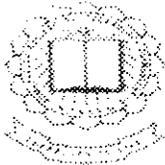


WORKFLOW AUTOMATION



Estd-1984

P-1057



ISO 9001:2000
Certified

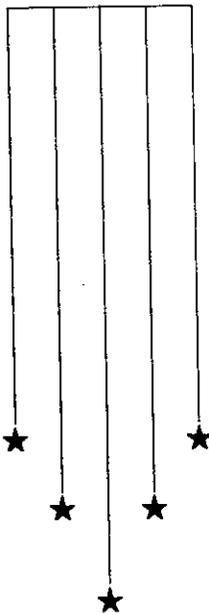
PROJECT REPORT

Submitted by

NANDITHA RAMASAMY(2KBCT29)

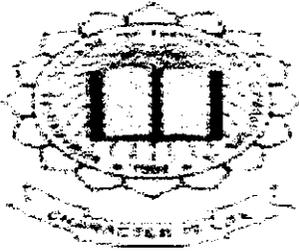
Under the guidance of

Mrs.V.GEETHA M.C.A



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

DEPARTMENT OF COMPUTER TECHNOLOGY
KUMARAGURU COLLEGE OF TECHNOLOGY
COIMBATORE:641 006.

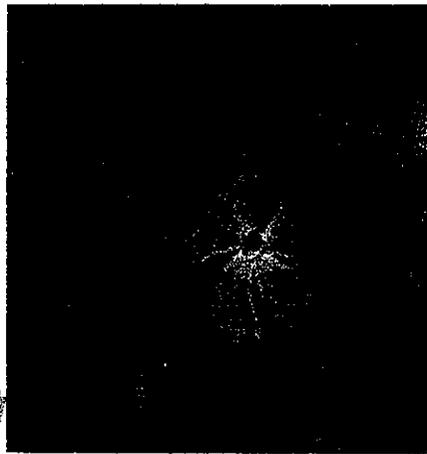


**KUMARAGURU COLLEGE
OF
TECHNOLOGY**

Affiliated to Anna University, COIMBATORE- 641006

DEPARTMENT OF COMPUTER TECHNOLOGY

Submitted by



Miss. Nanditha . Ramaswamy(0028Q0141)

CERTIFICATE

DEPARTMENT OF COMPUTER TECHNOLOGY
KUMARAGURU COLLEGE OF TECHNOLOGY
COIMBATORE-641006.

CERTIFICATE

This is to certify that the project entitled

has been submitted by

**In partial fulfillment of the award of the degree of Bachelor of Science in
" APPLIED SCIENCE- COMPUTER TECHNOLOGY "of Bharathiar University,
Coimbatore during the academic year**

G. Anand
21/3

(GUIDE)

2002 - 2003

ON

(HEAD OF THE DEPT)

**Certified that the candidate was examined by us in the project viva voce
Examination held on 24/3/2003 and the University Register number was**

G. Anand
24/3

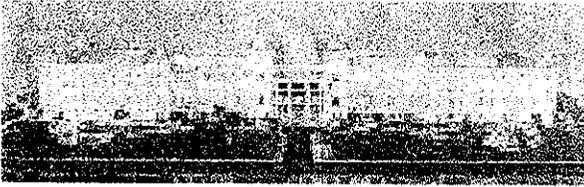
0028Q0141

S. S. S. S. S.

Workflow Automation

PROJECT REPORT

Submitted in partial fulfillment of the requirements for the award of
Degree of B.Sc [APPLIED SCIENCE- COMPUTER TECHNOLOGY]



Submitted by

Miss. NANDITHA . RAMASWAMY [2KBCT29]

Under the guidance of

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19-03-2003

TO WHOMSOEVER IT MAY CONCERN

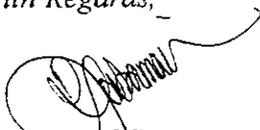
This is to certify that Ms. NANDITHA RAMASWAMY (Reg. No. 0028Q0141), studying B.Sc .Computer Technology in Kumaraguru college of Technology , Chinnavedampatti, Coimbatore, has completed the project entitled :

WORKFLOW AUTOMATION

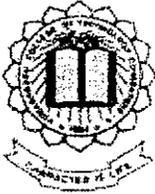
From the period of December 2002 to March 2003 in our concern. During that period, it was found that she is technically sound. Her attendance was regular and conduct was good.

