INFORMATION AND RESOURCE MANAGEMENT SYSTEM

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KUMARAGURU COLLEGE OF TECHNOLOGY
COIMBATORE

A PROJECT REPORT

Submitted to the

FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

In partial fulfillment of the requirements
for the award of the degree
of

MASTER OF COMPUTER APPLICATION

June, 2006

KUMARAGURU COLLEGE OF TECHNOLOGY
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Bonafide Certificate

Certified that this project report titled **INFORMATION RESOURCE MANAGEMENT SYTEM "** is the bonafide work of Mr. **C.KARTHIKEYAN** 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 of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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To Whom It May Concern

This is to certify that **Mr.C.KARTHIKEYAN, Reg no: 71203621019**, final year M.C.A student from Kumaraguru College of Technology Coimbatore, has successfully completed his project titled **"INFORMATION RESOURCE MANAGEMENT SYSTEM"** during the period from January 2006 to May 2006. During this period his conduct was found good.

As part of the company's policy we don't let out coding or pseudo code out of the company's premises in soft or hard copy.

For Adrain Technologies,

Mr.B.Prasanna Venkatesh M.S.,
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ACKNOWLEDGEMENT

I would like to express my gratitude and humble thanks to our beloved principal **Dr. Joseph.V.Thanikal Ph.D.**, and to our former principal **Dr.K.K.Padmanaban Ph.D.**, for his kind support extended during the project.

I would like to express my deep sense of gratitude to **Dr. M. Gururajan Ph.D.**, HOD, Department of Computer Applications for providing moral support towards this project work.

I am deeply indebted to **Mrs.V.Jalaja Jayalakshmi M.C.A**, Lecturer, Department of Computer Applications, my internal project guide for offering her guidance, timely encouragement and support to me for the completion of this project.

I thank **Ms. V. Geetha MCA, MPhil,** Project Coordinator, Assistant Professor, Master of Computer Applications, who has been encouraging me to do this project.

I would like to express my sincere thanks to **Mr.S.Raj Kumar M.S**, Project Manager, Adrian Technologies, my external guide for his support, and experience from which I have greatly benefited.

ABSTRACT

Information Resource Management System(IRMS) is an important department in each and every company. Managing the employees is the costly work in all companies. The aim of this system is to cut down the cost of the human resource which is employed, to maintain the employee information, in preparing the pay slip for each employee, to maintain the attendance for each employee, in resume scanning for interview management, to track the undergoing client project, to maintain the client information, to generate the reports for various management levels.

The whole system is solely operated by a single person called administrator. Administrator can enjoy in working of this system, by touching each modules of the system in a highly user friendly manner.

Hence only one person operates the whole system secrecy of information is also maintained. The IRM system computerizes all the details that are maintained manually. Once the details are fed into the system there is no need for various persons to deal with separate sections. Only a single person is enough to maintain all the reports. The security can also be given as per the requirement of the users.

IRM system saves time in maintaining information by reducing the man power that needs to be employed in various departments for gathering and

distribution of information by holding all work in a single stand alone system. Since every information is seen in a single system retrieval of information becomes easier. All the information is tied in a single system updating of information also becomes very easier.

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DFD	-	Data Flow Diagram
IRMS	-	Information and Resource Management System

CHAPTER 1

1. INTRODUCTION

1.1 PROJECT OVERVIEW

Information Resource Management is one important department in each and every company. Managing the employees is the costly work in all the companies. The aim of this system is to cut down the cost of the human resource which is employed to maintain the employee information, in preparing the pay slip for each employee, to maintain the attendance for each employee, in resume scanning for interview management, to track the undergoing client project, to maintain the client information, to generate the reports for various management levels.

The whole system is solely operated by a single person called administrator. Administrator can enjoy in working of this system, by touching each modules of the system in a highly user friendly manner.

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IRM system saves time in maintaining information by reducing the man power that needs to be employed in various departments for gathering and distribution of information by holding all work in a single stand alone system. Since every information is seen in a single system retrieval of information becomes easier. All the information are tied in a single system, Updating of information also becomes very easier.

1.1.1 OBJECTIVES OF THE SYSTEM

- ✓ Reports can be generated with case.
- ✓ Accurate calculations are made.
- ✓ Less manpower required.
- ✓ Large volumes of data can be stored with case.
- ✓ Updating of Records stored are updated now and then.

1.2 COMPANY PROFILE:

Adrian Technologies *was started in the year 1997* in Bangalore. It also has many supporting branches in and around India. *Adrian Technologies* offers Client a wide range of IT Services and Solutions including Web Designing, Customized Product Design and Development, delivering a high Quality Cost effective Software Solutions that meet Client's Expectation. Company also gives their Clients the power to address their Challenges to gain a Competitive edge in the IT Market. Adrian believes in developing a strong relationship with their Clients and is committed to provide maximum customer satisfaction.

Adrian is committed to creating and shaping leaders who will help our customers make distinctive, lasting and substantial improvements to their business.

Adrian Technologies Pvt. Ltd. is committed in providing innovative Software Solutions to its Clients and recognizes the importance of technology. Adrian seasoned software Professional has Expertise in a wide range of technologies including,

- ❖ Web Technology
- ❖ Client Server Technology
- ❖ Database Design, Development and Administration

- Customized Package Software implementation like Accounts
- Development of System Software in Low Level Programming
- Main Frame
- Server Side Programming

Adrian undertakes Short Term and Long Term Projects on a contract and regular basis with reputed Clients. Adrian goal is to clearly understand their Client's need and provide them with real and lasting Solutions that meet their Expectations.

