of the current system. The proposed system has many benefits such as stability, user friendliness, flexibility and simplicity.

It is designed and developed according to the user requirements. It may be better choice to select MS Access to maintain the database and Tables, Query, Forms and Reports created in Accesses will have loss chances for corruption, when compared to other database like FoxPro, etc. A detailed system study was carried out and various objectives were then formulated.

4.3.1 Advantages of Proposed System

The proposed system has many advantages. It has mainly avoided all the drawbacks existing system. Various advantages of proposed system are as follows:

- Instantaneous retrieval of any type of information.
- Generation of query based reports.
- To provide facility for maintenance of all master files.
- Provision to select values from a list of values, so as to minimize errors.
- User friendly for using this application

4.4 System Configuration

4.4.1 Hardware Specification

Processor	: Intel Pentium 4
Speed	: 2.00GB
RAM	: 120 MB
Hard Disc	: 40GB
Operating System	: Windows 2000 Professional
Monitor	: 15 inch
CD drive	: Samsung 52X, RW

4.4.2 Software Specification

Operating System	: Windows 2000 Professional
Package	: MS Office

4.5 Input Design

Input design is the method by which validation data are accepted from the user. This valid data in turn is stored as operational data in the database.

Inaccurate input data are the most common cause of errors in the data processing. The input design is carried out in such away that the input data entry is very easy and error free. Input screen takes care to filter the invalid data from becoming an operational data at data entry phase. This is achieved by providing checks and validation

4.5.1 Features of Input Design

- Input design mainly includes Combo Box, Command Buttons which helps in the user to choose the option.
- The input design also includes Save, Undo, Close, Preview, Print buttons.
- The input design also includes Add Button, which helps to add some data's.

4.5.2 Some of the Input Forms are

- College Master
- Company Master
- Dept Master
- Request Master
- Industrial Guide Master
- Course Master
- Requests
- Student Status
- Permission Letter
- Regret Letter
- Monthly Report
- Certificate

4.6. Output Design

The output design defines the output required and the format in which it is to be produced care must be taken to present the right information The output generated can be classified into 3 categories.

- Screen output
- Output to be stored in the Tables
- Hardcopy of the output

The screen output essentially displays the generated output on the screen. The provision of generated output to be stored in the file is for future reference and to take hard copies of the same is to provide information to the Human Resource Management and wherever situation demands. The most important and effective way of presenting information is reports.

4.6.1 Some of the Reports Generated are

- ❖ Permission Report
- ❖ Regret Report
- ❖ Monthly Report
- ❖ Certificate Report

4.7. Table Design

4.7.1 College Master

In this module are maintain details of the college. The college details are stored in Field Name. The details maintained are College Code, College Name, Address, City, State, Pin code, Contact Person, Designation, Phone No, Fax No, Email ID, Website Address.

FIELD NAME	DATA TYPE
College Code	Text
College Name	Text
Address	Text
City	Text
State	Text
Pin code	Number
Contact Person	Text
Designation	Text
Phone No	Number
Fax No	Number
Email ID	Text
Website Address	Text

4.7.2 Company Master

In this module are maintain details of the Company.. The Company details are stored in Field Name. The details maintained are Company Code and Company Name.

FIELD NAME	DATA TYPE
Company Code	Text
Company Name	Text

4.7.3 Department Master

In this module are maintain details of the Department. The Department details are stored in Field Name. The details maintained are Department Code and Department Name.

FIELD NAME	DATA TYPE
Dept Code	Text
Dept Name	Text

4.7.4 Request Master

In this module are maintain details of the Request. The Request details are stored in Field Name. The details maintained are Request Code and Request Name.

FIELD NAME	DATA TYPE
Request Code	Number
Request Name	Text

4.7.5 Industrial Guide Master

In this module are maintain details of the Industrial Guide.. The Industrial Guide details are stored in Field Name. The details maintained are Guide Code and Guide Name.

FIELD NAME	DATA TYPE
Guide Code	Number

4.7.6 Course Master

In this module are maintain details of the Course. The Course details are stored in Field Name. The details maintained are Course Code and Course Name.

FIELD NAME	DATA TYPE
Course Code	Text
Course Name	Text

4.7.7 Request Header

In this module are maintain details of the Requests. The Requests details are stored in Field Name. The details maintained are Request No, Request Date, Request By, College Code, Request Type, Request For, Duration From, Duration To, Course of study, No of Students, External Guide Name, Referred By, Assigned To Company.

FIELD NAME	DATA TYPE
Request No	Text
Request Date	Date / Time
Request By	Text
College Code	Text
Request Type	Text
Request For	Text
Duration From	Date / From
Duration To	Date / From

No of Students	Number
External Guide Name	Text
Referred BY	Text
Assigned To Company	Text

4.7.8 Request Detail

In this module are maintain details of the Request detail. The Requests details are stored in Field Name. The details maintained are Request No, Line Number, Student Name, Gender, Request Status, Allotted to Dept, Project Title, Internal Guide Name, Technology Used, Project Status, Report Submitted.

FIELD NAME	DATA TYPE
Request No	Text
Line Number	Number
Student Name	Text
Gender	Text
Request Status	Text
Allotted TO Dept	Text
Project Title	Text
Int Guide Name	Text
Technology Used	Text
Project Status	Text
Report Submitted	Yes / No

4.7.9 Monthly Report

In this module are maintain details of the Monthly Report detail. The Monthly Report details are stored in Field Name. The details maintained are Request No, Student Name, Dept Code, Project Title, Technology Used, Project Status, Report Submitted.

FIELD NAME	DATA TYPE
Request No	Text
Student Name	Text
Dept Code	Text
Project Title	Text
Technology Used	Text
Project Status	Text
Report Submitted	Yes / No

4.7.10 Temp GOP

In this module are maintain details of the Temp GOP. The Temp GOP details are stored in Field Name. The details maintained are Request No, Request Date, Request By, College Code, College Name, Request Type, Request For, Duration From, Duration To, Course of study, No of Students, External Guide Name, Referred By, Assigned To Company, Ref No, Salute, Address, City, State, Pin Code, Student Name, Dept Code, Gender, Int Guide Name.