We wish her all the best in her future endeavors.

With Regards,



Authorized Signatory



Acknowledgement

✦ I express my sincere gratitude to our esteemed principal, Dr. K.K.Padmanabhan for providing me all the necessary facilities required.

✦ I putforth my sincere thanks to the head of the department, Dr. V. Sundaram for the encouragement given by him to carry out the project.

✦ TO THE INTERNAL GUIDE : Mrs. V. Geetha

Like the God in the temple is your presence for me in the college, in helping me get over the problems and achieve my goal.

✦ TO THE EXTERNAL GUIDES : Mr. Mukundan &
Mr. Sathyanarayanan

As the heart is for human life, so is your moral support for my project.

✦ DEDICATED TO MY PARENTS :

Parents stood like rock solid pillars and gave me moral support whenever I needed it. Above all they were the ones who helped me to finish my project successfully.

SYNOPSIS

The project entitled "WORKFLOW AUTOMATION" is intended towards automizing the procedural way of manual workflow in a corporate by a computer system.

This project focuses towards automizing the employee Leave Applying sanctioning, & exigency procedures , their personal details, Administration, Intranet mailing system, Leave monitoring & facilitate information flow within the organization.

The noticeable intention of the project is that the whole process is carried out through networks. INTERNET MAILING SYSTEM plays a vital role & also facilitates the information flow within the concern. Thus the confidential messages are send to respective persons in a secured way.

This project uses HTML as its front-end, PHP/SQL as a network connectivity & MYSQL as its back-end. This project is designed in such a way that it is user friendly with the privilege of seeing it as well as using it for future enhancement.

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SIGNIFICANCE

✚ 1.1 WHAT IS WORKFLOW AUTOMATION ???

The title "WORKFLOW AUTOMATION" refers to paperless work.

The word "PAPERLESS" means that everything is carried out through online requisitions.(i.e. networks)

✚ 1.2 BENEFITS :

- ➔ Avoids paper work.
- ➔ Less time consumption.
- ➔ Speedy disposal of applications.



INTRODUCTION



Introduction to Intranets

WHAT ARE INTRANETS???

- ✦ An intranet is a company-wide software and information distribution system that uses Internet tools and technology .
- ✦ It could be a simple HTML file linked on a LAN, a full-blown sophisticated system with dedicated server hardware, or anything in between .
- ✦ We can use an intranet to give employees access to company documents, distribute software, enable group scheduling, provide an easy front end to company databases, and let individuals and departments publish information they need to communicate to the rest of the company.

Typical Intranet applications / examples are:

- ✦ Real Time Broadcasting of News, Information Technology, Breaking News, even Medical Information from abroad and Financial Data from either the Central source and/or from Multiple Sources, Complete Electronic Mail for Interoffice and Intra-office Communication, Online (Internal) Documentation

interface with CD-ROM Libraries) ,etc...

ORGANISATION STRUCTURE :

Amrita Industrial Inc..

→ Branch head

→ Assistant manager

→ Officers

→ Employees

Company Profile

AMRITA INDUSTRIAL INC. is a marketing company with its branches located all over South India. They mainly deal with “PETRO-CHEMICAL PRODUCTS “. The company has executed software projects in GUI- based ,Internet,Intranet applications for corporate clients. They have also executed projects based on Database applications. They have their own team of dedicated consultants who are drawn from various industries to meet their client’s needs.

