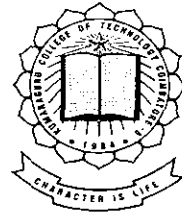


P-1754



**INTRANET BASED
PROJECT & SERVICE REQUEST MANAGEMENT SYSTEM**

By

N.N.SURESH
(Reg no: 71203621054)

Of

**KUMARAGURU COLLEGE OF TECHNOLOGY
COIMBATORE**

(Affiliated to Anna University)

A PROJECT REPORT

Submitted to the

FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

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

MASTER OF COMPUTER APPLICATIONS

JUNE 2006

BONAFIDE CERTIFICATE

Certified that this project report titled

**INTRANET BASED
PROJECT & SERVICE REQUEST MANAGEMENT SYSTEM**

is the bonafide work of

Mr. N.N.SURESH (Reg.No: 71203621054)

Who carried out the research under my supervision Certified further that to the best of my knowledge the work reported herein 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.




PROJECT GUIDE



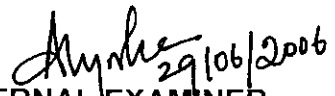
HEAD OF THE DEPARTMENT

We examined the candidate with University Register Number. 71203621054

in the project Viva- Voce Examination held on 29/06/2006



INTERNAL EXAMINER



EXTERNAL EXAMINER

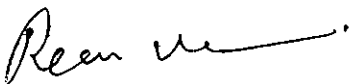
May 31,2006

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.N.N.Suresh** (Reg No:71203621054) final year student of Master of Computer Applications from Kumaraguru College of Technology, Coimbatore has successfully completed project titled **“INTRANET BASED PROJECT AND SERVICE REQUEST MANAGEMENT SYSTEM”** during the period from Jan 2006 to May 2006.

During this period, his conduct and work was found good.We wish him success for his bright future.

For Sunvin Technology Private Limited,



Ram Narayanan
Asst Manager
Human Resources

ABSTRACT

Main objective of this system, Intranet based project and service request management system, is to inform the status of the work done by the employees to the organization and to know the status of all the ongoing projects, which results in a better communication between members of the team.

The major purpose of this system is to reduce the project development time and to increase the productivity of the employees by knowing the status of work done. Actual usage of this system is when the necessary task list is prepared by the administrator or the project manager, these tasks has to be divided among the team and the team members. When the task list is scheduled to the team and team members then this system serves as a communication medium between the employees of the organization.

To automate the services required for the employee to complete the tasks scheduled to them, service request management system is incorporated with the project management. This enables the employees to raise any services required for them to complete the assigned task. The requests are processed by the administrator based on their validity. Also, this system aims in increasing the productivity of the employee by analyzing the performance of the employees for a project.

The scope of this system is an intranet application which is suitable for a specific organization that provides individual working environment for the employees. This system is developed using Java, JSP and Oracle.

ACKNOWLEDGEMENT

I would like to express my gratitude and humble thanks to our beloved principal **Dr. Joseph V. Thanikal** for having given me the adequate support and opportunity for completing this project work successfully.

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LIST OF SYMBOLS, ABBREVIATIONS AND NOMENCLATURE

DAO	-	Data Access Objects
HTML	-	Hyper Text Markup language
HTTP	-	Hyper Text Transfer Protocol
IDE	-	Integrated Development Environment
JDBC	-	Java Database connectivity
JSP	-	Java server pages
MVC	-	Model View Controller
NF	-	Normal Form
SQL	-	Structured Query language

CHAPTER 1

INTRODUCTION

1.1 PROJECT OVERVIEW

Intranet based Project & Service request management system, is basically an intranet application which, provides various status information of the ongoing projects in the organization and automates the services required for an employee in the organization.

1.1.1 OBJECTIVE

Main objective of this application is to provide the status of the work done by the employees to the organization and to themselves to improve the performance of both the sides. Scope of this system is an intranet application suitable within the organization.

1.1.2 LIST OF MODULES

Incorporation means merging of various activities that take place in a working environment. Thus, the core modules Project Management System and Service Request Management system are incorporated in order to increase the productivity and performance of the employees.

This application has core modules namely:

- Employee Management with Login validation

- Project and Team Management Module

- Workload and Status Module

- Service Request Management Module

- Service request status validation Module

1.2 COMPANY PROFILE

Sunvin Technology was established in the year of 2004. This is one of the growing company whose motto is to provide software development and integration solutions that enable organizations to improve their business processes while retaining more value from their existing investments, thereby increasing their business agility and improving efficiency.

Company mission

To maximize and expand our customer's capabilities by building long-term customer relationships, by providing high value IT services with a commitment to customer service, quality and innovation.

Company focuses in the business domain related to insurance, financial services, manufacturing, retail, health care, transport, banking etc.,

CHAPTER 2

SYSTEM REQUIREMENT AND SPECIFICATION

For the development of the system the hardware and the software resources used throughout the system are:

2.1 HARDWARE REQUIREMENTS

Processor	:	Intel Pentium III 800 MHz
Primary Memory	:	256 MB SDRAM
HardDisk Drive	:	40 GB HDD
Display Unit	:	Samsung Color Monitor (15")
Keyboard	:	Samsung 108 Keys keyboard
Mouse	:	LG optical mouse

2.2 SOFTWARE REQUIREMENTS

Operating System	:	Windows XP
Database	:	Oracle 9i
Programming Language	:	Java 1.4.2, servlets, jsp, HTML
Web server	:	Apache Tomcat v 5.0
Scripting language	:	Javascript
Web browser	:	IE 6.0
Java Editor	:	Eclipse IDE

2.3 SOFTWARE OVERVIEW

2.3.1 DATABASE

2.3.1.1 ORACLE

Oracle Corporation strives to comply with industry-accepted standards and participates actively in SQL standards committees. The strengths of SQL provide benefits for all types of users, including application programmers, database administrators, managers, and end users. Technically speaking, SQL is a data sublanguage. The purpose of SQL is to provide an interface to a relational database such as Oracle, and all SQL statements are instructions to the database.

FEATURES OF SQL

- It processes sets of data as groups rather than as individual units.
- It provides automatic navigation to the data.
- It uses statements that are complex and powerful individually, and that therefore stand alone.
- All major RDBMS support SQL and thus SQL codes are portable.

FEATURES OF ORACLE 9i

ORACLE 9i provides statements for a variety of tasks, including:

- Querying data
- Inserting, updating, and deleting rows in a table
- Creating, replacing, altering, and dropping objects
- Controlling access to the database and its objects
- Guaranteeing database consistency and integrity
- Supports PL/SQL
- High security

2.3.2 PROGRAMMING LANGUAGE

2.3.2.1 JAVA

Java is an Object Oriented Programming language developed at Sun Microsystems in June 1995. Java is simple, secure, portable, multithreaded, interpreted, object-oriented, robust, architecture-neutral, high-performance, distributed and dynamic language. The major goal of the Java designers was “write once; run anywhere, anytime, forever”. To a great extent this goal was accomplished.

Java is both compiled and interpreted language. Java has a built in compiler known as JIT (just-in-time) compiler which translates the source code to bytecode (.class files). A bytecode is a highly optimized set of instructions designed to be executed by the Java run-time system which is called the Java Virtual Machine (JVM). This JVM is the interpreter for the bytecode. This is how all the Java programs written and compiled once can be run on any machine provided that JVM is installed in that machine.

Benefits of JAVA

Java programming language enables the developer to:

- Write platform independent code
- Develop secure applications that can be transmitted over various networks.
- Build applications that contain various GUI components.
- Enable access to various database and relational database management systems through JDBC (Java Database connectivity) API.

2.3.2.2 SERVLET

Servlet is a Java programming language class used to extend the capabilities of servers that host applications accessed via a request – response programming model. Here, the request – response programming model is referred to as HTTP (Hyper Text Transfer Protocol).

Advantages of Servlets

➤ Portable

Since, servlets are written in Java they are portable and can be moved from one web server to another.