FIELD NAME	DATA TYPE
Request No	Text
Request By	Text
College Code	Text
College Name	Text
Request For	Text
Line Number	Number
Student Name	Text
Course of Study	Text
Gender	Text
Duration From	Date / Time
Duration To	Date / Time
Request Type	Text
No of Students	Number
Ref No	Text
Salute	Text
Int Guide Name	Text
Request Status	Text
Request Date	Date / Time
Ext Guide Name	Text
Address	Text
City	Text
State	Text
Pin Code	Number
Assigned to Company	Text

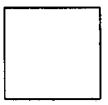
4.7.11 Temp Regret

In this module are maintain details of the Temp Regret. The Temp Regret details are stored in Field Name. The details maintained are Request No, Request Date, Request By, College Code, College Name, Request Type, Request For, Duration From, Duration To, Course of study, No of Students, Referred By, Assigned To Company, Ref No, Salute, Address, City, State, Pin Code, Student Name, Dept Code, Gender, Int Guide Name.

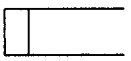
FIELD NAME	DATA TYPE
Request No	Text
Request By	Text
College Code	Text
College Name	Text
Request For	Text
Line Number	Number
Student Name	Text
Course of Study	Text
Gender	Text
Duration From	Date / Time
Duration To	Date / Time
Request Type	Text
No of Students	Number
Ref No	Text
Salute	Text
Int Guide Name	Text
Request Date	Date / Time
Address	Text
City	Text
State	Text
Pin Code	Number
Assigned to Company	Text

4.8 Data Flow Diagram

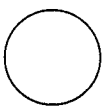
A Data Flow Diagram is graphical representation of the "Flow" of data through functions or processor. More generally, a data flow diagram is used for the visualization of data processing. It illustrates the processor, data stores, and external entities, data flows in a system and the relationship between these things.



A square is a represented as source or destination of system data.



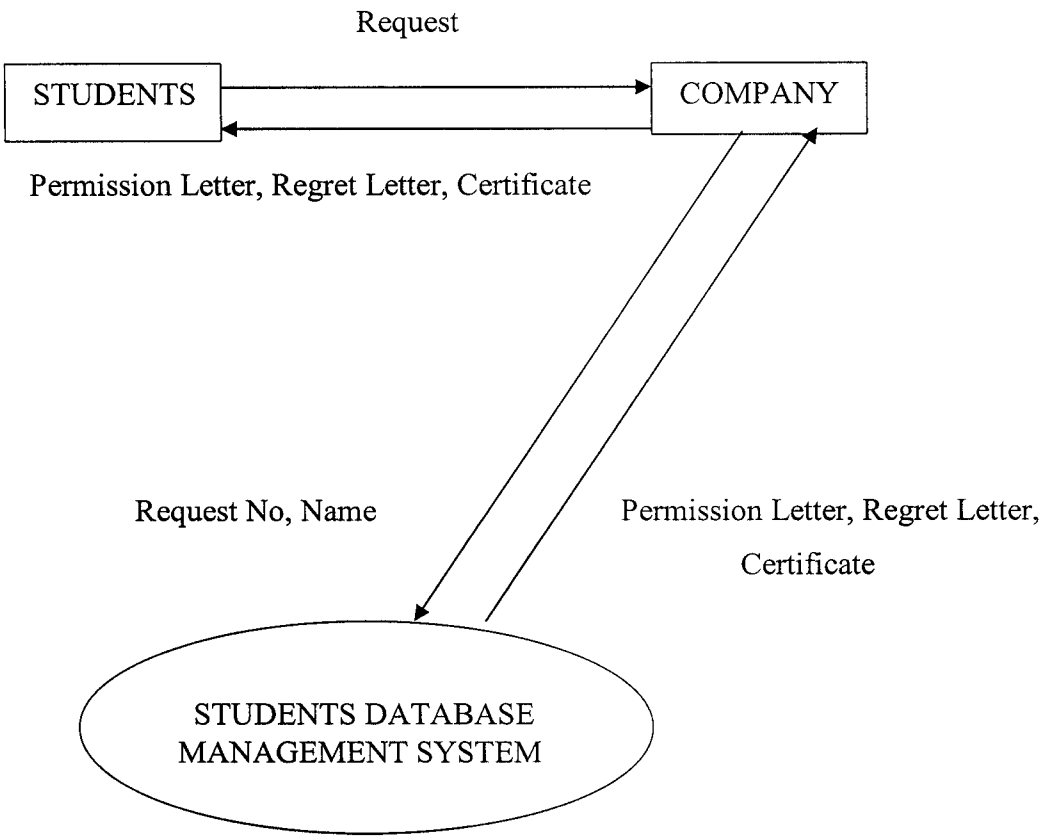
An open rectangle is data store –data at rest, are temporary repository of data.



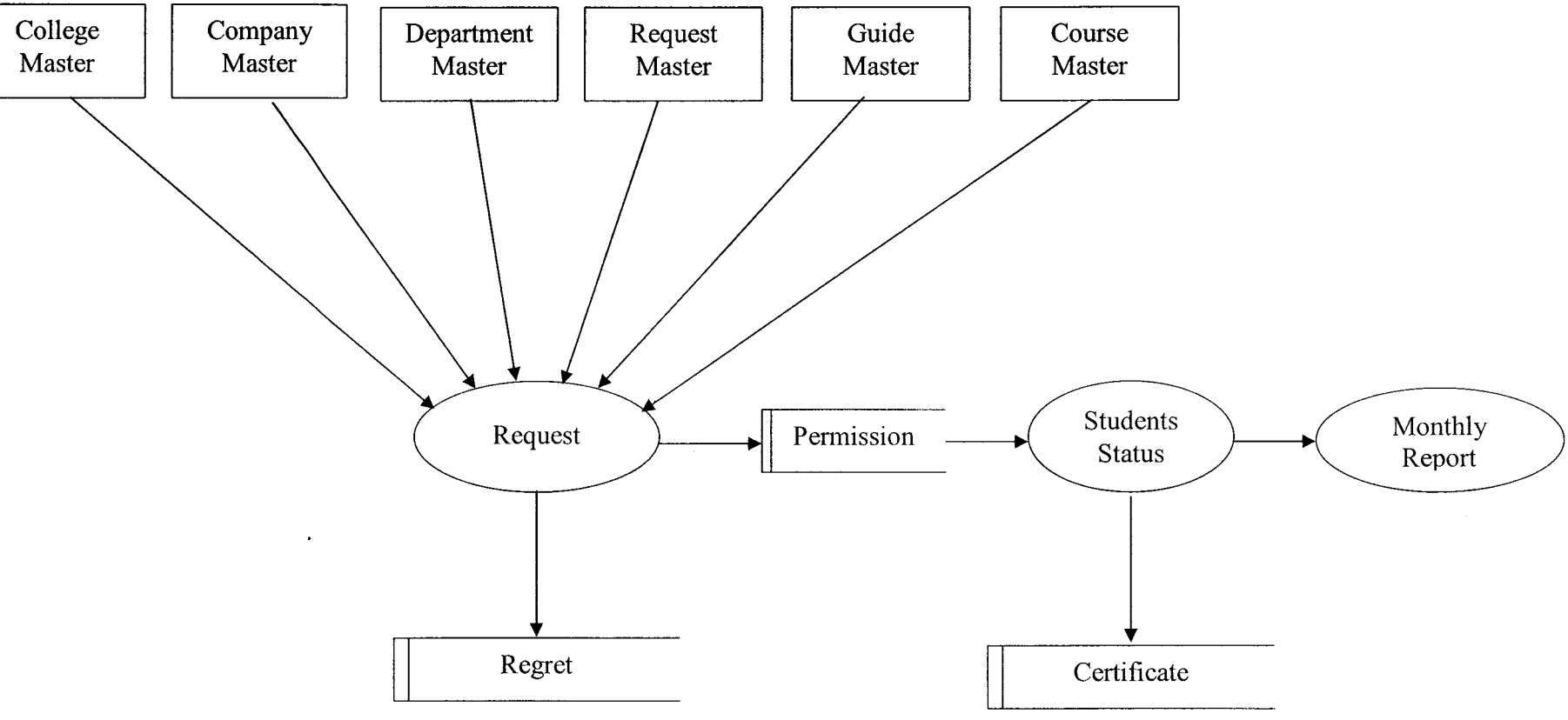
A circle or bubble represents the process that transforms incoming data flow into outgoing data flows.