SEGMENT EXPERTISE :

- ✦ Web applications
- ✦ Wholesale, Retail Distribution, Transportation
- ✦ Banking, Finance, Insurance

BUSINESS FOCUS :

- ✦ The company has strategically positioned itself in the core areas of e-business, Internet, Human resource management, software testing & service , banks & IT companies.

SERVICES OFFERED :

- ✦ Software Development
- ✦ Package Implementation
- ✦ Value added professional services

PERFORMANCE :

- ✦ The overall performance of the company has been overwhelming in terms of customer satisfaction.

SOFTWARE REQUIREMENT SPECIFICATION

SYSTEM STUDY

This stage explains about the existing system & also to enhance it further by using the proposed system.

→ EXISTING SYSTEM

→ PROPOSED SYSTEM

✦ EXISTING SYSTEM :

Existing system is done manually. People working in a company may take leave at any time. But this process is done only through leave letters. They write a letter and submit it to their concerned head. The supervisor or the head of the branch verifies the availability of employees in the concern and then sanctions or rejects it. The supervisor or the head of the branch has to maintain a personal copy in their register for further clarifications and the person taking leave will also be given a copy.

✦ DISADVANTAGES :

This involves bulk of paper to be maintained by the head of the branch or the supervisor & also the concerned employee. So this process consumes lot of time. Hence to overcome all these problems we go in for the proposed system where we automate the above process.

✦ PROPOSED SYSTEM :

The main objective of proposed system is to enable the company to manage the entire process through computer systems. The system also provides the complete leave details & leave processing of each & every employee. It also gives a flexibility to communicate (mailing) with each other.

✦ FEATURES:

The proposed system has the following features.

➔ Employee Maintenance:

This module is intended to maintain the bio-data of all the employees working in the concern. If needed the existing records of the employees can be either updated or viewed.

➔ Administration :

This module is mainly used to encompass extra details of the existing employees in the concern. If needed the newly added information of the employees can be either updated or viewed.

➔ Leave processing & Leave details :

Leave processing is done when the employee taking leave waits for the sanctioning & exigency of his/her leave & all these depends upon the

availability of employees in the concern.

Leave details deals with the type of leave the employee takes.

→ Intranet mailing system :

Mailing is done between employees in the concern regarding company matters.

→ Leave monitoring :

This is the final module which represents the Monitoring of leave. This actually informs us how many employees leave are sanctioned and how many are rejected along with their code numbers.

PRODUCT OVERVIEW

The project entitled "WORKFLOW AUTOMATION" is developed under the "CLIENT SERVER ARCHITECTURE". This project is focused to automate the flow of work in a concern which includes five modules.

- Employee Maintenance
- Administration
- Leave processing
- Intranet Mailing System &
- Leave Monitoring

Employee Maintenance :

This module is intended to maintain the PERSONAL DETAILS -OF EMPLOYEES in the concern. The details of all the employees are accessed & manipulated only by a privileged person. By default a person is given the privilege to access the employee database. During his absence, he may provide privilege to some other person in the concern & can also relinquish the control back.

Administration :

The second module is intended towards encompassing extra details for the employees in the concern. (i.e only privileged persons) .

Leave processing :

This module is categorized into 2 main divisions : leave details & leave processing. The first division namely leave details is intended to maintain the type of leave the employee takes like casual leave, medical leave, maternity leave , privilege leave..... The leave type is stored in a database & we can also include any type of leave in future. The second division namely leave processing is intended towards automizing the leave applying request within the organization & the leave can either be sanctioned or rejected depending upon the availability of employees in the concern.

Intranet Mailing system :

This module is intended towards propelling & accepting messages within an organization. Here we don't make use of an internet because the privacy of the messages should be maintained within the organization.

Leave Monitoring :

This is the final module which represents the monitoring of leave. This gives the details of how many employees leave are sanctioned & how many are rejected along with their code number. Since the technology is client-server based, the software is going to reside on the server. Whenever a request is placed by the client, the server preprocesses the pages and appropriate information is sent to the client.