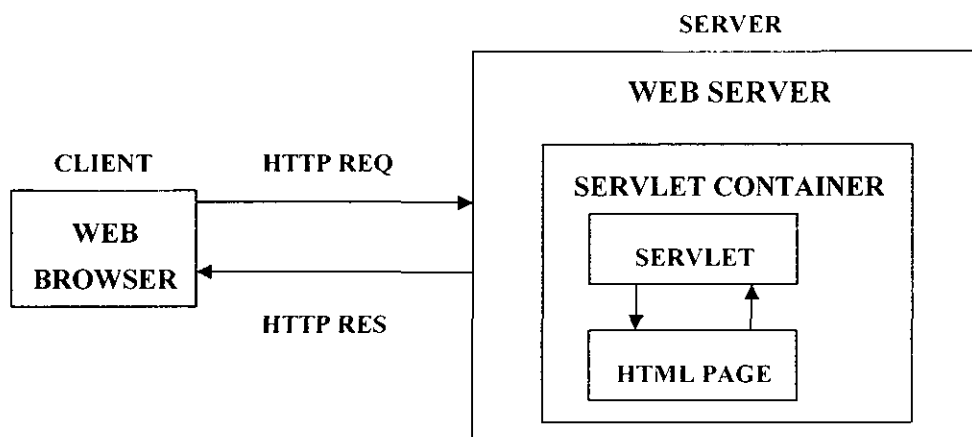
➤ Rapid development cycle

Servlets has access to entire Java API and thus applications can be developed in quick time

➤ Performance & Security

Each client request is executed within a thread, not a process and thus increases performance. Servlets inherit all the built-in security features of the Java programming language.

Servlet Architecture



2.3.2.3 JSP

Java Server Pages (JSP) is HTML document that can contain code from the Java programming language. This allows the HTML documents to go from static to dynamic, since the JSP page is executed in a Java object called servlet.

Advantages of Java Server Pages (JSP)

- Easy to learn and Portable

The design of JSP makes them usable by Web developers who have minimal programming skills but are well-versed in the areas of Web site development.

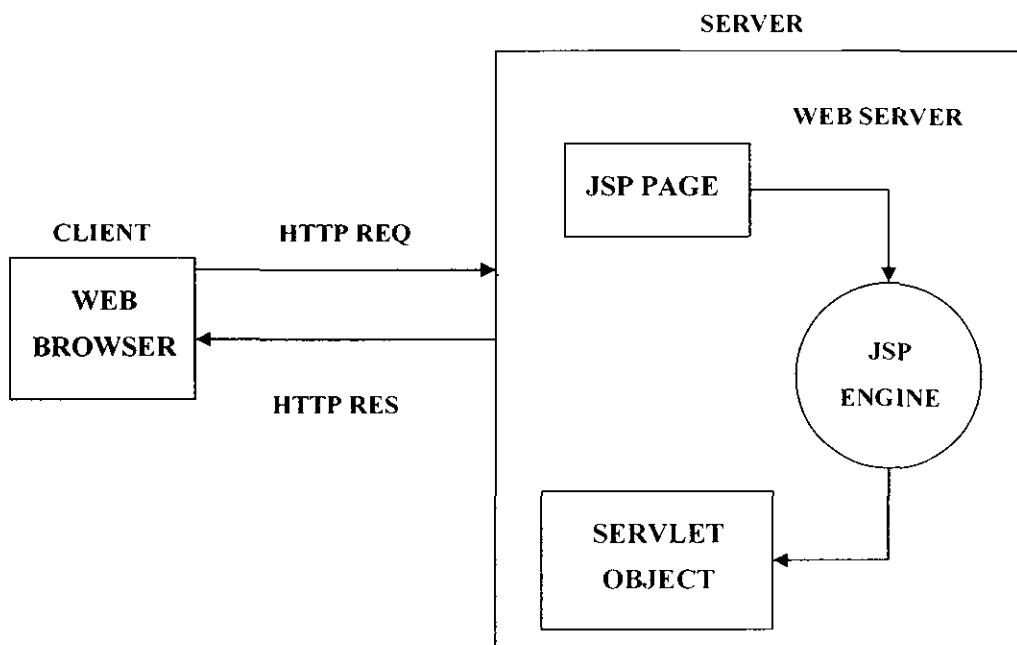
- Customizable

A web application developer can create their own tags allowing them to separate tasks from the visual presentation.

- Automatic Compilation

Changes made to the JSP pages are automatically compiled by the web server through JSP engine.

JSP ARCHITECTURE



2.3.2.4 HTML

HTML stands for Hyper Text Markup Language; it's a language to develop web documents.

2.3.3 WEB SERVER

Java web applications need to be deployed and executed on web servers that provide support for the Java web component.

Web components are HTML pages, image files, Java class files and other resources. Web applications are one or more web components that are to be deployed in web server.

This system uses Apache TOMCAT V 5.0 web server which is developed by SUN Micro Systems. This server has the capability to handle both Servlets and JSP's.

2.3.4 SCRIPTING LANGUAGE

Client side scripting is a type of language normally used to validate the form data. This system uses the Java Script for client side scripting.

2.3.5 WEB BROWSER

Basically web browsers are HTTP client programs but can handle other types of protocols also. This system uses Internet Explorer v 6.0

2.3.6 ECLIPSE – Integrated Development Environment (IDE)

Eclipse is a kind of universal tool platform - an open extensible IDE for anything and nothing in particular. It provides a feature-rich development environment that allows the developer to efficiently create tools that integrate seamlessly into the Eclipse Platform. The Eclipse platform itself is structured as subsystems which are implemented in one or more plug-ins. The subsystems are built on top of a small runtime engine.

CHAPTER 3

SYSTEM ANALYSIS

3.1 PROBLEM STATEMENT

Main objective of the system is to help the software company to manage their software development life cycle under a single roof with incorporating the service request management for their employees. This system provides features to manage software project, monitor the employee performance, automate service request. Also this system serves as a communication medium, to know the status of the tasks of the various employees and the services offered to them.

3.2 EXISTING SYSTEM

Existing system which is followed in the company, involves a lot of paper work which leads to ambiguity. When the entire project is divided into modules and tasks, the project manager allots the modules to the teams available and tasks to the members of the team.

The work allotment and status schedule of employees are maintained in the Microsoft excel work sheet, which is only known to the project manager. But this does not provide any information to the employees who are doing the tasks. It only specifies information to the project manager alone. This does not reveal any status information about the project.

Also, at times employees need resources to complete their job. Resource allocation and status information about the resources were also not properly maintained.

There is also a possibility where the task list can be altered or deleted by any intruder. There is no mechanism to protect the file from any unauthorized access

3.2.1 Drawbacks of the existing system

Following are the drawbacks of the system

- Inefficient and less secured data.
- Maintenance is difficult
- Time consuming process

3.3 PROPOSED SYSTEM

Main purpose of the proposed system in the initial stage identified the various users who are going to use and benefit with this system. After identification of the various users, each one of them is given a user id and password through which access privileges are identified and the necessary screens are built with access privileges.

This system has the potential benefits like development cost is minimal, provide prompt data to various employees regarding any request and reduces manual work of the project manager.

Proposed system has a separate interface for each type of the user. This system is accessed in and around the organization through the local area network by specifying the URL. To know the work allotment details and to raise any service request or process the request necessary options are provided along with the screens. This system also has the ability to report the status of all ongoing projects to the administrator and various other service request status details.

The system, Intranet based project and service request management system is designed with the idea of extensibility, were the entire design model can be made an online application if the company has several branches located at various places or if the project manager is out of station and want to know the status of the ongoing projects that were allotted to them. But, the need and the requirement are suitable within the organization alone.

To protect the data from any unauthorized access, users are given necessary permissions based on their role type and the nature of the work done by the employee.

Oracle database proves to be highly secured and the works performed by the employees are scheduled so that the employee when log's in their task would be known along with their completion date and status.

3.3.1 Benefits of proposed system

Following are the benefits of the proposed system

- Has centralized database system
- Intranet application
- Status reports and performance reports of employees.
- Employees are provided with access privileges to improve security.
- Easy maintenance because of efficient data.
- User friendly graphical screens.

3.4 PURPOSE OF THE SYSTEM

The major purposes of this system were analyzed and are listed below:

- To reduce project development time.
- To indicate the tasks allotted to the corresponding employees.
- To increase the productivity of employees.
- To know the performance of employees
- To know the status of all ongoing projects
- To automate requests needed for employees.
- Generate required reports to know the status.

3.5 SCOPE OF THE SYSTEM

Scope of this system is to convert requirements specified by the user into functional requirement and implement the same in the system. This system is specific for the organization (i.e.) an intranet application.