Adrian respect for those unchanging goals in the Market place combined with our use of Technology to create innovative Cost-efficient Solutions that set us apart form the other technology Solutions Providers. Adrian has provided successful On-site development on a variety of platform and languages for Companies. Adrian is also involved in the exporting and importing of Software products.

CHAPTER 2

SYSTEM REQUIREMENT AND SPECIFICATION

2.1 HARDWARE REQUIREMENTS

Processor	:	Intel Pentium III 800 MHz
Primary Memory	:	256 MB SDRAM
Hard Disk Drive	:	40 GB HDD
Display Unit	:	Samsung Color Monitor (15")
Keyboard	:	Samsung108 Keys keyboard
Mouse	:	LG optical mouse

2.2 SOFTWARE REQUIREMENTS

PROGRAMMING LANGAGE	:	JAVA 1.3, SWING.
DATABASE	:	SQL SERVER7.0

2.3 SOFTWARE OVERVIEW

2.3.1 PROGRAMMING LANGAGE

2.3.1.1 JAVA

Java is an Object Oriented Programming language developed at Sun Microsystems in June 1995. Java has built-in support for threads, networking and a vast variety of other tools. The amazing thing about java is that it can be used to create a huge variety of applications and is noted for its 'Write once Run anywhere' characteristic.

Java is simple, object-oriented, distributed, interpreted, robust, secure, architecture-neutral, portable, high-performance, multithreaded and dynamic language.

The Java architecture consists of Java Virtual Machine (JVM), which is an abstract computer that runs compiled java programs. The JVM supports object oriented programming directly by including instructions for object method invocation. The java compiler generates architecture-independent byte codes.

Benefits of java

Java allows the user to:

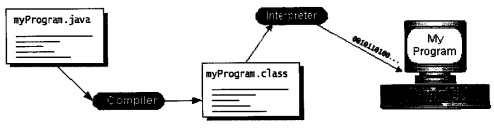
- Write robust and reliable programs.
- Build an application on almost any platform, and run that application on any other supported platform without having recompiling your code.
- Distribute your applications over a network in a secure fashion.

(a) The Java Programming Language

The Java programming language is a high-level language that can be characterized by all of the following

1 Simple	7 Architecture neutral
2 Object oriented	8 Portable
3 Distributed	9 High performance
4 Interpreted	10 Multithreaded
5 Robust	11 Dynamic
6 Secure	

With most programming languages, we can either compile or interpret a program so that we can run it on our computer. The Java programming language is unusual in that a program is both compiled and interpreted. With the compiler, first you translate a program into an intermediate language called *Java byte codes* —the platform-independent codes interpreted by the interpreter on the Java platform. The interpreter parses and runs each Java byte code instruction on the computer. Compilation happens just once; interpretation occurs each time the program is executed. The following figure illustrates how this works.



Java byte codes as the machine code instructions for the *Java Virtual Machine* (Java VM). Every Java interpreter, whether it's a development tool or a Web browser that can run applets, is an implementation of the Java VM.

You can compile your program into byte codes on any platform that has a Java compiler. The byte codes can then be run on any implementation of the Java VM. That means that as long as a computer has a Java VM, the same program written in the Java programming language can run on Windows 2000, a Solaris workstation, or on an iMac.

(b) The Java Platform

A *platform* is the hardware or software environment in which a program runs. The Java platform differs from most other platforms in that it's a software-only platform that runs on top of other hardware-based platforms.

The Java platform has two components:

- The *Java Virtual Machine* (Java VM)
- The *Java Application Programming Interface* (Java API)

Java VM is the base for the Java platform and is ported onto various hardware-based platforms.

The Java API is a large collection of ready-made software components that provide many useful capabilities, such as graphical user interface (GUI) widgets. The Java API is grouped into libraries of related classes and interfaces; these libraries are known as *packages*.

Native code is code that after you compile it, the compiled code runs on a specific hardware platform. As a platform-independent environment, the Java platform can be a bit slower than native code. However, smart compilers, well-tuned interpreters, and just-in-time byte code compilers can bring performance close to that of native code without threatening portability.

2.3.1.2 SWING

The Swing package is part of the Java Foundation Classes (JFC) in the Java platform. The JFC encompasses a group of features that help us to build GUIs; Swing provides all the components from buttons to split panes and tables.

The Swing package was first available as an add-on to JDK 1.1. Prior to the introduction of the Swing package, the Abstract Window Toolkit (AWT) components provided all the UI components in the JDK 1.0 and 1.1 platforms. We can identify Swing components because their names start with J. The AWT button class, for example, is named Button, whereas the Swing button class is named JButton. In addition, the AWT components are in the java.awt package, whereas the Swing components are in the javax.swing package.

As a rule, programs should not use "heavyweight" AWT components alongside Swing components. Heavyweight components include all the ready-to-use AWT components, such as Menu and ScrollPane, and all components that inherit from the AWT Canvas and Panel classes. When Swing components (and all other "lightweight" components) overlap with heavyweight components, the heavyweight component is always painted on top.

Swing Application creates four commonly used Swing components:

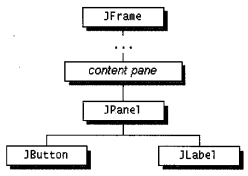
- a *frame*, or main window (JFrame)
- a *panel*, sometimes called a *pane* (JPanel)
- a button (JButton)
- a label (JLabel)

The frame is a *top-level container*. It exists mainly to provide a place for other Swing components to paint themselves. The other commonly used top-level containers are dialogs (JDialog) and applets (JApplet).