The project is developed using HTML as its front-end & MS-Access as its back-end. ISP/SERVICES acts as a network connectivity.



FUNCTIONAL SPECIFICATIONS

This includes two phases namely the Input design & the Output design.

INPUT DESIGN:

Input to a system can be defined as the information that is to be provided to the system. With this information it does further processing in order to produce results which helps in decision making.

Input design consists of developing specifications and procedures necessary for processing the data entered.

One of the main objective of input design is to prevent the entry of invalid data. All the validation checks to be carried out on the input data need to be specified here.

The screens used in this system are classified as follows.

- Registration page
- Login page
- Employee information page
- Admin
- Leave form page
- Compare

REGISTRATION SCREEN:

This page is used to register certain details of the employee like user id, password, empno... Through this screen only he registers his details into the employee database.

LOGIN SCREEN:

This page is the first page which indicates the entry of employees into the concern. This page checks whether the user logging in is authorized or not. After confirmation we can enter the home page & start with the first module. By default only an authorized person is given the rights to log in.

EMPLOYEE MAINTENANCE:

This page is intended to maintain the bio-data of employees working in the concern & we can also view the records of the employees. If needed we can also update the existing records of the employees.

ADMIN:

This enables the addition of extra details of employees to the concern. This increases the level of security. If needed we can also update or view the newly added information of the employees.

LEAVE FORM PAGE:

Here the person has to fill the necessary details in the leave form and submit it to the

concerned head or the supervisor. The employee is also given a copy of the leave form to verify.

COMPOSE :

This screen helps the employees in the concern to communicate with each other regarding company matters or other important matters.

OUTPUT DESIGN :

Output design is a very important phase in the designing of any system. The important objective of any system is in its capability of producing high quality outputs or reports.

The following outputs or reports are produced by the system.

- Leave details
- inbox

LEAVE DETAILS :

Leave details can include any type of leave like casual leave, medical leave, maternity leave, privilege leave... All the above categories have 2 options like sanction & rejection. The above options are finalized depending upon the availability of employees in the concern. We can include any type of leave in future also.

INBOX :

In this screen the employee checks for mails & if needed he can also delete the selected mails.

Performance Requirements

The main objective of my platform(JSP) is that it works successfully on all major web platforms.

- The code interpretation is also very easy when compared to ASP.
- JSP can maintain state on the server between requests
- It runs in a ready loaded JVM as an extension to the web server.
- It supports components like JSP Tags, JavaBeans or Enterprise JavaBeans .
- The Project uses JAVA as its base language which is highly secured,distributed,robust,simple....

<u>JSP</u>	<u>ASP</u>
<ul style="list-style-type: none">• JSP runs on all main web servers like Tomcat, Apache , Web logic...	<ul style="list-style-type: none">• ASP is usually used on Microsoft IIS or PWS web servers.
<ul style="list-style-type: none">• Code interpretation is once.	<ul style="list-style-type: none">• Code interpretation is at each instance.
<ul style="list-style-type: none">• Highly secured.	<ul style="list-style-type: none">• Partially secured.

Exception handling

A java exception is an object that describes an exceptional condition that has occurred in a piece of code. When exceptional condition arises, an object representing that exception is created and thrown in the method that caused the error. If exceptions are not handled & caught properly the java interpreter displays a message & terminates the program. If we want the remaining code to be executed then we have to catch the error condition thrown by the exception object. This is called EXCEPTION HANDLING. The purpose of this is to detect & report events. There are 5 keywords available in exception handling.

1. try
2. catch
3. throw
4. throws
5. finally

In my project only the first 2 keywords are used often.

The usage of try block is to simply enclose the code that we want to monitor. Immediately following the try block is the catch block

The usage of catch block is that it specifies the exception type that we wish to catch.