CHAPTER 4

SYSTEM DESIGN

4.1 ELEMENT OF DESIGN

System design is what virtually every software engineer wants to do. It is the place where customer requirements, business needs and technical considerations all come together in the formulation of a product or system. Design creates a representation or model of the application to be developed. To start with, what are the input data needed for the system are identified. Later the database design has to be performed that satisfies the proposed system. Later what is the architecture design that needs to make the proposed system to work in an efficient way and finally determine how the output is obtained that meets all the requirements.

4.1.1 INPUT DESIGN

Input design is the process of converting all the requirements obtained from the user into a computer-based format. The goal of the input design is to make user to provide valid data and minimize the errors that are possible during the input of data.

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:

Employee login form

This form gets input as user id and password of the employee.

Employee addition form

This form is visible only for administrator who adds new employees and assigns role of the employee along with their department details, minimal personal details and mail id.

Employee profile updating form

This form is visible for all employees and administrator to update their profile.

Change password form

This form is visible for all employees and administrator to update/change their password.

Client detail form

This form is visible only for administrator who adds new clients and inputs client data through this form.

Project Entry form

This form is also visible only for administrator who creates new projects for the clients and fills in the project detail by selecting the appropriate project manager for the project.

Team entry form

This form enables the project manager to create a new team with a team leader along with the team members.

Module Entry form

This form enables the administrator and project manager to create new modules for the existing projects. Also, this form allots a team leader for this particular module.

Task entry form

This form enables the project manager and team leader to create new tasks for the modules of the current project under development. Also, this form allots a team member for this particular task.

Resource addition form

This form is visible only for the administrator who has the rights to add new resource with their status information.

Request generation form

This form is visible for employees like project manager, team leader, team member to generate request along with their status details.

Request processing form

This form is visible for all employees who can update the status of the request generated.

4.1.2 OUTPUT DESIGN

A quality output is one which meets 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 the user input, which will generate the reports based on the user's requirement. Output of this system is generated with the intention of people like administrator, project manager, team leader, team member and service request member.

4.1.3 ARCHITECTURE DESIGN

4.1.3.1 MODEL – VIEW – CONTROLLER DESIGN

When developing web applications, a common design methodology is to use the Model-View-Controller design, known as MVC.

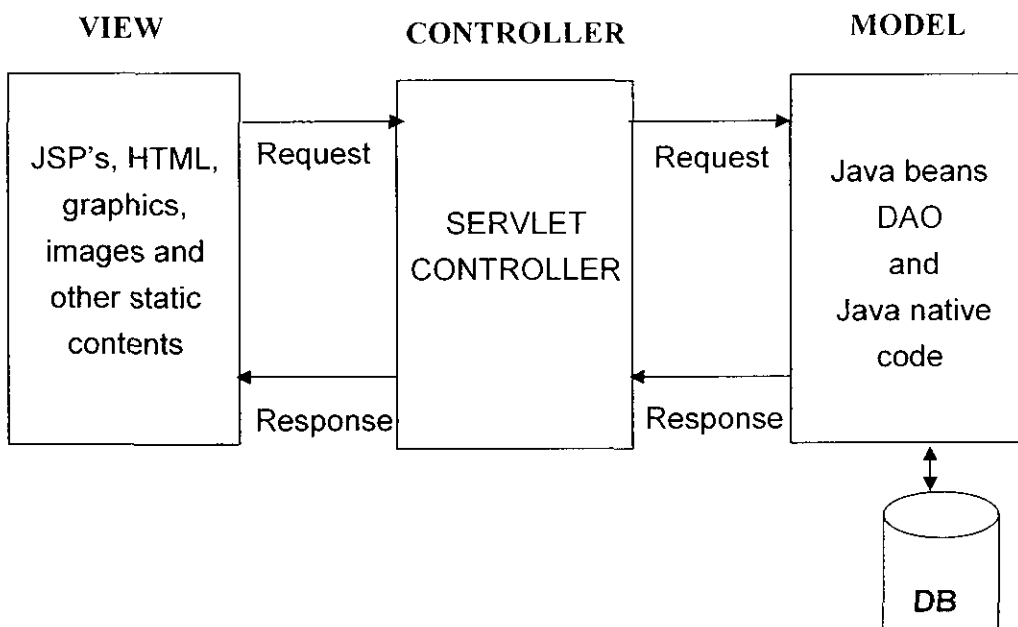
4.1.3.2 MVC in Java Web Application

- A client (VIEW) sends a request
- A Servlet (CONTROLLER) processes the request using java beans.
- The java beans and Data Access Objects (DAO) uses JDBC to communicate with the database (MODEL)
- This model object forwards the request to a JSP (VIEW)
- The JSP retrieves the data from the java bean and generates html pages for the client's response.

A JSP page creates the view of the form that the client fills out. The client submits the form to a servlet (controller). The servlet determines what the user is requesting and what needs to be done with that request. The servlet invokes a method on the model bean to add the data to the database. If the data was entered successfully, the response sent back to

the client is a jsp page that displays a data entered successfully page or a please verify this data page. If a problem occurs, the response sent back is the initial jsp page that contained the form. Any problem areas can be displayed on the form. For example, if a client chose a username that was unavailable, they would be prompted to try a different username.

MVC DESIGN ARCHITECTURE



4.1.4 MODULAR DESIGN

Modules in this system are

- Employee management with Login validation
- Project and Team Management
- Workload and status
- Service request management
- Service request status validation

Employee Management with login validation

Various types of users are identified and each user is allocated a user id and password. This user id and password provides the key for entering in to this system. Validation of user is performed and based on the role of the employee corresponding screens and their functionalities are loaded.

Along with core module, this module has sub modules to include new employee by admin, change/update employee profile and change/update password.

Project and Team Management

To start any new project or update the status of any on going projects client information is needed. So this module includes sub module to add new client and assign project for the clients. This module is entirely designed for the administrator.

Assigning projects for the clients, selecting the project manager and to report status of the ongoing projects this module is designed.

Organizing a team involves members and a team leader for the team. This module also has the process of creating/assigning team to the projects and selecting members for the team. Additionally have options to change team members and team leaders in case of their un-availability. All this privileges are suitable for the administrator and project manager.

Workload and status module

Breaking up of whole project in to modules and assigning these modules to teams is done here. Project manager assigns module to each team and starts monitoring the performance of each team and the employees belonging to this team. This module has sub-modules, which allows project managers and team leaders to divide the module into smaller tasks and assigning them to team members. It also provides functionalities to update the status information of the work done of each employee. Re-assigning and altering options are also provided.

Service request management module

Employees working in the organization may need to be provided with the necessary equipments and working materials. To automate any requests needed such as any hardware resource, software resource, stationary material or additional staff members and other categories are all considered to be service requests and managing those requests are performed in this module.

As an administrator, processing of such requests has to be carried out on a daily basis so that validating the requests and processing and servicing the requests become faster and can substantially increase the productivity of the employees. For this, administrator has the options to add new resource and check the availability of the resources. Status of the resources is also maintained in this module. An employee can raise any request for his job to get completed provided if the request is a valid one.

Service request status validation module

Processing the service requests raised by the employees can be performed either by the employee itself (request / cancel status) and by the administrator who can (assign / reject) requests after validating the requests. Resources are allocated based on their availability status and returnable status if the requests are valid. Later if the request period is over then the resources has to be returned if they are returnable. After receiving the prompt response from the request generator the requests get completed. Various status reports like this are managed in this module which serves as purpose of the system.

4.1.5 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. A well designed database can play as a strong foundation for the whole system.

The details about the data relevant for the system are identified first. These are termed as data dictionary which identifies the attributes needed for the entities to perform their tasks. By designing the data dictionary, the database designer can eliminate the redundant fields. Also, redundant data can be eliminated by normalizing the tables. The normalization performed in this system is up to third normal form (3 NF).

Need for Normalization:

- Improves database design
- Ensures need to reorganize data when design is modified / enhanced
- Removes anomalies for database activities

Process of Normalization:

Formal technique for analyzing a relation was based on its primary key and functional dependencies between its attributes. This is often executed as a series of steps.

Each step corresponds to a specific normal form, which has known properties. As normalization proceeds, relations become progressively more restricted (stronger) in format and also less vulnerable to update anomalies.

First step : Convert the identified data dictionary into tables or relations.

Second step: Examine for redundancy and convert them to non-redundant forms.

Third Step : Convert the Non-redundant model to a database definition.

First Normal Form 1 NF:

A table is said to be in first normal form if it has no repeating groups. That is, the intersection of each row and column has one and only value.