The panel is an *intermediate container*. Its only purpose is to simplify the positioning of the button and label. Other intermediate Swing containers, such as scroll panes (JScrollPane) and tabbed panes (JTabbedPane), typically play a more visible, interactive role in a program's GUI.

The button and label are *atomic components* -- components that exist not to hold random Swing components, but as self-sufficient entities that present bits of information to the user. Often, atomic components also get input from the user. The Swing API provides many atomic components, including combo boxes (JComboBox), text fields (JTextField), and tables (JTable).

Here is a diagram of the *containment hierarchy* for the window shown by SwingApplication. This diagram shows each container created or used by the program, along with the components it contains. Note that if we add a window -- a dialog, for instance -- the new window has its own component hierarchy, unattached to the hierarchy shown in this figure.



As the figure shows, even the simplest Swing program has multiple levels in its containment hierarchy. The root of the containment hierarchy is always a top-level container. The top-level container provides a place for its descendent Swing components to paint themselves.

Every top-level container indirectly contains an intermediate container known as a *content pane*. For most programs, you don't need to know what's between a top-level container and its content pane. As a rule, the content pane contains, directly or indirectly, all of the visible components in the window's GUI. The big exception to the rule is that if the top-level container has a menu bar, then by convention the menu bar goes in a special place outside of the content pane.

To add a component to a container, you use one of the various forms of the add method. The add method has at least one argument -- the component to be added. Sometimes an additional argument is required to provide layout information. For example, the last line of the following code sample specifies that the panel should be in the center of the its container (the content pane). For more information about the add method, see the how-to page for the container's layout manager.

2.3.2 DATABASE

2.3.2.1 Microsoft SQL Server 7.0

Microsoft SQL Server 7.0 is a relational database that runs on the NT operating system. Microsoft SQL Server 7.0, is a widely accepted industry standard for defining, changing and managing data and controlling how changes to the database are made by using tables, indexes, keys, rows, and columns to store data. Microsoft SQL Server 7.0 is an incredibly robust, easy-to-use, and scalable relational client / server database. It is fully integrated with Windows NT, and can therefore take full advantage of many of its features. This includes internet/intranet access, security and other NT based applications. Microsoft SQL

Server 7.0 is used because it can also store large volumes of data. The advantages of Microsoft SQL Server 7.0 include the following:

- Reliability & Concurrency
- Sophisticated Locking – Dynamic Locking
- Fault Tolerance
- High Performance Hardware
- Centralized Control
- Efficient Response time
- Very large Database features (VLD)

SQL Server is a Microsoft back office product that is deployed on windows. A specialized computer program that is used in storing and managing data is known as database management system. SQL server is a SQL based client/server relational database management system. SQL stands for Structured Query Language that is used in writing queries to retrieve data from databases.

Features of SQL Server 7.0

Microsoft SQL Server 7.0 features include:

- Internet Integration.
- Scalability and Availability.
- Enterprise-Level Database Features.
- Ease of installation, deployment, and use.

CHAPTER 3

SYSTEM ANALYSIS

3.1 PROBLEM STATEMENT

The main objective of this system is to automate the organization's needs by integrating its various departments through single stand alone system. The aim of this system is to cut down the cost of the human resource which is employed to maintain the employee information, in preparing the pay slip for each employee, to maintain the attendance for each employee, in resume scanning for interview management, to track the undergoing client project, to maintain the client information, to generate the reports for various management levels. The IRM system computerizes all the details that are maintained manually. Once the details are fed into the computer there is no need for various persons to deal with separate sections. Only a single person is enough to maintain all the reports. The security can also be given as per the requirement of the users.

3.2 EXISTING SYSTEM

The system, which is followed at present, is a complete manual system. The system consists of Book of Accounts that has to be maintained in all aspects. Printing work are difficult. In the existing system each and every time a reference should be made manually. There are high possibilities to commit

errors and mistakes, which leads to produce the wrong statements to the management. Report generation is also not an easy task. Another important drawback of existing system is time factor. It will not help the management to solve the problem in time.

3.2.1 Study on Existing System

The existing system is a manual system and there are many difficulties in maintaining and handling it. The drawbacks of the manual system are,

- Ledger books are maintained for each entry.
- Each time to make a new entry the previous records has to be referred.
- Maintaining the data manually has no security.
- To generate a report, every time the ledger books has to be searched which is time consuming.

The system, which is followed at present, is a complete manual system. The system consists of Book of Accounts that has to be maintained in all aspects. Printing work are difficult. In the existing system each and every time a reference should be made manually. There are high possibilities to commit errors and mistakes, which leads to produce the wrong statements to the management. Report generation is also not an easy task.

Another important drawback of existing system is time factor. It will not help the management to solve the problem in time.

3.2.2 Drawbacks of the existing system

- Manual work.
- Security of information is low.
- Time consumption.
- High Manpower.
- Chance for Duplication of data is high.
- Lack of accuracy

3.3 PROPOSED SYSTEM

This system cuts down the cost of the human resource which is employed to maintain the employee information, in preparing the pay slip for each employee, to maintain the attendance for each employee, in resume scanning for interview management ,to track the undergoing client project , to maintain the client information, to generate the reports for various management levels.