PRODUCT DEFINITION





PROBLEM STATEMENT



The project entitled "WORKFLOW AUTOMATION" is carried out through manual work. We don't use any sort of internet technologies like E-mail... The head has to maintain a register to file the employees leave requisition letters & in turn the employee requesting for a leave should also have a copy. So the time taken to carry out the whole process consumes lot of time. Each & every process is handled manually. The leave request is mainly sanctioned or rejected depending upon the availability of employees. So all these seemed to be a very tedious process & hence to overcome all these problems we carry out the entire process through computer systems. In the proposed system the whole process is carried out thro' Intranet mailing system. The following are the 5 modules included for enhancing the work.

→ Employee Maintenance

→ Administration

→ Leave processing

→ Intranet mailing system

→ Leave Monitoring

PROCESSING ENVIRONMENT

HARDWARE SPECIFICATION

PROCESSOR

IBM PC Pentium III 850MHz

HARD DISK

20 GB

RAM

128 MB

KEYBOARD

Enhanced 101 / 102 Keys

MOUSE

Logitech (3 Buttons)

MONITOR

COLOR

SOFTWARE SPECIFICATION

FRONT END

HTML

BACK END

MS-ACCESS

NAW CONNECTIVITY

INTERNET

OPERATING SYSTEM

**WINDOWS NT /
WORKSTATION**

INTERNET TOOL

HTML

SCRIPT LANGUAGE

JAVASCRIPT

WEB SERVER

TOMCAT 3.2

PROTOCOL USED

✦ **HTTP (Hyper Text Transfer Protocol)**

USER CHARACTERISTICS

✦ **It is very easy for an ordinary programmer to understand the language if he/she is well versed in web based applications and concepts.**

PROJECT PLAN & FEASIBILITY STUDY

Development Tools

The following are the tools used for the project:

✚ HTML (Hyper Text Markup Language- Front end)

✚ JSP/SERVLETS(Network connectivity)

✚ MS-ACCESS(Back end)

✚ HYPER TEXT MARKUP LANGUAGE :

- ✓ HTML stands for HYPER TEXT MARKUP LANGUAGE) and Hyperlink is one which links one file to another. HTML tags are pieces of code enclosed by the less than sign(<) and a greater than sign(>). It is mainly used for web browsing.

✚ JSP : (JAVA SERVER PAGES)

- ✓ JSP is a technology based web application and is developed by sun Microsystems. They are text files that combine standard HTML and scripting tags.
- ✓ They get compiled into Java Servlets the first time they are invoked. Currently JSP 1.1 is the version available.
- ✓ It is a serverside programming used to create dynamic web pages. The JSP specification provides web developers with the framework to create dynamic content on the server.
- ✓ The JSP 1.1 specification extends the Java Servlet API.

- ✓ It supports major web platforms using HTML and Java code, which is secure, fast & independent of server platform.
- ✓ A JSP page is divided into 2 major categories. One is ELEMENTS & the other is the TEMPLATE DATA. JSP acts as a MIDDLEWARE.
- ✓ ELEMENTS are processed by the server. Template data or anything other than elements are processed by the engine or container. A JSP page is executed on an JSP engine which is installed on a web server.

✦ JSP'S SCORE OVER ASP AS FOLLOWS :

- ✓ JSP's are interpreted once to Java bytecode and re-interpreted only when the file is modified.
- ✓ JSP's run on all major web platforms.
- ✓ JSP's provide better facilities for separation of page code and template data by of JAVA BEANS , enterprise Javabeans & tag libraries.

✦ SERVLETS :

- ✓ Servlets are pure Java based applications . Servlets are single servers that can handle any number of requests at a time.
- ✓ Servlets are multithreaded and protocol independent. They are purely platform independent.
- ✓ It uses Datagram protocols like USER DATAGRAM PROTOCOL(UDP).
- ✓ It supports cross servers(support all types of servers).
- ✓ Servlets use JSDK(Java servlet development kit) &

the response is in the form of text or HTML tags.