Process:

- Identify repeating groups of fields
- Remove the repeating groups to a separate table. Such a table becomes dependent of the parent table from which it is derived.
- Identify the keys for the tables.

Table Employee in 1 NF

Eid	Ename	Dcode	Dname	Rcode	Rname
1001	Ramu	SRQ	ServiceReq	SRM	SR Member
1002	Vignesh	PRD	ProjDev	TML	TeamLeader
1003	Aasik	PRD	ProjDev	TML	TeamLeader
1004	Syed	PRD	ProjDev	TMM	TeamMember

Second Normal Form 2 NF:

A table is said to be in the 2nd normal form if all its non key fields are fully dependant on the whole key. This means that each field in the table must depend upon the entire key.

Process:

- Identify primary key for the 1NF relation.
- Check if the fields are dependent on the whole key. Identify the functional dependencies in the relation
- Remove fields that depend on part of the key
- Group partially dependent fields as a separate table
- Name the tables
- Identify keys to the tables

Table in 2 NF

Eid	Ename	Dcode	Rcode
1001	Ramu	SRQ	SRM
1002	Vignesh	PRD	TML

Dcode	Dname	Rcode
SRQ	Serv Req	SRM
PRD	Proj Dev	TML

Third Normal Form 3 NF:

A table is said to be in 3rd Normal Form if all the non-key fields of the table are independent of all other non-key fields of the same table.

Process:

- Identify the primary key in the 2NF relation.
- Identify functional dependencies in the relation.
- If transitive dependencies exist on the primary key, remove the fields that depend on other non-key fields.
- Place them in a new relation along with copy of their determinant.
- Group interdependent fields as a separate table, identify the key and name the table.

Table in 3 NF

Dcode	Dname
PRD	ProjDev
SRQ	ServReq

Rcode	Rname
TML	TeamLead
PRM	ProjMgr

Here, all the tables designed in this system are normalized up to 3 NF and thus redundant data is eliminated.

4.2 TABLE DESIGN

Table no: 4.2.1

Table name: Employee

The employee table is used to store the personal and company details of the employee.

Field name	Datatype	Description	Key
Empid	Number(6)	Employee id	Primary Key
Empname	Varchar2(30)	Employee name	
Gender	Varchar2(1)	Employee gender	
Dob	Date	Employee date of birth	
Age	Number(3)	Employee age	
Address	Varchar2(30)	Employee address	
City	Varchar2(15)	Employee City	
State	Varchar2(15)	Employee State	
Country	Varchar2(15)	Employee country	
postal_code	Number(6)	Employee postal code	
phone_no	Number(12)	Employee phone no	
Qual	Varchar2(10)	Employee qualification	
Expr	Number(2)	Employee experience	
Doj	Date	Employee date of joining	
dept_code	Varchar2(3)	Employee department code	Foreign key
role_code	Varchar2(3)	Employee role code	Foreign key
Pwd	Varchar2(10)	Employee password	
Emailed	Varchar2(20)	Employee email-id	

Table no: 4.2.2

Table name: Department

The department table is used to store the details of the department available in the company.

Field Name	Type	Description	Key
dept_code	Varchar2(3)	Department code	Primary key
dept_name	Varchar2(15)	Department name	
dept_desc	Varchar2(30)	Department description	
no_of_emp	Number(3)	Number of employees	

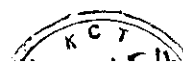


Table no: 4.2.3**Table name: EmployeeRole**

The employee role table is used to store the details about the designation of each employee.

Field Name	Type	Description	Key
role_code	Varchar2(3)	Employee's role code	Primary key
role_name	Varchar2(15)	Employee's role name	
role_desc	Varchar2(30)	Employee's role description	

Table no: 4.2.4**Table name: ClientDetails**

The clientdetails table is used to store the details about the client

Field Name	Type	Description	Key
client_id	Number(6)	Client ID	Primary key
client_name	Varchar2(15)	Client name	
con_person	Varchar2(25)	Contact person	
email-id	Varchar2(25)	Client email – id	
Address	Varchar2(40)	Client address	
cl_state	Varchar2(15)	Client state	
cl_country	Varchar2(15)	Client country	
postal_code	Number(6)	Client postal code	
phone_no	Number(12)	Client phone number	

Table no: 4.2.5**Table name: ProjectDetails**

The project details table is used to store the details about the project that is under development.

Field Name	Type	Description	Key
proj_id	Number(6)	Project ID	Primary key
client_id	Number(6)	Client id	Foreign key
proj_name	Varchar2(25)	Project Title	
proj_ldr	Number(6)	Project leader emp-id	Foreign key
proj_sdate	Date	Project start date	
proj_edate	Date	Project end date	

no_of_teams	Number(3)	Number of teams	
no_of_mod	Number(3)	Number of modules	
dev_tool	Varchar2(40)	Development tools	
proj_desc	Varchar2(40)	Project description	

Table no: 4.2.6**Table name: TeamDetails**

The team details table is used to store the details about the team and team leader.

Field Name	Type	Description	Key
team_id	Number(6)	Team ID	Primary key
team_name	Varchar2(15)	Team name	
tot_mem	Number(3)	Number of members	
team_ldr	Number(6)	Team leader ID	Foreign key

Table no: 4.2.7**Table name: TeamMemberDetails**

The team member details table is used to store the details about the members of the team.

Field Name	Type	Description	Key
team_id	Number(6)	Team ID	Foreign key
member_id	Number(6)	Member employee id	Foreign key

Table no: 4.2.8**Table name: ModuleDetails**

The table module details are used to store the details about the module and to which project it belongs and to which team it is allocated.

Field Name	Type	Description	Key
mod_id	Number(6)	Module ID	Primary key
proj_id	Number(6)	Project id	Foreign key
team_id	Number(6)	Team ID	Foreign key
mod_name	Varchar2(25)	Module Title	
assgn_date	Date	Module assigned date	
start_date	Date	Module start date	

comp_date	Date	Module end date	
no_of_tasks	Number(3)	Number of tasks	
mod_desc	Varchar2(30)	Module description	
mod_status	Varchar2(15)	Module status	

Table no: 4.2.9**Table name: TasksDetails**

The table tasks details is used to store the details regarding tasks and to whom it is allocated.

Field Name	Type	Description	Key
task_id	Number(6)	Task ID	Primary key
Modid	Number(6)	Module ID	Foreign key
emp_id	Number(6)	Member ID	Foreign key
Taskname	Varchar2(15)	Task name	
hrs_allotd	Number(3)	Allotted hours	
hrs_worked	Number(3)	Total hours worked	
task_desc	Varchar2(30)	Task description	
task_status	Varchar2(9)	Task status	
Remarks	Varchar2(30)	Remarks	

Table no: 4.2.10**Table name: RequestType**

The table request type is used to store the details regarding the type of the request made and the department to which it belongs.

Field Name	Type	Description	Key
reqtype_code	Varchar2(3)	Request type code	Primary key
reqtype_name	Varchar2(15)	Request type name	
Dcode	Varchar2(3)	Department code for request type	Foreign key

Table no: 4.2.11**Table name: RequestStatus**

The table request status stores the status code and name of the requests being generated.

Field Name	Type	Description	Key
reqstat_code	Varchar2(3)	Request status code	Primary key
reqstat_name	Varchar2(15)	Request status name	

Table no: 4.2.12**Table name: Resources**

The table named resources is used to store the details regarding the resources available and their availability & returnable status.

Field Name	Type	Description	Key
res_id	Number(6)	Resource ID	Primary key
rtype_code	Varchar2(3)	Request type code	Foreign key
res_name	Varchar2(20)	Name of the resource	
return_stat	Varchar2(2)	Return status	
res_stat	Varchar2(2)	Available status	

Table no: 4.2.13**Table name: ServiceRequestDetails**

The table service request detail is used to store the details regarding the requests generated by the employee's and their status.