The whole system is solely operated by a single person called administrator. Administrator can enjoy in working of this system, by touching each modules of the system in a highly user friendly manner.

Hence only one person operates the whole system all information kept confidential. The IRM system computerizes all the details that are maintained manually. Once the details are fed into the computer there is no need for various persons to deal with separate sections. Only a single person is enough to maintain all the reports. The security can also be given as per the requirement of the users.

IRM system saves time in maintaining information by reducing the man power that needs to be employed in various departments for gathering and distribution of information by holding all work in a single stand alone system. Since every information is seen in a single system retrieval of information becomes easier. All the information are tied in a single system, Updating of information also becomes very easier.

The drawbacks, which are faced during existing system, can be eradicated by using the proposed system. The main objective of the existing system is to provide a user-friendly interface. The system, which is proposed, now computerizes all the details that are maintained manually. Once the details are fed into the computer there is no need for various persons to deal with separate sections. Only a single person is enough to maintain all the reports. The security can also be given as per the requirement of the users.

3.3.1 Benefits of Proposed System

- Large volumes of data can be stored with case.
- Maintenance of file is flexible.
- Records stored are updated now and then.
- Stored data and procedures can be easily edited.
- Reports can be generated with case.
- Accurate calculations are made.
- Less manpower required.

3.3.2 Study on Proposed System

The system, which is followed at present, is a complete manual system. The system consists of Book of Accounts that has to be maintained in all aspects. Printing work are difficult. In the existing system each and every time a reference should be made manually. There are high possibilities to commit errors and mistakes, which leads to produce the wrong statements to the management. Report generation is also not an easy task. Another important drawback of existing system is time factor. It will not help the management to solve the problem in time.

Information Resource Management is one important department in each and every company. Managing the employees is the costly work in all the companies. The aim of this system is to cut down the cost of the human resource which is employed to maintain the employee information, in preparing the pay slip for each employee, to maintain the attendance for each employee, in resume scanning for interview management, to track the undergoing client project , to maintain the client information, to generate the reports for various management levels.The whole system is solely operated by a single person called administrator. Administrator can enjoy in working of this system, by touching each modules of the system in a highly user friendly manner.Hence only one person operates the whole system all information kept confidential. The IRM system, computerizes all the details that are maintained manually. Once the details are fed into the computer there is no need for various persons to deal with separate sections. Only a single person is enough to maintain all the reports. The security can also be given as per the requirement of the users.

3.4 MODULE FUNCTIONALITIES

The proposed system consists of following modules. They are

- ✓ **Contract Management**

This module keeps track of all client information. New client and new project can be registered here. It also helps to know which project is assigned to particular employee. It also keeps track of all the sub-contract details and also gives the details about the Projects which have been out sourced.

- ✓ **Attendance Management**

This module keeps track of attendance maintained by each employee for every month. This module also helps to see the remaining leave for each leave type. When the grade of an employee is increased, depending upon the grade total leave can also be increased.

- ✓ **Interview Management**

This module keeps track of the total interviewee attending interview for a particular designation. It also holds the interviewer who is going to conduct the interview, and also gives the venue for interview.

- ✓ **Employee Management**

This module keeps track of employee details which includes the employee personal details , qualification details and experience details.

Pay slip Management

This module helps to prepare the pay slip for each employee. Pay slip is prepared according attendance maintained by each employee. Based on the net pay of an employee income tax is also detected.

CHAPTER 4

SYSTEM DESIGN

4.1 ELEMENT OF DESIGN

System design is the most creative and challenging phase in the life cycle of system development. Design implies to a description of the final system and the process by which it is developed. The first step to determine is what input data is needed to form the system and the database that has to be designed should meet the requirement of the proposed system. The next step is to determine how the output is produced and in what format.

4.1.1 INPUT DESIGN

The input design is the process of converting the user- oriented inputs into the computer-based format. The goal of designing input data is to make the automation as easy and free from errors as possible.

The input design requirement such as user friendliness, consistent format and interactive dialogues for giving the right message and help for the user at right time are also considered for the development of the project.

Throughout the system, the forms found to get input are,

Administrator login form

This form reads user type and password as input and validates it for authorization.

Project Management Form

This form allows Administrator to enter the details of the on-going project and to assign projects to particular employee .

Sub-contract (or) Outsource Details Form

This form allows Administrator to enter the details of the out source people, so that these peoples can be identified when ever the deviation is seen in the on-going project.

Attendance Management Form

This form allows Administrator to enter the attendance details of each employee, which in turn helps to maintain the pay slip in a very easy manner.

Pay slip Management Form

This form allows Administrator to prepare the pay details of each employee on the basis of the attendance maintained by each employee.

Employee Management Form

This form allows Administrator to enter the details of each employee who are working the organization.

4.1.2 OUTPUT DESIGN

A quality output is one, which meets the requirement of the end user and presents the information clearly. Efficient and intelligent output design improves the system's relationship and helps user decision-making. The application output design is customized based on user input, which will generate the data depending on user's requirement. The accessibility of the output design is secured in the system with user authentication and rights.

4.1.3 MODULAR DESIGN

It is always difficult for any developer to grasp a system without breaking it up into several smaller systems. These smaller segments will all be part of the original system yet they will be independent in the sense that they will incorporate within them a major function in the system.

A software system is always divided into several sub system that makes that it easier for the development. Software that is structured into several sub system makes it easy for the development and testing. The different subsystems are known as the modules and the process of dividing an entire system into subsystem is known Decomposition.