An arrow identifies the data flow-data in motion. It is a pipeline through which information flows.

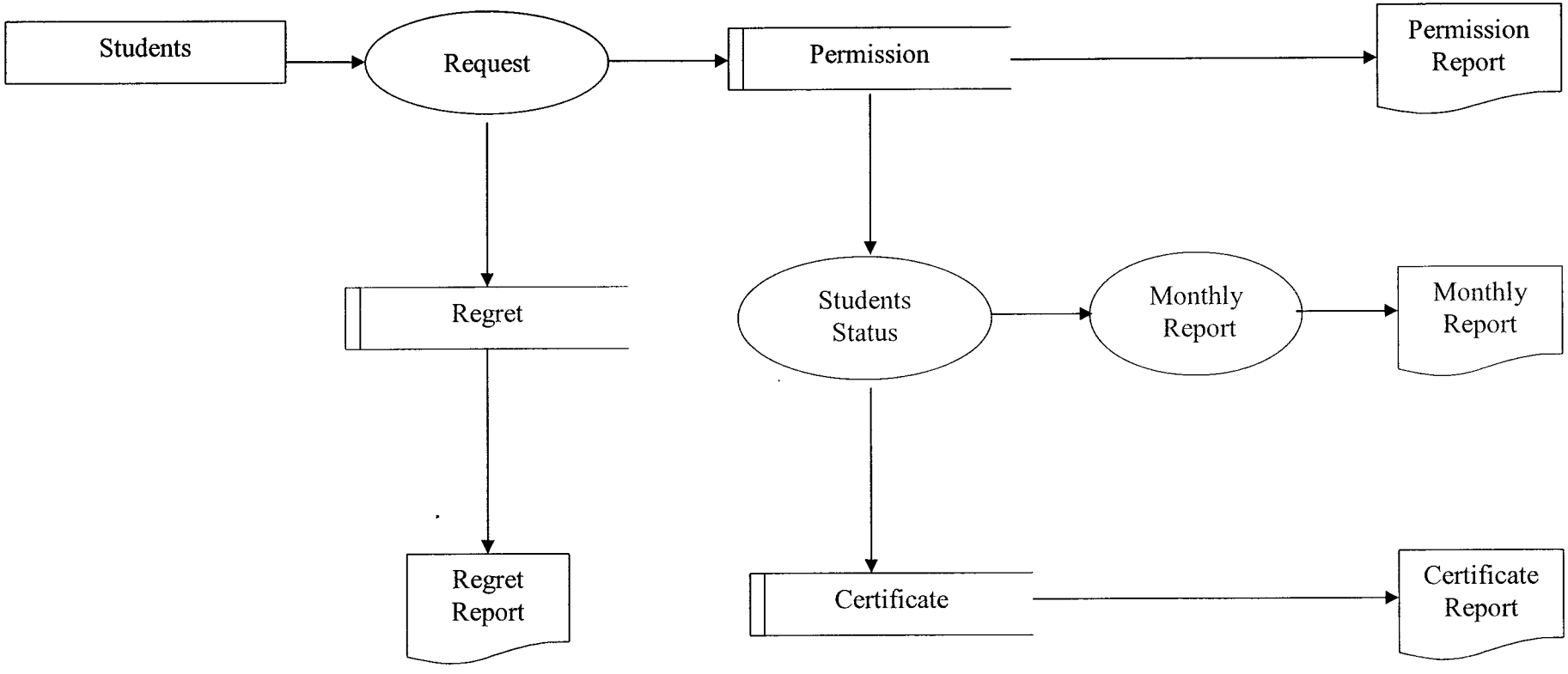
Level 0


Request
STUDENTS
COMPANY
Permission Letter, Regret Letter, Certificate
Request No, Name
Permission Letter, Regret Letter,
Certificate
STUDENTS DATABASE
MANAGEMENT SYSTEM

el 1


College Master
Company Master
Department Master
Request Master
Guide Master
Course Master
Request
Permission
Students Status
Monthly Report
Regret
Certificate

el 2


Students
Request
Permission
Permission Report
Regret
Students Status
Monthly Report
Monthly Report
Regret Report
Certificate
Certificate Report

Testing

CHAPTER-5

TESTING

5.1 System Testing

To obtain better result, the system should be tested to confirm that the system works effectively. Also the performance of the system should also be tested in a well planned and designed manner. Any system can be tested by either top-down or bottom-up approach. The bottom-up approach is the way of testing the individual program. The system is tested in the top-down approach, with the sample data the whole system is individually tested.

5.2 White box Testing

White box testing, sometimes called glass-box testing is a test case design method that uses the control structure of the procedural design to derive test cases. Using white box testing methods, the software engineer can derive test cases.