Field Name	Type	Description	Key
req_id	Number(6)	Request ID	Primary key
emp_id	Number(6)	Employee ID	Foreign key
res_id	Number(6)	Resource ID	Foreign key
purpose	Varchar2(25)	Purpose of the request	
req_date	Date	Resource Requested date	
needed_date	Date	Resource Needed date	
days_req	Number(3)	Number of days required	
rstat_code	Varchar2(3)	Request status code	Foreign key

4.3 DATABASE COMPONENTS

Table no: 4.3.1

Table name: Stored Procedure Details

Package name: adddetails

Method Name	Type	Input Parameters	Output Parameters	Description
addemp	procedure	ename, gen, d_o_j,dcode, rcode,passwd , mail_id	Employee ID Error Message	<ul style="list-style-type: none"> ➤ Insert all the input parameters into the Employee table. ➤ Commit transaction ➤ If there is an error in inserting, return the appropriate error message. ➤ Else, return the empid
addclnt	procedure	cname, con_per, desgn, cl_addr, cl_st, cl_cntry, cl_postcd ,cl_phno	Client ID Error Message	<ul style="list-style-type: none"> ➤ Insert all the input parameters into the client table. ➤ Commit the transaction ➤ If there is an error in inserting, return the appropriate error message. ➤ Else, return the clientid.

addproj	procedure	clid, prname, prldr, sdate, edate, totteams, totmod, devtool, prdesc	Project ID Error Message	<ul style="list-style-type: none"> ➤ Insert all the input parameters into the Project table. ➤ Commit the transaction. ➤ If there is an error in inserting, return the appropriate error message. ➤ Else, return the project id.
addteams	procedure	tname, totmem, tmlidr	Team id Error Message	<ul style="list-style-type: none"> ➤ Insert all the input parameters in to the teams table. ➤ Commit the transaction ➤ If there is an error in inserting then return the appropriate error message. ➤ Else return the team id.
addmod	procedure	prid, tmid, mname, asdate, sdate, edate,	Module id Error Message	<ul style="list-style-type: none"> ➤ Insert all the input parameters in to the modules table. ➤ Commit the transaction

		tottasks, moddesc, modstat		<ul style="list-style-type: none"> ➤ If there is an error in inserting then return the appropriate error message. ➤ Else return the module id.
addtasks	Procedure	mdid, eid, atdhrs, wrkdhrs, tkdesc, tkstat, remrks	Task id Error Message	<ul style="list-style-type: none"> ➤ Insert all the input parameters in to the tasks table. ➤ Commit the transaction ➤ If there is an error in inserting then return the appropriate error message. ➤ Else return the task id
address	Procedure	resname, retstat, resstat, reqtypecode	Resource id Error Message	<ul style="list-style-type: none"> ➤ Insert all the input parameters in to the resource table. ➤ Commit the transaction ➤ If there is an error in inserting then return the appropriate error message. ➤ Else return resource id.
Addreq	Procedure	Empid, resid, purpose, requested	Request Id Error	<ul style="list-style-type: none"> ➤ Insert all the input parameters in to the serv_req table.

		date, needed date, days_req, rstat_code	message	<ul style="list-style-type: none">➤ Commit the transaction➤ If there is an error in inserting then return the appropriate error message.➤ Else return request id.
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CHAPTER 5

DATA FLOW DIAGRAM

5.1 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.