↓ MS-ACCESS :

- ✓ Microsoft Access is one of the popular RDBMS.
- ✓ Access allows us to build and maintain powerful databases both effectively and efficiently.
- ✓ There are 4 important parts in an Access database. They are Tables, Queries, Forms & Reports.

↓ IMPORTANT FEATURES OF MS-ACCESS:

- ✓ Online help
- ✓ Extensive query facility
- ✓ Importing and Exporting data
- ✓ Security

Feasibility Analysis

The following are the analysis observed.

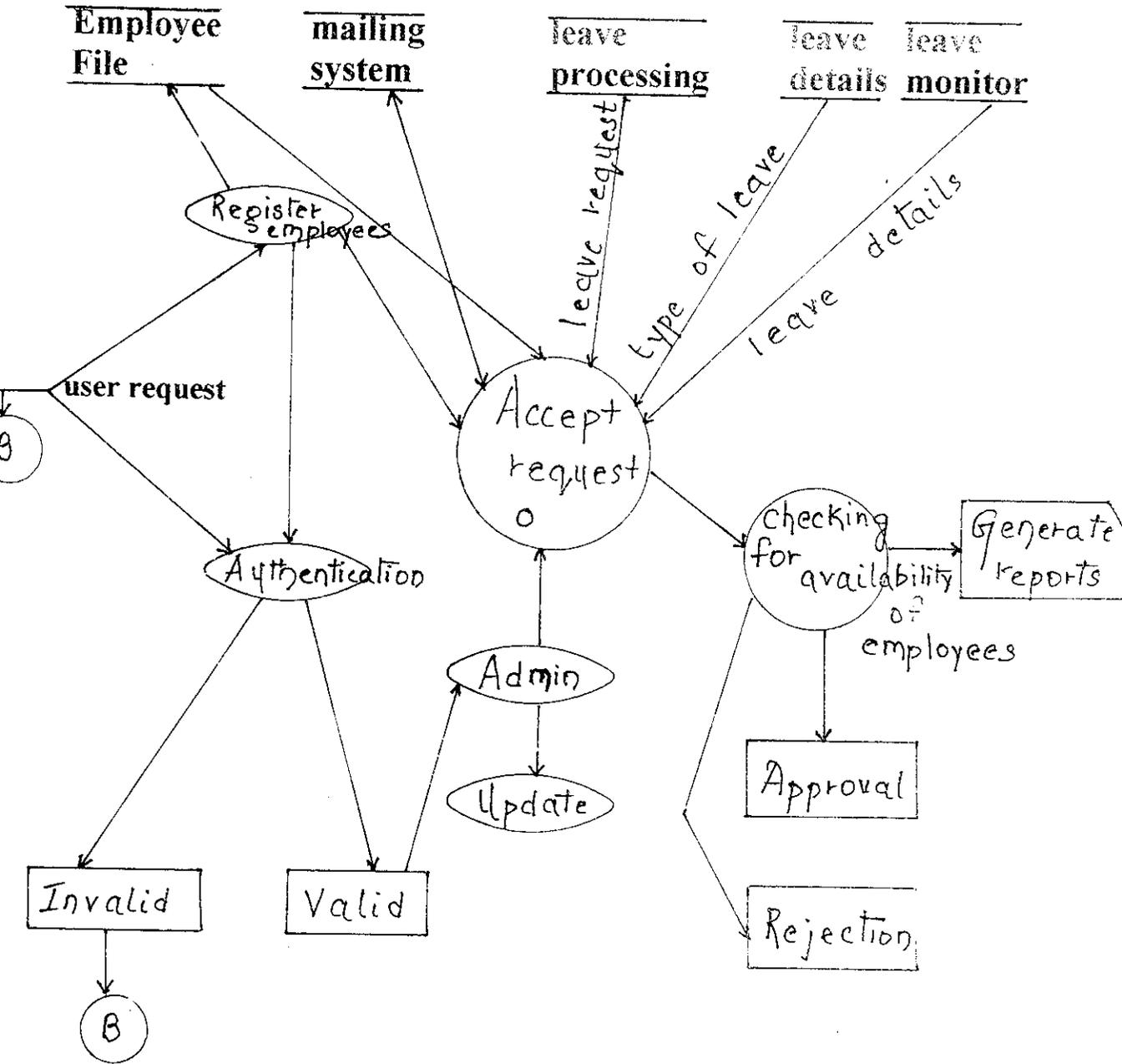
- ↓ TECHNICAL FEASIBILITY
- ↓ OPERATIONAL FEASIBILITY
- ↓ ECONOMIC FEASIBILITY

- This phase helps us to avoid form requisitions. Online requisition forms can be used for various activities or operations, (i.e. for acceptance & rejection) & this can be done within a very short time.
- This phase helps us to manage the leave details, leave processing & assignments of all the employees in the concern. Depending upon the availability of the employees only ,we finalize whether to approve or reject the leave request .
- In this phase everything can be done economically through some electronic media like e-mail, internet, etc...

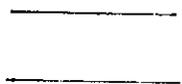
SYSTEM DESIGN

DATA FLOW DIAGRAM

DATA FLOW DIAGRAM



Symbols used



Data store



Connectors or
arrows



Sub process



External Entity

Table Design

Table design is an essential part in any project. It is actually the back end of our project where we store values, retrieve values, update values... This actually consists of 3 important items field names, Data type, & width. The field names are created depending upon the input forms. The following are the tables created & used for the project.