- Guarantee that all independent paths within a master have been exercised at least once.
- Exercise all logical decisions on their true and false.
- Exercise internal data structure to ensure their validity.

5.3 Black Box Testing

Black box testing, also called behavioral testing, focuses on the functional requirements of the software. That is, black box testing enables the software engineer to derive sets of input conditions that will fully exercise all functional requirements for a program. Black box testing is not an alternative to white box techniques. Rather it is a complementary approach that is likely to uncover a different class of errors than

Black box testing attempts to find errors in the following categories :

- Incorrect or missing functions.
- Interface errors.
- Behavior or performance errors.

The system has used both White Box and Black Box testing.

Conclusion

CHAPTER-6

CONCLUSION

This project entitled **"STUDENTS DATABASE MANAGEMENT SYSTEM"** being implemented and found to replace the manual system effectively, it has been possible to eliminate human errors likely to occur in these works because of bulk of data entry and data processing. This project designed for the particular need of the company was found to work effectively.

This system reduces the lab and clerical work and has also resulted in quick data entry and information retrieval. This system works with higher degree of accuracy and user friendliness, which are very vital for the progress of the organization.

Handling large volume of data manually demand a lot of hand work, greater processing time. Manual handling of data will lead to fatigue and boredom therefore there are great chance of errors to occur.

The system has been tested with valid test data and is found to meet its objective.

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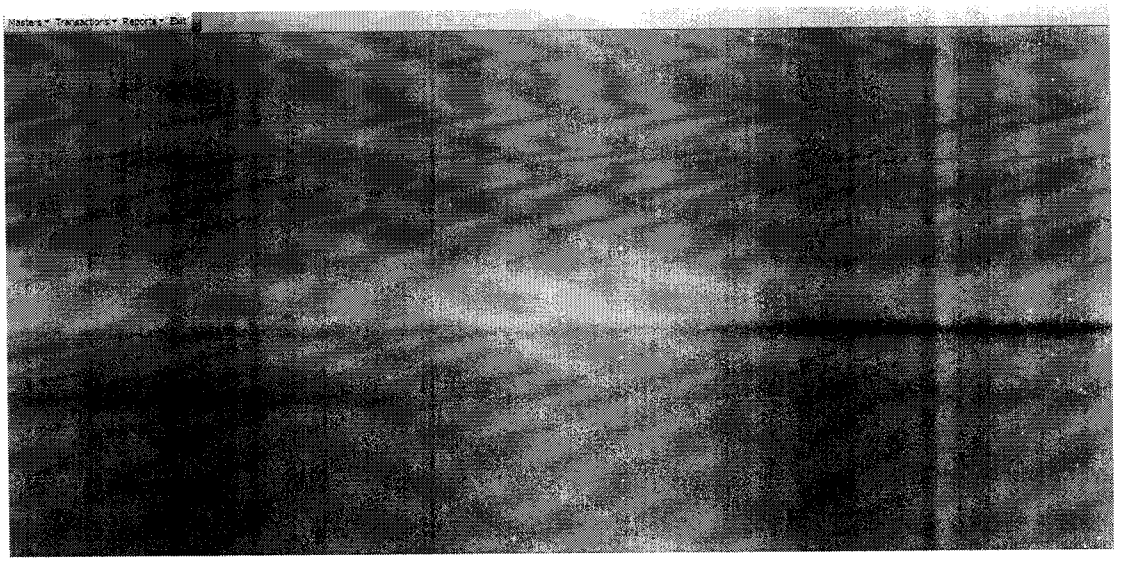
www.rootsindia.com
www.Rediker.com
www.ialda.com

Source:

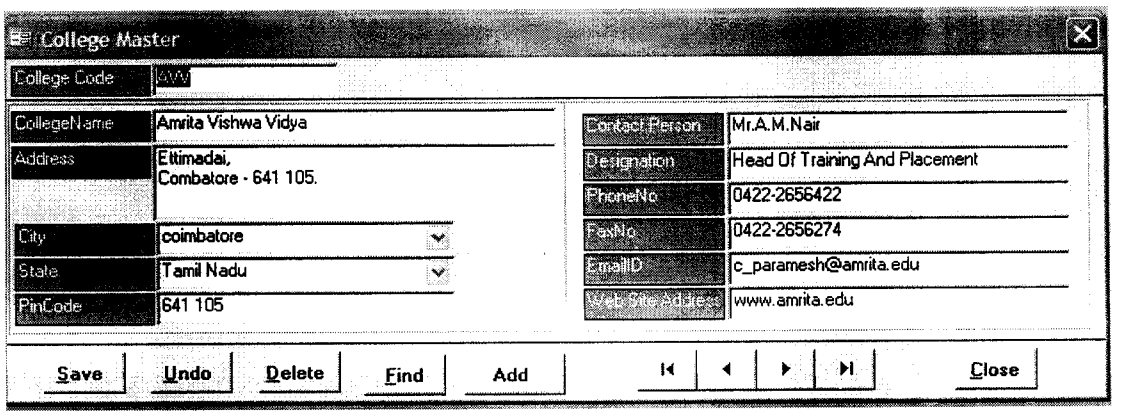
CRISIL

Annexure

Forms




Masters
Transactions
Reports
Exit
CollegesMaster
CompanyMaster
DepartmentMaster
CourseMaster
IndustrialGuideMaster
RequestMaster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College Code
CollegeName
Amrita Vishwa Vidya
Address
Ettimadai,
Combatore - 641 105.
City
coimbatore
State
Tamil Nadu
PinCode
641 105
Contact Person
Mr.A.M.Nair
Designation
Head Of Training And Placement
PhoneNo
0422-2656422
FaxNo
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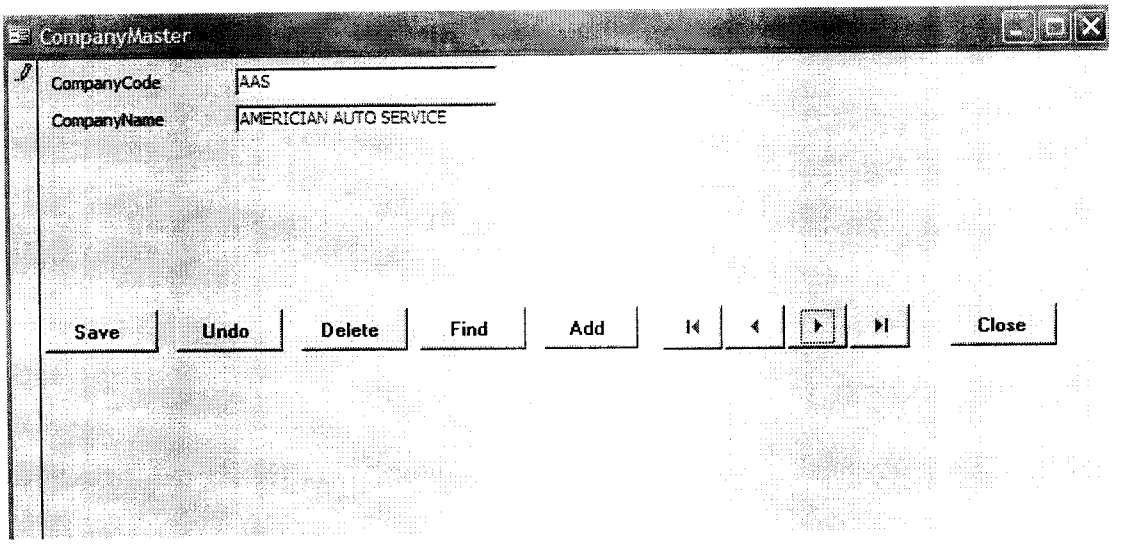
Web Site Address
www.amrita.edu
Save
Undo
Delete
Find
Add
Close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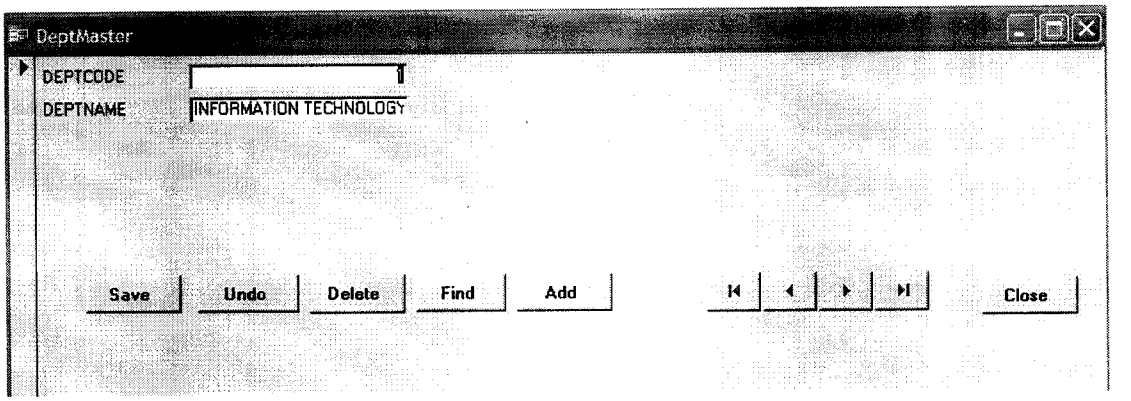
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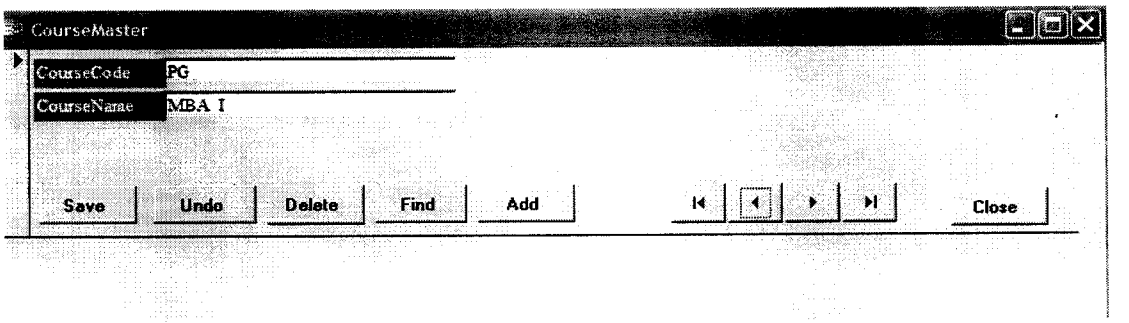
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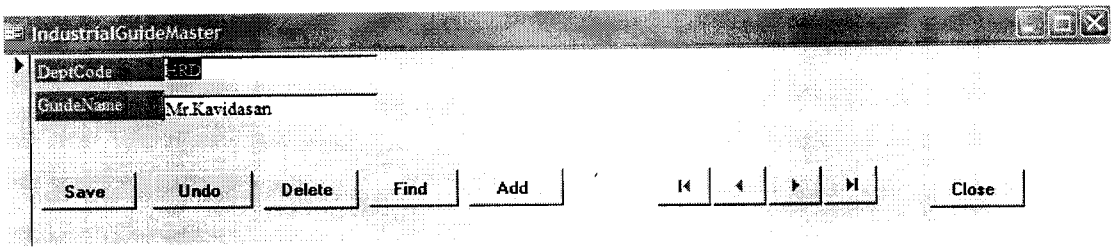
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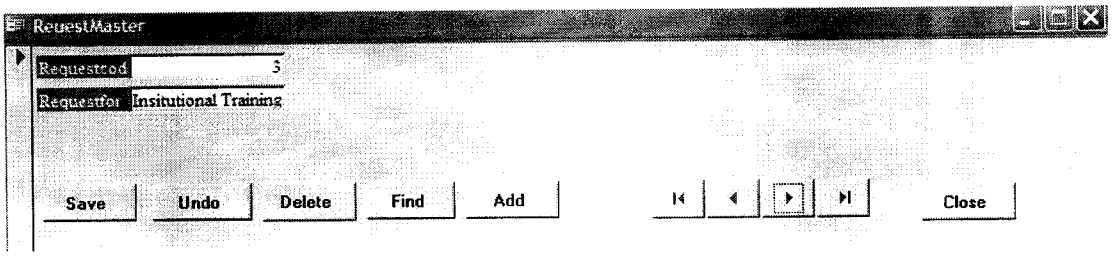
RequestMaster
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Requestfor
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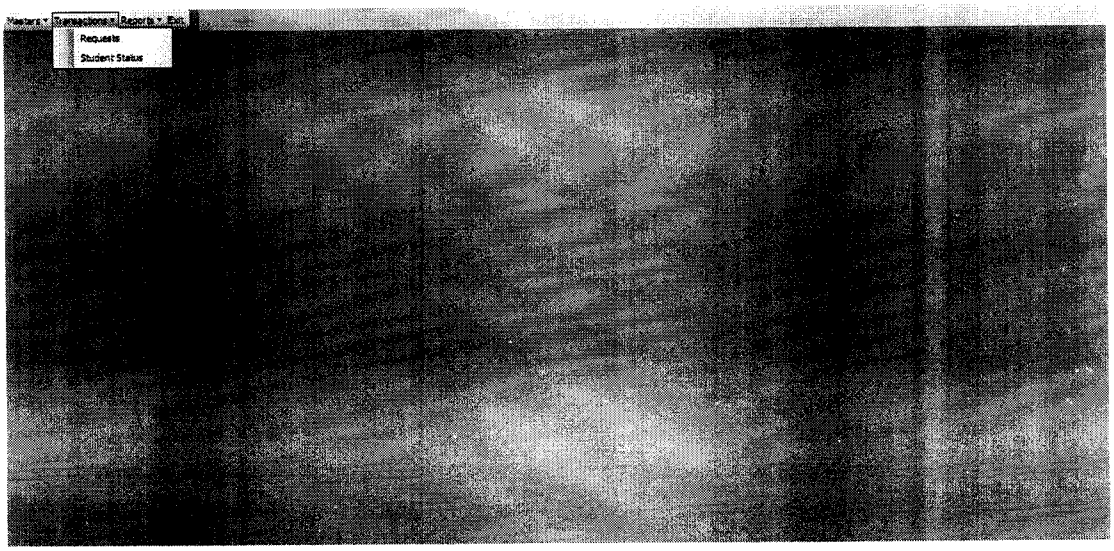
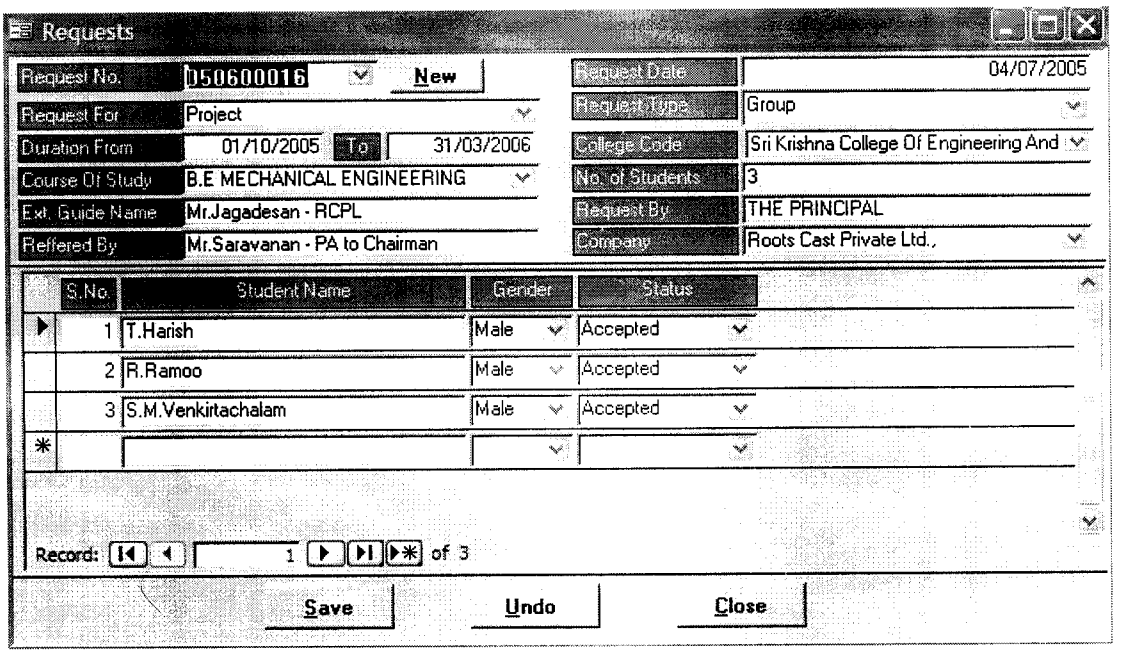