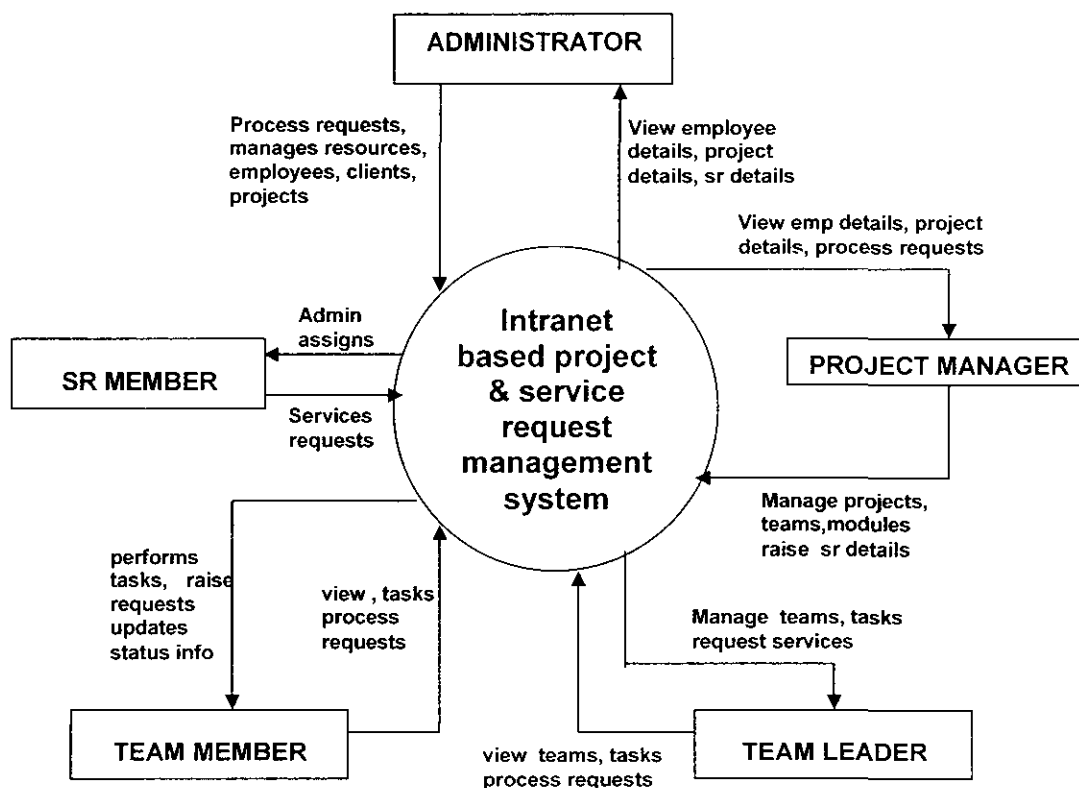


FIG NO: 5.1 CONTEXT FLOW DIAGRAM

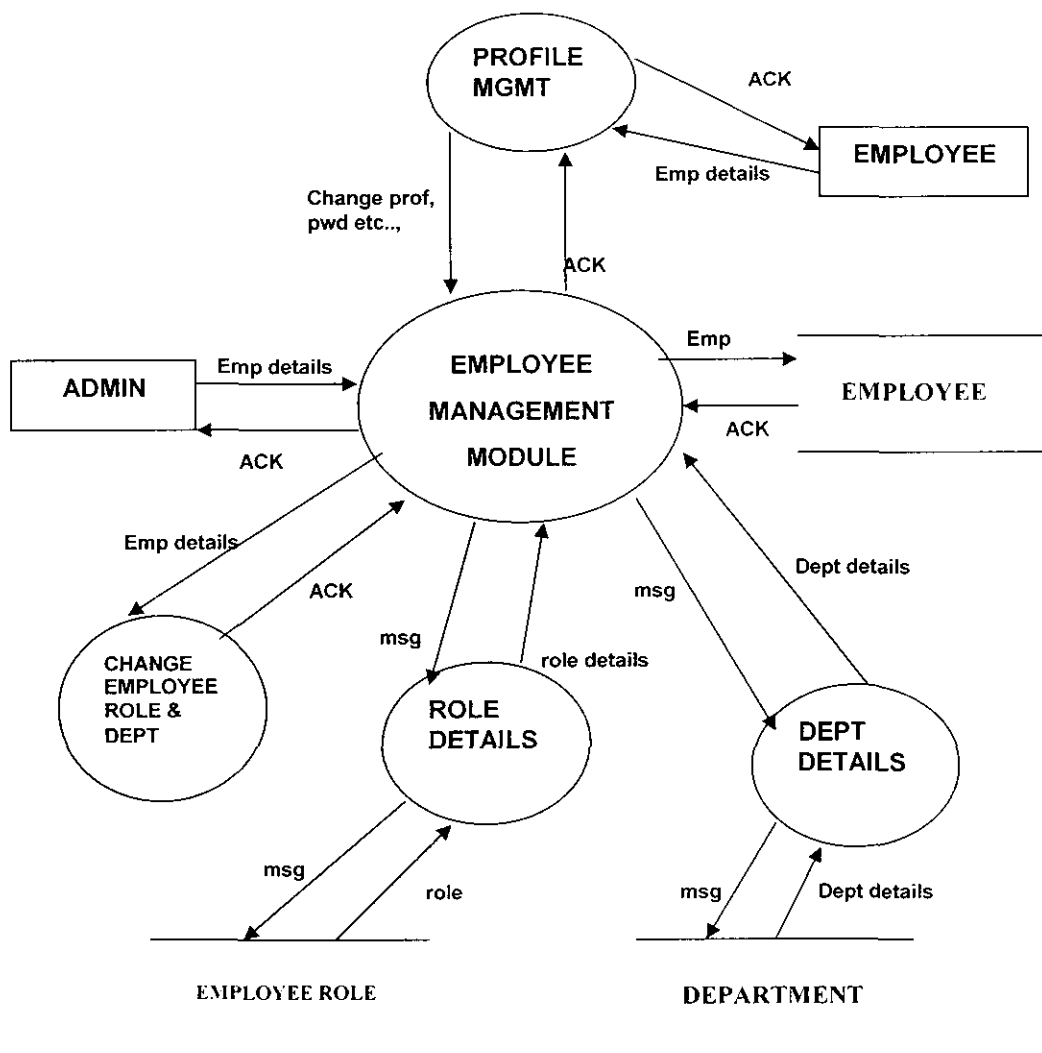


FIG NO: 5.2 EMPLOYEE MGMT SYSTEM

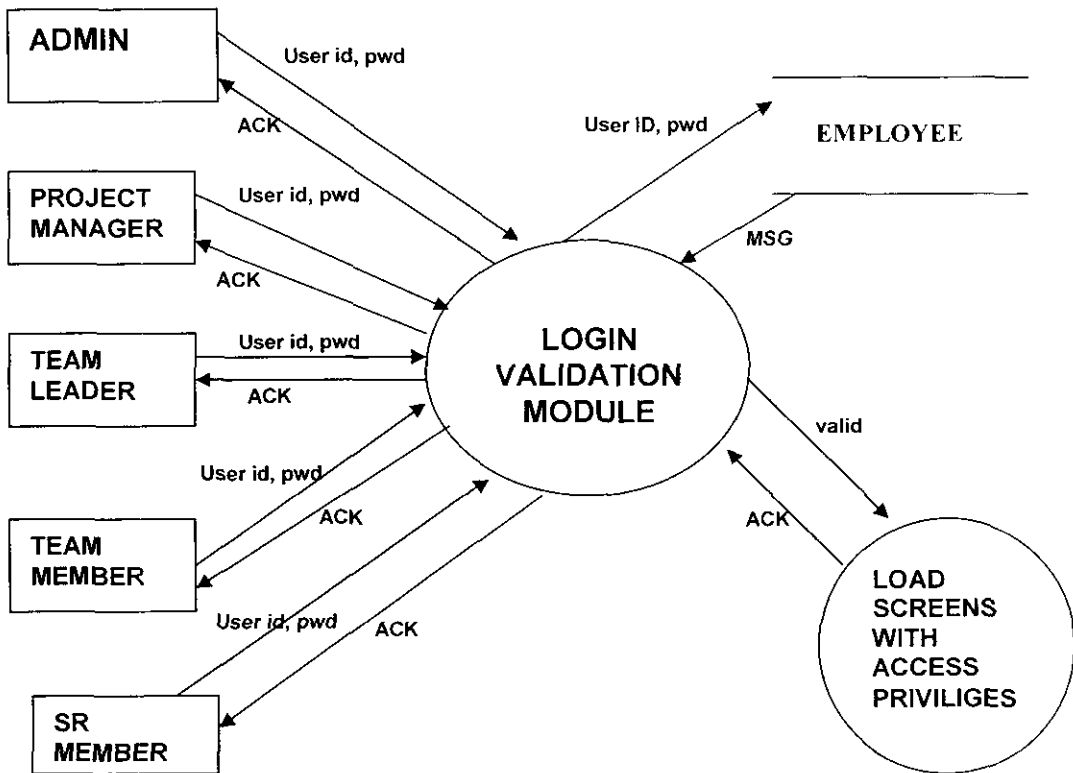


FIG NO: 5.3 LOGIN VALIDATION SYSTEM

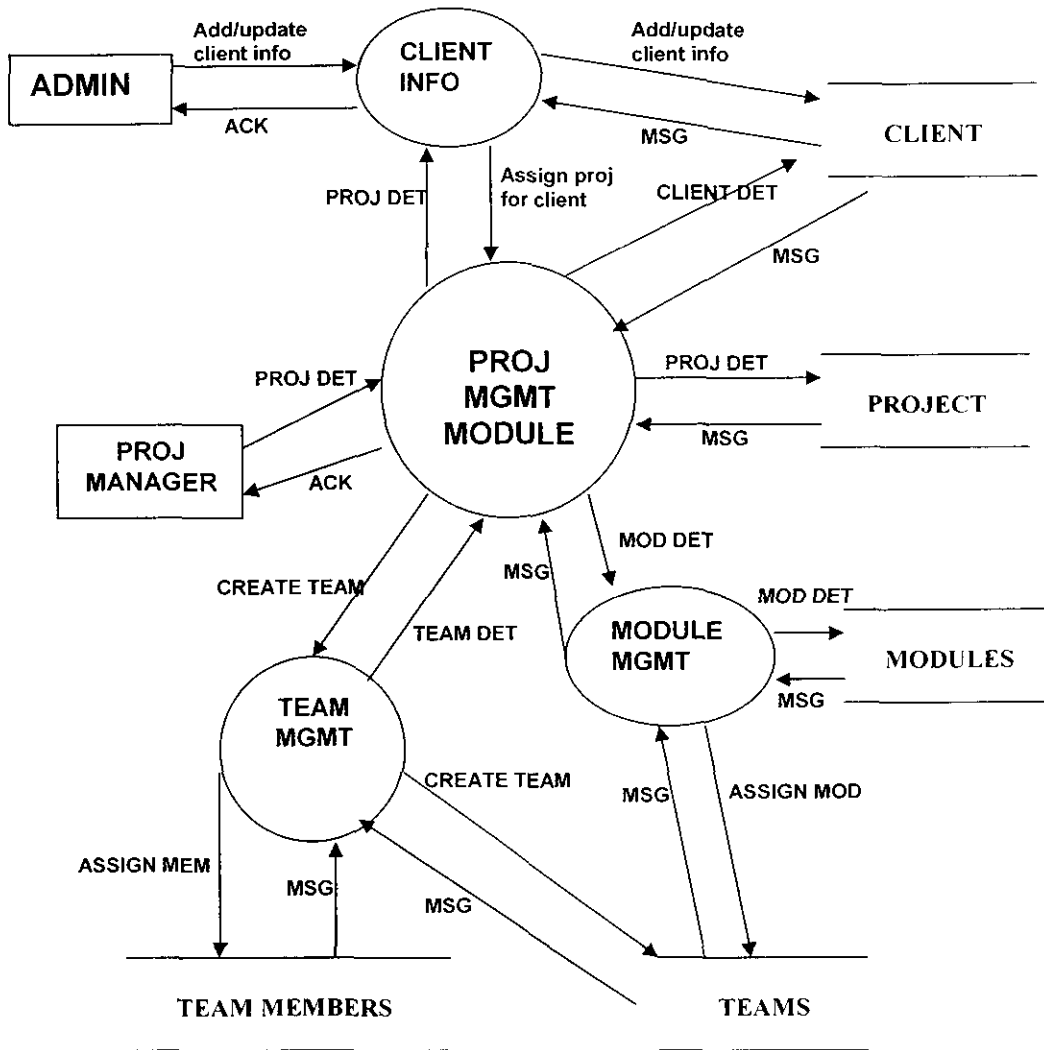


FIG NO: 5.4 PROJECT MGMT SYSTEM

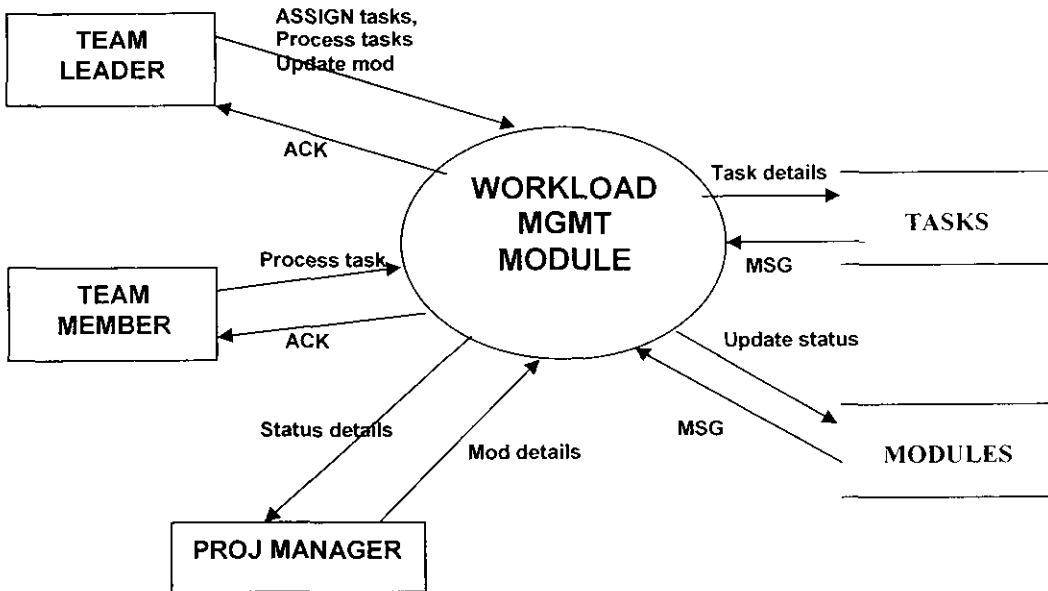


FIG NO: 5.5 WORKLOAD MGMT SYSTEM

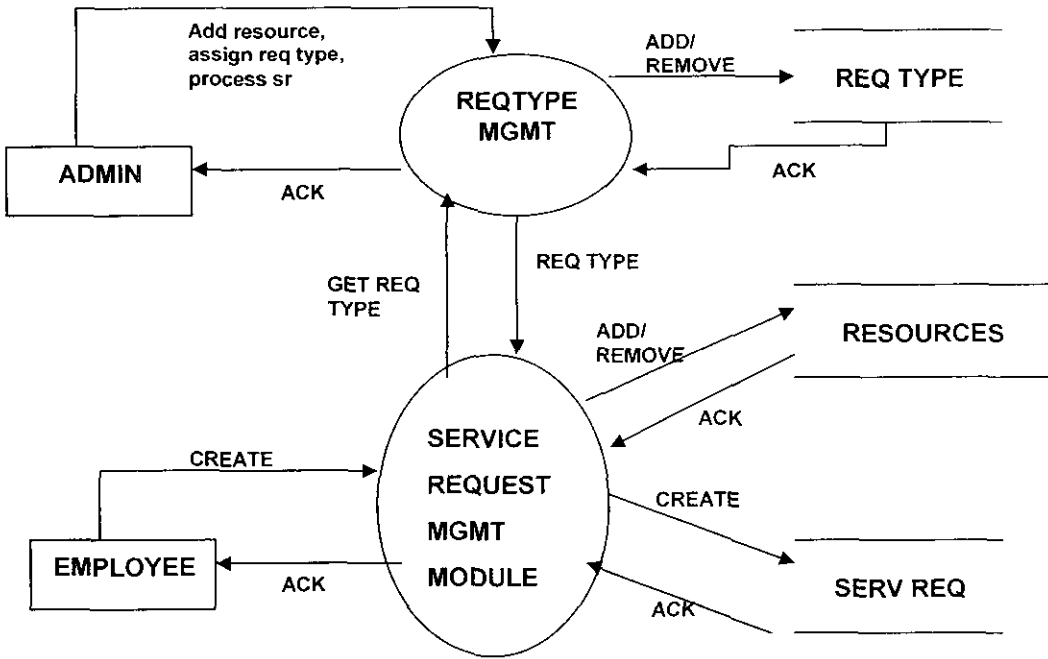


FIG NO: 5.6 SERV REQUEST MGMT SYSTEM

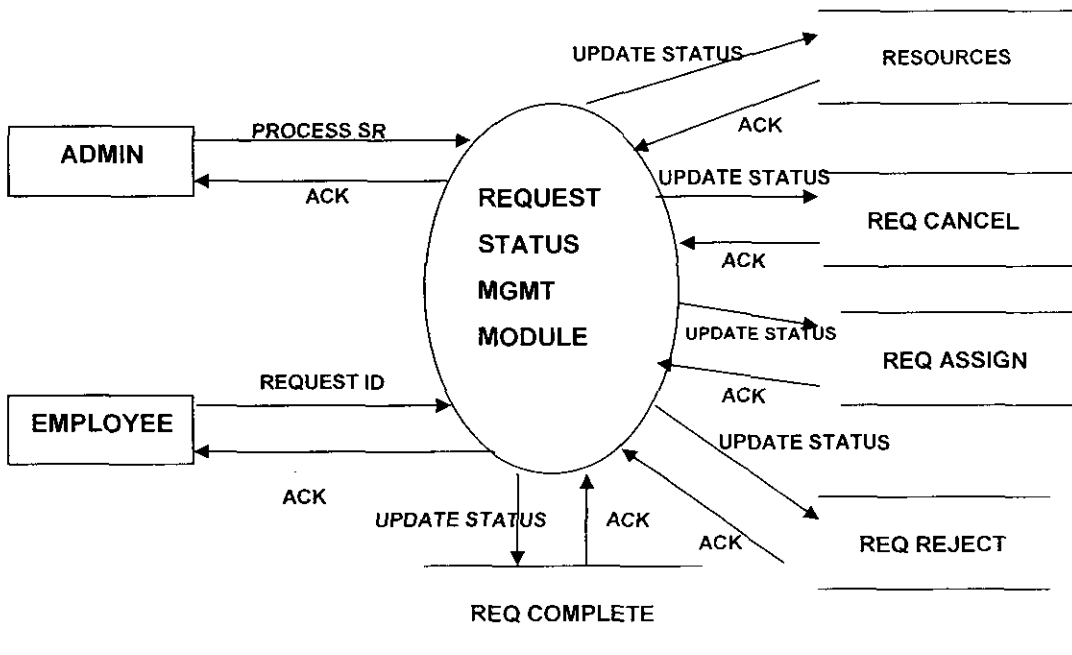


FIG NO: 5.7 REQUEST STATUS MGMT SYSTEM

CHAPTER 6

SYSTEM TESTING AND IMPLEMENTATION

6.1 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 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.

6.1.1 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.

In Intranet based project and service request management system all modules are appropriately validated with the suitable input. Each module is separately verified with their control program in bottom up approach fashion.

For example in this system following units are tested, employee management module is checked with all possible input cases. During resource allocation, service request Management module is tested for their reliability with more than one user. Also, date validation are performed to indicate it's correctness.

6.1.2 Validation Testing

Validation testing is that validation succeeds when software functions in a manner that can be reasonably expected by the customer. The most popular validation testing is alpha and the beta testing.

6.1.3 Alpha Testing

This is the test conducted at the developing environment by the developing people itself. It is the peer review process performed by the developers involved in the company.

6.1.4 Beta Testing

This is the test conducted at the user environment where the system will survive. It is done by the actual user of the system. This system also examined with this test, by installing it into the organization and user feed back are gathered, according to that this system has been refined.