↓ Emp_mas (Employee Maintenance) :

Field name	Data type	Width
Emp_no (pk)	Number	Integer
Emp_name	Text	50
F_name	Text	20
H_name	Text	20
Fir_name	Text	20
Mid_name	Text	20
Las_name	Text	20
Emp_addr1	Text	50
Emp_city1	Text	15
Emp_pin1	Number	Integer
Emp_addr2	Text	50
Emp_city	Text	15
Emp_pin	Number	Integer
Emp_dd	Number	Integer

Emp_mm	Text	3
Emp_yy	Number	Integer
Emp_dd1	Number	Integer
Emp_mm1	Text	3
Emp_yy1	Number	Integer
User_id	Text	20
Emp_pass	Text	15
Emp_deptno	Number	Integer
Emp_deptname	Text	10
Emp_desig	Text	20
Emp_qual	Text	15
Emp_sex	Text	6
Emp_marstat	Text	10

✚ Emp_Leavetrans(Leave details):

Field name	Data type	Width
Emp_no (fk)	Number	Integer
From_date	Number	Integer
From_mon	Text	3
From_yy	Number	Integer
To_date	Number	Integer
To_mon	Text	3
To_yy	Number	Integer
leavedays	Number	Integer
Leave_type	Text	15
Rem	Text	10
Status	Text	10

Leave_addr	Text	10
------------	------	----

✚ leave (type of leave) :

Field name	Data type	Width
Leave	Text	50

✚ Emp_Leavemas (master table) :

Field name	Data type	Width
Emp_no (fk)	Number	Integer
Nfd_lc_CL	Number	Integer
Nfd_lc_ML	Number	Integer
Nfd_lc_MaL	Number	Integer
Nfd_lc_PL	Number	integer

✚ Emp_mailtrans (mailing table) :

Field name	Data type	Width
Mail_id	Autonumber	Integer
User_id	Text	50
User_msg	Text	50

From_id	Text	20
Mail_date	Date/Time	Medium date
Subject	Text	10

✚ Emp_locmas (location table) :

Field name	Data type	Width
Bran_code (pk)	Number	Integer
Bran_name	Text	15
Bran_head	Text	10