A system cannot be decomposed into several subsystems in anyway. There must some logical barrier, which facilitates the separation of each module. The separation must be simple but yet must be effective so that the development is not affected.

The following list shows various operations done in each module.

Project Management Module

Registration of new project.

Registration of new client

Updating the registered project

Updating of registered client

Deletion of existing project

Deletion of existing client

Sub-contract (or) Out source Management Module

Registration of new resource

Updation of registered resource

Deletion of existing resource

Attendance Management Module

Maintaining the daily attendance

Verification of leave maintained by each employee

Updation of yearly leave

Updation of company leave

Pay Slip Module

Preparation of Pay Slip for each employee

Employee Management Module

Registration of new employees

Updation of employee details

Deletion of employee details

Maintaining the transfer details

4.1.4 DATABASE DESIGN

A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. The general objective of database design is to make the data access easy, inexpensive and flexible to the user. The design of the database is one of the most critical parts of design phase. An elegantly database can play as a strong foundation for the whole system. The details about the data relevant for the system are identified first.

According to their relationship, tables are designed by the following standard database design methods. The data types for each data item in the tables are decided. For the optimum design of the database, to have better response time, to have data integrity, to avoid redundancy and for the security of the database all the tables created are normalized. The database design is done according to the procedure. The database design transforms the information domain model created during the analysis into the data structure that will be required to implement the system software.

Normalization

The normalization simplifies the entities, removes the redundancies from the system data and finally builds a data structure, which is both flexible and adaptable to the system. Normalization offers a systematic step-by-step approach towards this goal. The different normal forms are,

- First normal form (NF)
- Second normal form (2NF)
- Third normal form (3NF)

In IRMS project, up to third normal form is used. All the tables are normalized using third normal form rule.

First Normal Form

An entity E is in 1NF if and only if all underlying values contain atomic values only. Any repeating groups must be eliminated.

Second Normal Form

An entity E is in 2NF if it is in 1NF and every non-key attributes is fully dependent on the primary key.

Third Normal Form

An entity E is in 3NF if it is in 2NF and no non-key attribute of E is dependent on another non-key attribute.

4.2 TABLE DESIGN

Table No. 4.2.1 Table Name: LoginDetails

Sr.	Field Name	Type	Foreign Key/PK/Remarks
1	UserName	VARCHAR(20)	Username
2	Password	VARCHAR(20)	Password

Table No. 4.2.2 Table Name: ConDetails

Sr.	Field Name	Type	Foreign Key/PK/Remarks
1	E_id	NUMBER(7)	FK
2	P_id	VARCHAR(20)	ProjectID
3	Allo_Start_Date	DATE	Allocation start date
4	Allo_End_Date	DATE	Allocation End Date
5	Pro_Name	VARCHAR(30)	Project Name
6	Pro_Mod	VARCHAR(30)	Project Module

Table No. 4.2.3 Table Name: ProDetails

Sr.	Field Name	Type	Foreign Key/PK/Remarks
1	P_id	VARCHAR(20)	PK
2	C_id	VARCHAR(20)	FK/Client Id
3	Pro_Name	VARCHAR(20)	Project Name
4	Start_Date	DATE	Start Date of Project
5	End_Date	DATE	End Date of Project
6	Proj_Des	VARCHAR(20)	Project Description
7	Mod	NUMBER(2)	Modules

Table No. 4.2.4 Table Name: CliDetails

Sr.	Field Name	Type	Foreign Key/PK/Remarks
1	C_id	VARCHAR(20)	PK/Client Id
2	Cli_Name	VARCHAR(20)	Client Name
3	Cli_Addr	VARCHAR(25)	Client Address
4	Phone_Num	Number(12)	Phone Number
5	Email	VARCHAR(20)	Email Id

Table No. 4.2.5 Table Name: SubConDetails

Sr.	Field Name	Type	Foreign Key/PK/Remarks
1	P_id	VARCHAR(20)	FK
2	Outsrc_id	VARCHAR(20)	FK/Out Source Id
3	Pro_Name	VARCHAR(20)	Project Name
4	Start_Date	DATE	Start Date of Project
5	End_Date	DATE	End Date of Project

Table No. 4.2.6 Table Name: OutSrcDetails

Sr.	Field Name	Type	Foreign Key/PK/Remarks
1	OutSrc_id	VARCHAR(20)	PK/Out Source Id
2	OutSrc_Name	VARCHAR(20)	OutSourceName
3	OutSrc_Addr	VARCHAR(20)	OutSourceAddress
4	Phone_Num	NUMBER(12)	Phone Number
5	Email	VARCHAR(20)	Email

Table No. 4.2.7	Table Name:EmpAttDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	E_id	NUMBER(7)	FK/Emp id
2	Atten_Type	VARCHAR(5)	AttendenceType
3	Date	DATE	Date

Table No. 4.2.8	Table Name:EmpLeaDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	E_id	NUMBER(7)	FK/Emp id
2	Leave_Type	VARCHAR(5)	AttendenceType
3	From_Date	DATE	Leave Start Date
4	End_Date	DATE	Leave End Date

Table No. 4.2.9	Table Name: YearLeaDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	Date	DATE	Leave Date
2	HoliDay_Name	VARCHAR(18)	HoliDayName

Table No. 4.2.10	Table Name: ComLeaDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	E_id	NUMBER(7)	Employee Id
2	Leave_Type	VARCHAR(20)	Leave Type
3	Num_Of_Days	NUMBER(2)	Total Leave Details