6.2 SYSTEM IMPLEMENTATION

Implementation is the stage where the theoretical designs are turned into *working system*. *The most crucial stage in achieving success of the new system is in giving confidence to the users that will work efficiently and effectively.*

The primary goal of implementation is to write source code to its specification which can be easily verified, and so that debugging, testing, and modification can be eased. The goal can be achieved by making the source code as clear and straight forward as possible.

The implementation is the process of converting a new or revised system into operational one. It is the key stage in achieving a new system because it involves a lot of upheaval in the user environment.

The implementation stage involves the following tasks:

- Careful Planning
- Investigations of systems and constraints
- Design of methods to achieve the change over
- Evaluation of change over method.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

7.1 CONCLUSION

An attempt has been made to computerize the INTRANET BASED PROJECT AND SERVICE REQUEST MANAGEMENT SYSTEM is implemented in Sunvin technology, to the satisfaction of the company. Validation has been performed wherever needed. This system generates the needed reports for various groups of employees in the organization from the centralized database system.

Incorporating this system is effective in maintaining consistent data. Efforts have been put to see that the new system is capable of satisfying all the requirements specified by the company.

In conclusion, it is worth to mention that this new system has improved in maintaining consistent data than the manual system. Test data have produced successful results in satisfying the needs of the company. This system is designed in such a way that the functionality of the system can be extended by introducing new entities.