Requests
Student Status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050600016
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04/07/2005
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Project
Request Type
Group
Duration From
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To
31/03/2006
College Code
Sri Krishna College Of Engineering And
Course Of Study
B.E MECHANICAL ENGINEERING
No. of Students
3
Ext. Guide Name
Mr.Jagadesan - RCPL
Request By
THE PRINCIPAL
Reffered By
Mr.Saravanan - PA to Chairman
Company
Roots Cast Private Ltd.,
S.No.
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3 S.M.Venkitachalam Male Accepted
Record: 1 of 3
Save
Undo
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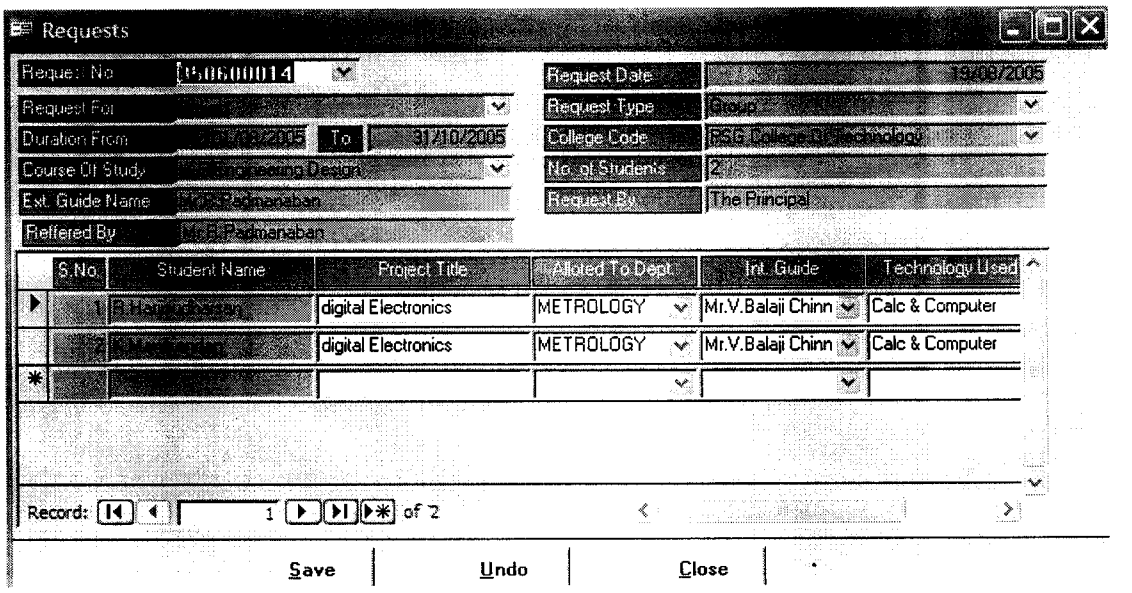
Requests
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Request Type
Group
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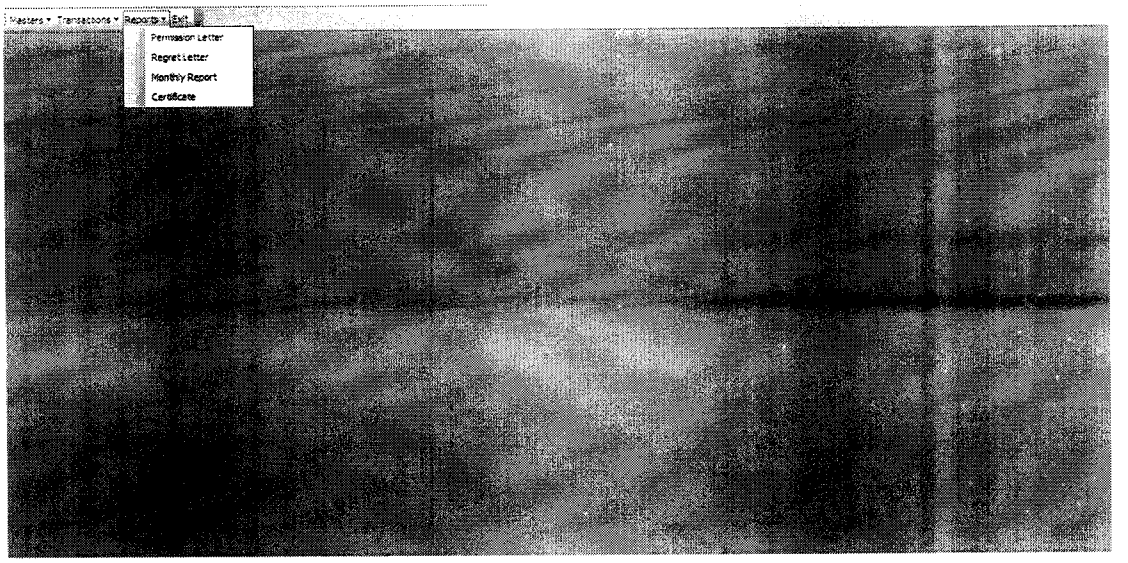
To
31/10/2005
College Code
RSR College Of Technology
Course Of Study
Engineering Design
No. of Students
2
Ext. Guide Name
Mr.R.Padmanaban
Request By
The Principal
Reffered By
Mr.R.Padmanaban
S.No.
Student Name
Project Title
Alloted To Dept
Int. Guide
Technology Used
digital Electronics METROLOGY Mr.V.Balaji Chinn Calc & Computer
digital Electronics METROLOGY Mr.V.Balaji Chinn Calc & Computer
Record: 1 of 2
Save
Undo
Close