Table No. 4.2.11	Table Name: RemLeaDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	E_id	NUMBER(7)	FK/Emp Id
2	Leave_Type	VARCHAR(7)	Company Leave Type
3	Rema_Leave	NUMBER(2)	Remaining Leave

Table No. 4.2.12	Table Name: IvDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	Iv_Id	NUMBER(3)	PK /IntervieweeId
2	Iv_Name	VARCHAR(20)	IntViewee Name
3	DOB	DATE	IntViewee DOB
4	GENDER	VARCHAR(1)	Gender
5	Addr	VARCHAR(30)	Address
6	Phone_Number	NUMBER(12)	Phone Number
7	Email	VARCHAR(25)	Email id
8	E_id	NUMBER(7)	Emp Id

Table No. 4.2.13	Table Name: IvExpDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	Iv_Id	NUMBER(3)	FK
2	Com_Name	VARCHAR(20)	Emp Previous Company Name
3	Com_Address	VARCHAR(20)	Company Address
4	Com_Con_Number	NUMBER(12)	Company Contact Number
5	Desig	VARCHAR(15)	Designation
6	Years_of_Exp	NUMBER(2)	Years of experience
7	Mon_of_Exp	NUMBER(2)	Months of Experience
8	Acheivments	VARCHAR(50)	Acheivements

Table No. 4.2.14	Table Name: IvQuaDetails		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	Iv_id	NUMBER(3)	FK
2	Qualification	VARCHAR(20)	Qualification
3	University	VARCHAR(20)	University
4	Year_of_Passing	NUMBER(4)	Year Passed
5	Percentage	NUMBER(5)	Mark in Percentage
6	Skills	VARCHAR(50)	

Table No. 4.2.15	Table Name: IvInformation		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	Iv_id	NUMBER(3)	FK
2	Iv_Date	DATE	Interview Date
3	Iv_Time	VARCHAR(8)	Interview Time
4	Venue	VARCHAR(10)	Venue

Table No. 4.2.16	Table Name: IvResult		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	Iv_id	NUMBER(3)	FK
2	G_id	NUMBER(1)	FK
3	G_Id_iv	NUMBER(1)	FK
4	G_id_Know	NUMBER(1)	FK
5	G_id_Exp	NUMBER(1)	FK
6	G_id_Skills	NUMBER(1)	FK

Table No. 4.2.17	Table Name: IvGrade		
Sr.	**Field Name**	**Type**	**Foreign Key/PK/Remarks**
1	G_id	NUMBER(1)	PK
2	G_Desc	VARCHAR(20)	Grade Description

4.3 DATA FLOW DIAGRAM

The data flow diagram is graphical representation which depicts the information regarding the flow of control and the transformation of data from input to output. The dataflow may be used to represent the system or software at any level of abstraction. In fact dataflow diagram may be partitioned into levels. A level 0 data flow diagram is called the context diagram, which represents the entire software element as single bubble with input and output arrows.

Figure No 4.1.1 Level 0 DFD for IRMS:

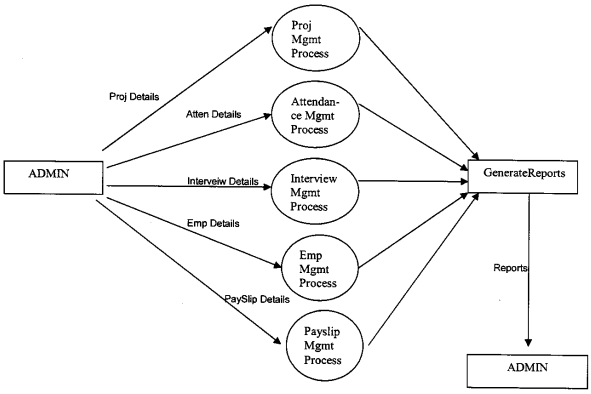


Figure No 4.1.2 Level 1 DFD for IRMS:

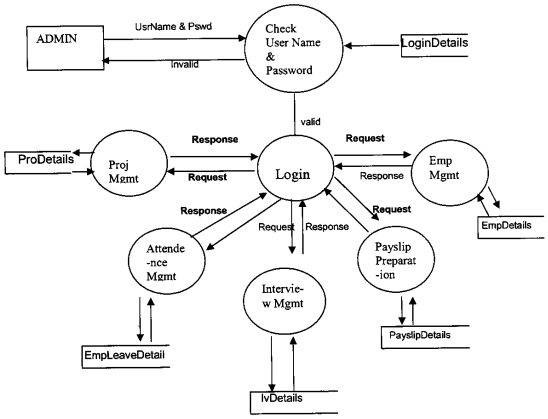


Figure No 4.1.3 DFD for Project Management:

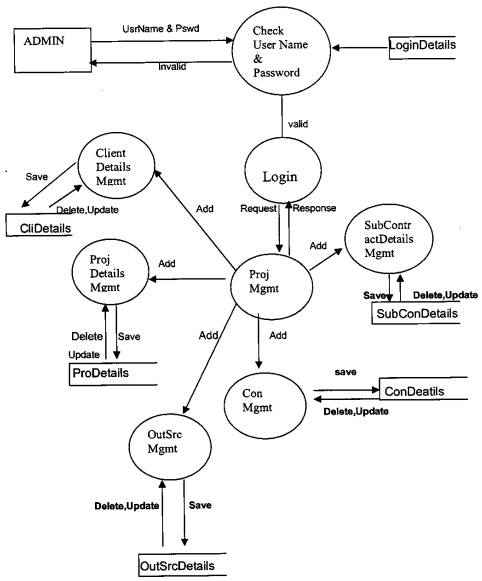


Figure No 4.1.4 DFD for Attendance Management:

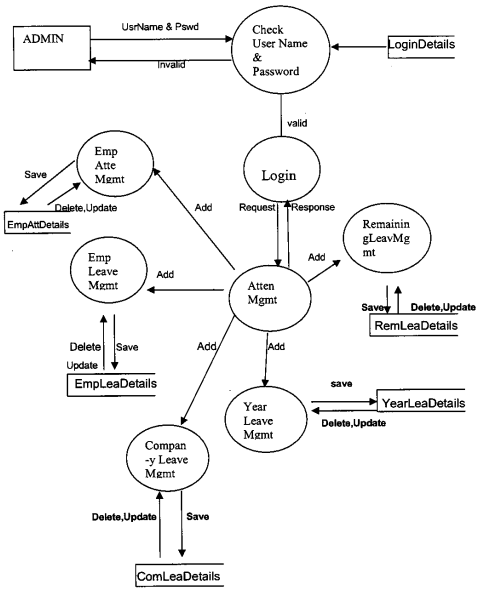
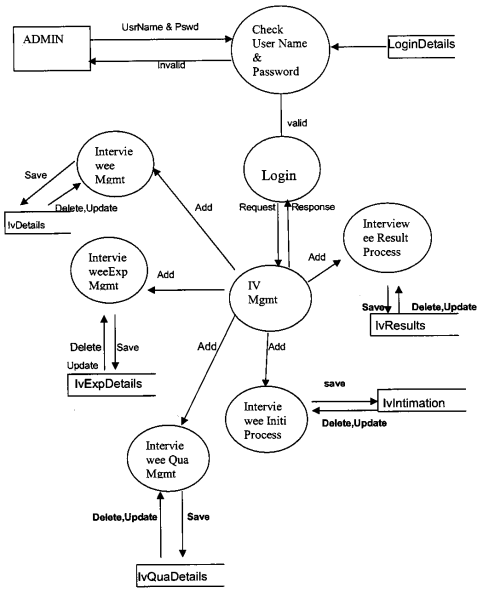


Figure No 4.1.5 DFD for Interview Management:



CHAPTER 5

SYSTEM TESTING AND IMPLEMENTATION

5.1 SYSTEM TESTING

System testing is the most vital activity that has to be enforced in any system development. This could be run parallel during the development phase and after the implementation. The feedback received from this testing was examined carefully for further enhancements. It is the part of testing where the entire website and application has been tested. This testing is performed with the requirement document as the reference and the goal is to see whether the application meets the requirement. . Eclipse IDE provides JUNIT (juice unit) tool for testing each and every module in the project. It is easy to use and debug the errors in the module.

5.1.1 Unit Testing

Unit testing is the process of testing the system module by module. It checks for the various inputs and outputs and also checks whether they are required. Using this method gives a clear idea of the bugs occurred.

For example in this system following units are tested,

For attendance modules attendance was checked by giving all type of conditions such as by giving the type of leave and it is checked while preparing the pay for a particular employee.

5.1.2 White Box Testing

White Box Testing also referred to as glass-box testing. It is a test case design that would use the program control flow structure to derive software test cases. This system has been examined with the following cases,

- All independent paths within a module have been exercised
- All logical decisions are exercised on their true or false side
- All loops are executed at their boundaries and within the operational bounds
- All internal data structure are examined for their validity

5.1.3 Validation Testing

It is one type of testing used to validate the input values entered in the different components or fields. For example in this system, this test is performed on the following fields.

Text field

The text field can contain only the number of character lesser than or equals to its size in all forms. The alphabetic and numeric data are checked for their validity If the text field contains date as its input, it is checked for their preferred format. If errors or any violation found in this input, the corresponding error or warning messages are flashed to the user. These messages not only indicate the error, but also give the tips to further activity.

Numeric field

This field can contain only numbers from 0-9. an entry of any other character flashes an error message.

5.1.4 Alpha Testing

This is the test conducted at the developing environment by the developing people itself.

5.2 IMPLEMENTATION

The system is developed in such a way that the existing facilities are enough for implementation. The hard ware facilities are made sufficient enough to implement the newly developed application.

The first step in implementation is to get approval from the users. The data entry through various screens and reports that the system is capable of producing is shown to the users.

The system has been successfully implemented in the organization with full cooperation from the management. Finally the system is handed over to the client.

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

6.1 CONCLUSION

The **"Information and Resource Management System"** is successfully designed and developed to fulfilling the necessary requirements, as identified in the requirements analysis phase, such as the system is very much user friendly, form level validation and field level validation are performing very efficiently.

The new computerized system was found to be much faster and reliable and user friendly then the existing system, the system has been designed and developed step-by-step and tested successfully. It eliminates the human errors that are likely to creep in the kind of working in which a bulk quantity of data and calculations has to be processed.