7.2 FUTURE ENHANCEMENT

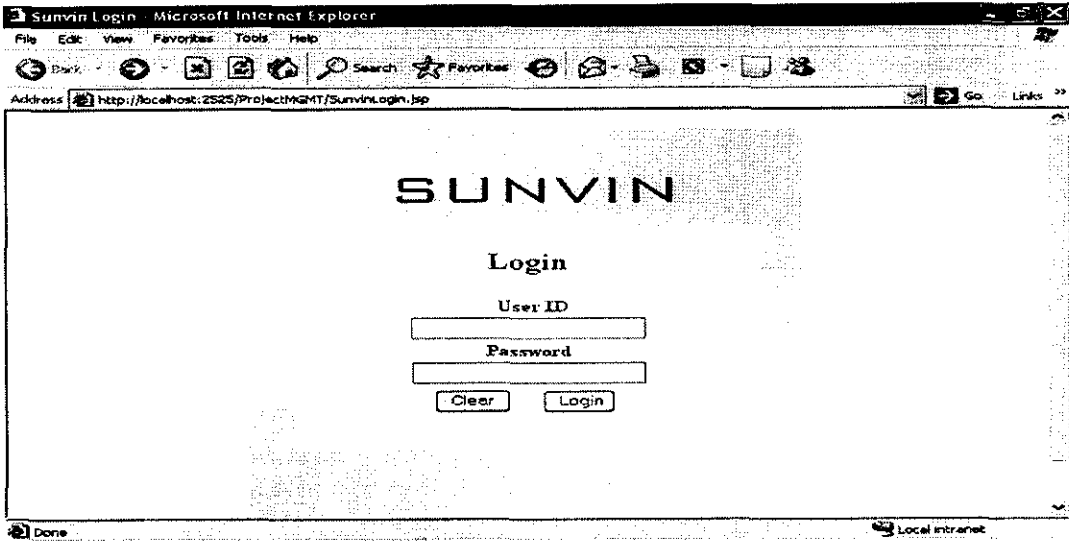
Intranet based project and service request management system can be enhanced in many ways. This system is designed in the manner which is suitable for the organization when extending its branch offices in various places and allowing the employees of the organization to provide access to the centralized database located in one area. Design methodologies followed in this system

provides easier way to extend the functionality of the system. The scope of the system can be extended to internet and can be made available to employees who are working in offsite.

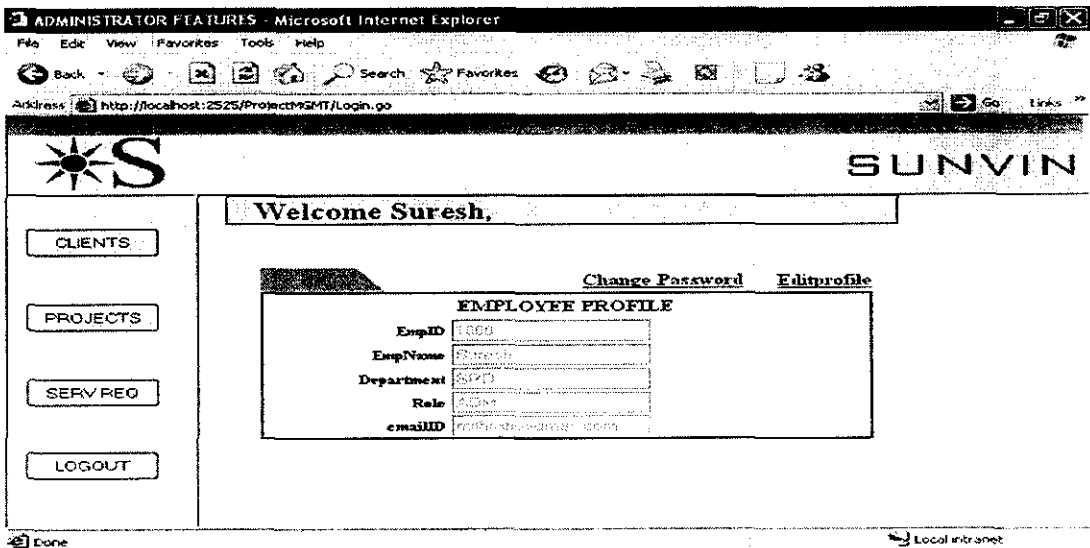
- Can be extended as an online application.
- Provide Integration of many departments to service requests raised by the concerning department employees.
- Implementation Mail server to provide better communication between employees

APPENDICES

APPENDIX 1



LOGIN SCREEN



ADMIN HOME PAGE

ADMINISTRATOR FEATURES - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Home Search Favorites

Address http://localhost:2525/ProjectMGMT/Login.go

SUNVIN

ASSIGN PRO. VIEW PROJEC MY HOME

CLIENTS

PROJECTS

SERV REQ

LOGOUT

ASSIGN PROJECT - FORM

PROJECT PROFILE

ClientNAME : abc technologies

PROJECT NAME :

PR Manager : Priya

Start Date : 1 JAN 2006

End Date : 1 JAN 2006

No Of TEAMS :

No Of Modules :

Development Tools :

Proj Description :

Done Local Intranet

ASSIGN PROJECT FORM

PM FEATURES - SUNVIN - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Home Search Favorites

Address http://localhost:2525/ProjectMGMT/Login.go

SUNVIN

NEW TEAM VIEW TEAMS MY HOME

PROJECTS

TEAMS

SERV REQ

LOGOUT

NEW TEAM CREATION

TEAM PROFILE

TEAM NAME :

No of Members : 1

TEAM Leader : Arul

TEAM MEMBERS

1. MEMBER ID :

CLEAR ADD


Done Local Intranet

TEAM CREATION FORM

ADMINISTRATOR FEATURES - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://localhost:2525/ProjectMGMT/Login.go



SUNVIN

RESOURCES SR PROCESS MY HOME

CLIENTS

PROJECTS

SERV REQ

LOGOUT

RESOURCE ADDITION FORM

RESOURCE NAME :	<input type="text"/>
RESOURCE TYPE :	SOFTWARE ▾
RETURNABLE :	RETURNABLE ▾
AVAILABLE :	AVAILABLE ▾
	<input type="button" value="CLEAR"/> <input type="button" value="ADD"/>


Done Local intranet

RESOURCE ADDITION FORM

PM FEATURES SUNVIN - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://localhost:2525/ProjectMGMT/Login.go



SUNVIN

LIST PROJEC REPORTS MY HOME

PROJECTS

TEAMS

SERV REQ

LOGOUT

ASSIGN TASK

TASK PROFILE

ModuleNAME :	PURCHASE ▾
TaskNAME :	<input type="text"/>
Assigned To :	1020 ▾
Alotted Hours :	<input type="text"/>
Task Description :	<input type="text"/>
Worked Hours :	<input type="text"/>
Task Status :	PENDING ▾
Remark :	<input type="text"/>
	<input type="button" value="CLEAR"/> <input type="button" value="ADD"/>


Done Local intranet

TASK CREATION FORM

ADMINISTRATOR FEATURES - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://localhost:2525/ProjectMGMT/Login.go



SUNVIN

NEW CLIENT VIEW CLIENTS MY HOME

CLIENTS

PROJECTS

SERV REQ

LOGOUT

Client ID	Client Name	Contact Person
10000	ABC TECHNOLOGIES	ad
10010	CTS INFOPRINT	shyam
10200	CLIENT NAME	roper
10400	ABC	ade
10410	QQQ	reqw

View


Done Local intranet

CLIENTLIST REPORT

PM FEATURES - SUNVIN - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://localhost:2525/ProjectMGMT/Login.go



SUNVIN

LIST PROJEC REPORTS MY HOME

PROJECTS

TEAMS

SERV REQ

LOGOUT

Project ID	Client ID	Project Name	StartDate
1001	10000	CTS INFOPRINT	2005-02-22
1002	10000	CTS INFOPRINT	2005-02-22
1003	10000	CTS INFOPRINT	2005-02-22
1004	10000	CTS INFOPRINT	2005-02-22
1005	10000	CTS INFOPRINT	2005-02-22
1006	10000	CTS INFOPRINT	2005-02-22
1007	10000	CTS INFOPRINT	2005-02-22
1008	10000	CTS INFOPRINT	2005-02-22
1009	10000	CTS INFOPRINT	2005-02-22
1002	10000	SUNVIN'S Q1 2005 Q12	2005-04-18

AssModule ModuleList

Microsoft Internet Explorer

select a record

OK

Done Local intranet

PROJECT LIST VALIDATION

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