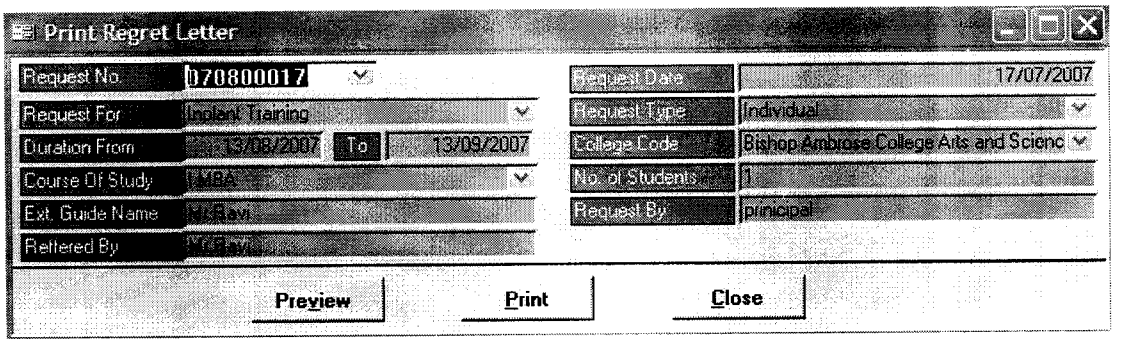
Requests

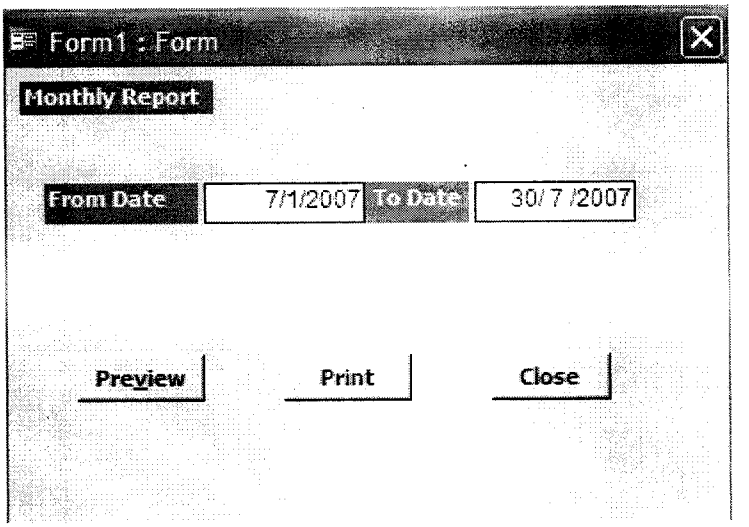
Request No: 0506000016
Request Date: 04/07/2005
Request For:
Request Type: Group
Duration From: 01/10/2005 To 31/03/2006
College Code: Sri Krishna College Of Engineering And T
Course Of Study: B.E.MECHANICAL ENGINEERING
No. of Students: 3
Ext. Guide Name: Mr.Jagadesan - RCPL
Request By: THE PRINCIPAL
Reffered By: Mr.Saravanan - PA to Chairman
Company:

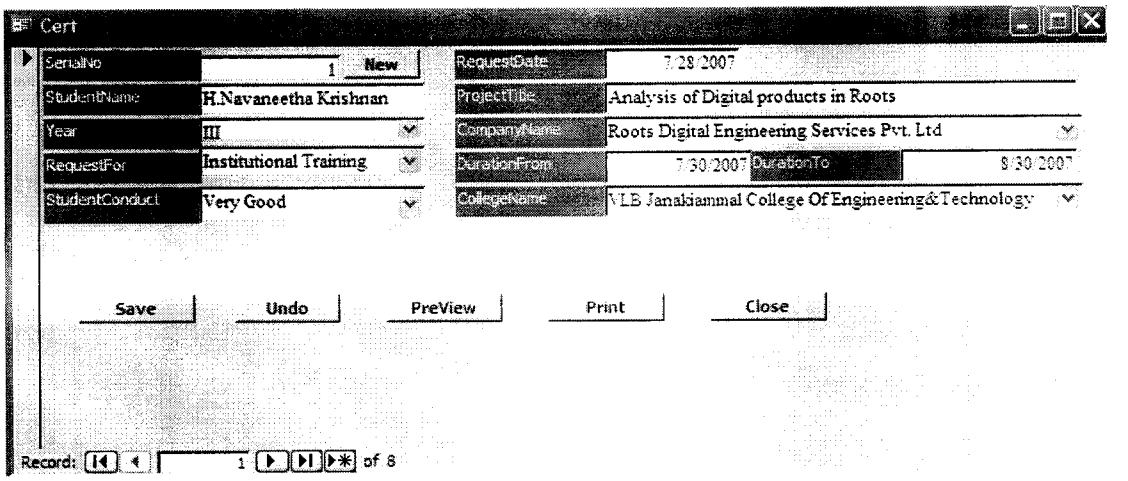
S.No.	Student Name	Gender	Status
1	T H	Male	Accepted
2	R	Male	Accepted
3	S	Male	Accepted
*			

Record: 1 of 3

Preview Print Close


Print Regret Letter
Request No
070800017
Request For
Inplant Training
Duration From
13/08/2007
To
13/09/2007
Course Of Study
MBA
Ext. Guide Name
Mr.Ravi
Rettered By
Mr.Raj
Request Date
17/07/2007
Request Type
Individual
College Code
Bishop Ambrose College Arts and Scienc
No. of Students
1
Request By
principal
Preview
Print
Close


Form1 : Form
Monthly Report
From Date
7/1/2007
To Date
30/ 7 /2007
Preview
Print
Close


Cert
SerialNo
1
New
StudentName
H.Navaneetha Krishnan
Year
III
RequestFor
Institutional Training
StudentConduct
Very Good
RequestDate
7/28/2007
ProjectTitle
Analysis of Digital products in Roots
CompanyName
Roots Digital Engineering Services Pvt. Ltd
DurationFrom
7/30/2007
DurationTo
8/30/2007
CollegeName
VLB Janakiammal College Of Engineering&Technology
Save
Undo
PreView
Print
Close
Record:
1
of 8

Reports

RIL/HRD/050600016

04/07/2005

THE PRINCIPAL
Sri Krishna College of Engineering and Technology
Sunganapuram, Kuniamuthur P.O.,
Coimbatore - Tamil Nadu - 641 008

Dear Sir,

Sub : Grant of Permission for to do Project - Reg.

As requested by you, we grant permission for your Student / Students

1	T.Harish	B.E MECHANICAL
2	R.Ramoo	B.E MECHANICAL
3	S.M.Venkirtachalam	B.E MECHANICAL

to do Project in our organization during the period Oct 05 to Mar 06 on the terms and conditions mentioned below.

1. They should adhere to the rules and regulations of our organisation.

2. They will not be eligible for any benefits or whatsoever for undertaking Project

3. The company shall not be liable to pay any compensation in any manner to the students or

4. They will be responsible for any financial loss made by them to the organisation during the course of their Project

5. They should not publish or pass on any information pertaining to the organisation without prior permission of the management, whatsoever the purpose may be.

6. They should follow strict discipline and if found to deviate any of the above at any time, they will not be allowed to proceed any more.

7. They should submit one copy of the report to the management on completion of the Project

8. After completion of the project they shall have to make a presentation to our personnel before collecting their project completion certificate.

9. They shall have the guidance of Mr.Jagadesan - RCPL

Thanking you,

Yours faithfully,
for **ROOTS CAST PRIVATE LTD.,**

(KAVIDASAN)
GENERAL MANAGER - CORPORATE HRD

05/08/2007

RIL/HRD/070800017

prinicipal
Bishop Ambrose College Arts and Science
College nagar,Sungam Bye - Pass Road,
Ramanathapuram,
coimbatore - Tamil Nadu - 641 045

Dear Sir,

Sub : Inplant Training - Reg.
Ref : Your letter dated 17/07/2007 - Reg.

With reference to the above, we regret to inform you that we are unable to give Inplant Training permission to your students as we have already permitted enough number of colleges, who have approached us earlier.

Thanking you,

Yours faithfully,
for **ROOTS INDUSTRIES LIMITED,**

(KAVIDASAN)
GENERAL MANAGER - CORPORATE HRD

Monthly Report

RequestNo	StudentName	DeptCode	Project Title	TechnologyUsed	Project Status	Report Submitted	Date
050600004	Geetha	43	Marketing of New products		Yet To Start	0	8/2/2005
050600004	ram	43	marketing of New Products		Yet To Start	0	8/2/2005
050600004	Sai	43	Marketing of New Products		Yet To Start	0	8/2/2005
050600005	abirami	98			Yet To Start	0	8/3/2005
050600006	Ravi	12	Packaging		Yet To Start	0	8/1/2005
050600006	Guru	12	Packaging		Yet To Start	0	8/1/2005

SL.No. : 1 Date : 7/28/2007

PROJECT / INPLANT TRAINING / INTERNSHIP CERTIFICATE

This is to certify that Mr. / Ms. H.Navaneetha Krishnan III Year student of VLB Janakiammal College Of Engineering&Technology has done / undergone Institutional Training on Analysis of Digital and signal of horn product in our Roots Digital Engineering Services Pvt. Ltd during the period from 7/30/2007 to 8/30/2007. During this period his / her conduct was Very Good .

(KAVIDASAN)
GENERAL MANAGER - CORPORATE HRD