6.2 FUTURE ENHANCEMENT

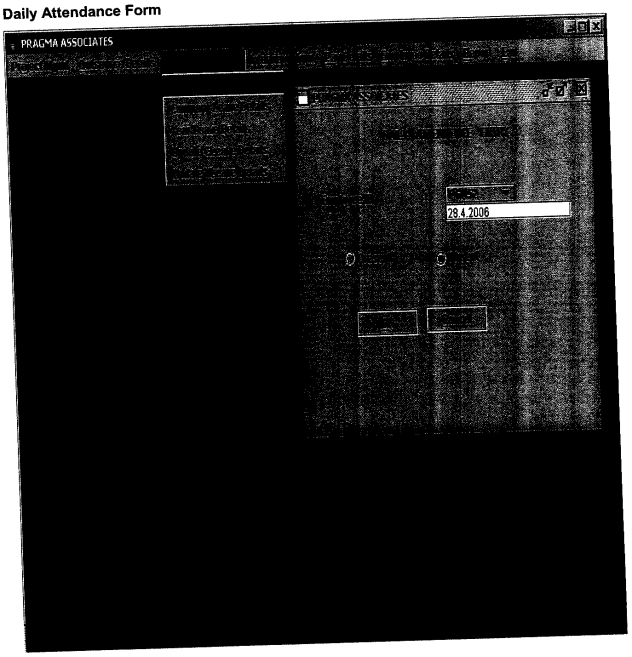
Every system should allow scope for further development or enhancement. The system can be adapted for any further development. The

system is so flexible to allow any modification need for the further functioning of programs. Since the objectives may be brought broad in future, the system can be easily modified accordingly, as the system has been modularized. The future expansion can be done in a concise manner in order to improve the efficiency of the system.

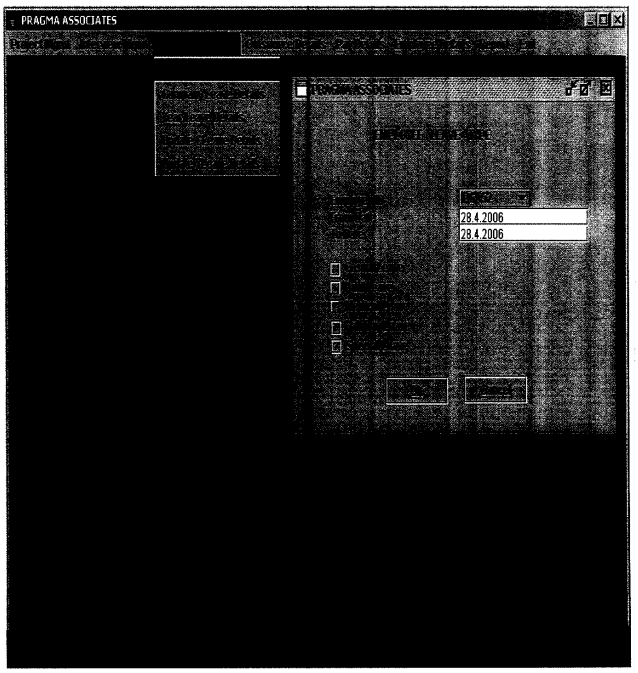
7.APPENDICES

APPENDIX

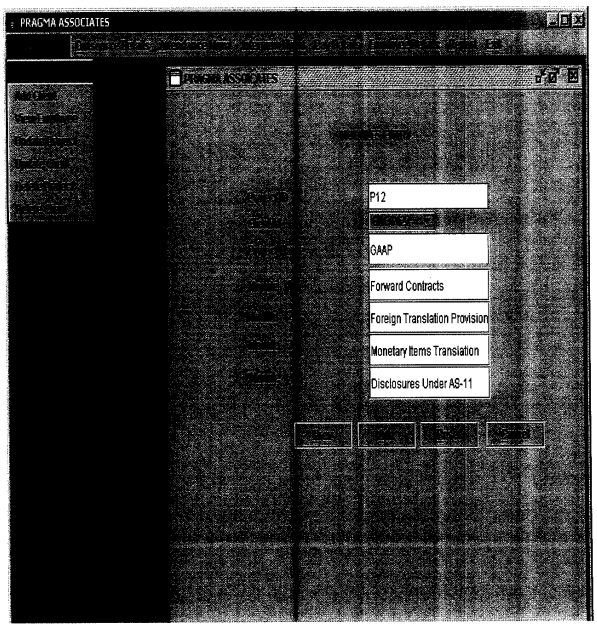
Daily Attendance Form



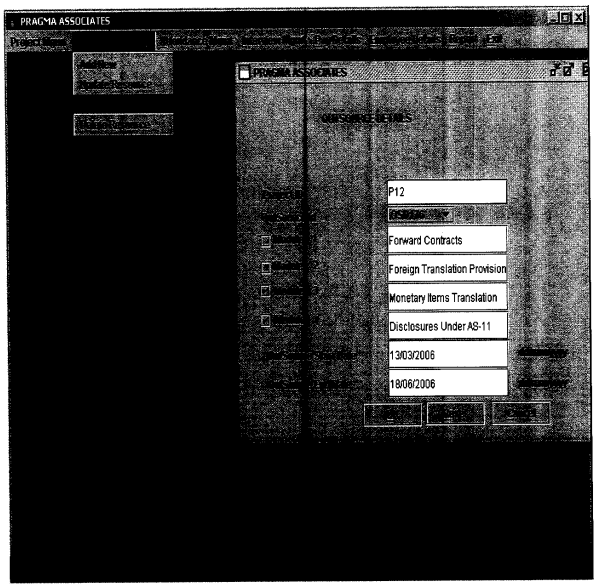
Employee Leave Type Form



Project Management Form



Outsource Details Form



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