✚ Emp_loctrans (location transaction table) :

Field name	Data type	Width
Emp_no (fk)	Number	Integer
Bran_code (fk)	Number	integer

SAMPLE PSEUDO CODE ROUTINE

```
html>
head>
title>workflow1.1</title>
/head>
img src="nans\employers\blue_80x30[1].gif" width="80" height="30">
script language="JavaScript" >
function clea()
```

```
document.workflow1.empno.value=""
document.workflow1.Emp_name.value=""
document.workflow1.Emp_dd2.value=""
document.workflow1.Emp_mm2.value=""
document.workflow1.Emp_yy2.value=""
```

```
document.workflow1.User_id.value=""
document.workflow1.Emp_pass.value=""
```

```
function chktxt()
```

```
(f)!=1)
```

```
document.workflow1.method="post"
document.workflow1.action="regis.jsp"
document.workflow1.submit()
```

```
function f()
```

```
if (document.workflow1.empno.value=="")
{
    alert("Emp no Should not be Empty");
    document.workflow1.empno.focus()
    return(1)
}
if (document.workflow1.Emp_name.value=="")
{
    alert("Emp Name Should not be Empty");
    document.workflow1.Emp_name.focus()
    return(1)
}
if (document.workflow1.Emp_dd2.value=="")
{
    alert("Date Should not be Empty");
    document.workflow1.Emp_dd2.focus()
```

```
        return(1)
    }
    if (document.workflow1.Emp_mm2.value=="")
    {
        alert("Month Should not be Empty");
        document.workflow1.Emp_mm2.focus()
        return(1)
    }
    if (document.workflow1.Emp_yy2.value=="")
    {
        alert("Year Should not be Empty");
        document.workflow1.Emp_yy2.focus()
        return(1)
    }

    if (document.workflow1.User_id.value=="")
    {
        alert("User id Should not be Empty");
        document.workflow1.User_id.focus()
        return(1)
    }
    if (document.workflow1.Emp_pass.value=="")
    {
        alert("Password Should not be Empty");
        document.workflow1.Emp_pass.focus()
        return(1)
    }
}
</script>
<form name="workflow1">
<form method="post" action="regis.jsp">

<body bgcolor=pink text=green alink=orange vlink=black>

<b>

<center><font face="IMPACT"><h2><i><b><u> </u></b></i></h2></font></center>
<center>
<center>Welcome to Amrita Incorporations!!!! </center><font size=6 color=red> REGISTR
ATION SCREEN
</font></center>
<center></center>
```



```
<center><input type=submit value="SUBMIT" name=b1 OnClick="chktxt();"></center>
<font color=yellow><center><a href="workflow2.html">Sign Up!!</a></center></font>
</form>
</body>
</html>
```

```
/* REGISTRATION SCREEN */
```

```
<html>
<head>
<title> Registration Screen</title></head>
<body bgcolor=green text=yellow>



<center><h1> REGISTRATION FORM </h1></center>

<center></center>
<br><br><br>
<%@ page language="java" import ="java.sql.*" %>

<%
    Connection conn =null;

    String empname=request.getParameter("Emp_name");

    int eno= Integer.parseInt(request.getParameter("empno"));

    String usid=request.getParameter("Userid");

    String pass=request.getParameter("Emppass");

    try
    {
        Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
        conn = DriverManager.getConnection("jdbc:odbc:work1");
        Statement stmt = conn.createStatement();

        int res=stmt.executeUpdate("insert into Emp_mas(Emp_no,Emp_name,User_id,Emp_p
ass)
values("+eno+", '"+empname+"', '"+usid+"', '"+pass+"'");

        if(res==1)
        {
            out.println("<center><b><h3><font color=lavender>Your number is succes
sfully
registered!!</font></h3></b></i></center>");
        }
    }

```

```
else
{
    out.println("<center><b><h1><font color=lavender>Registration Failed
!!</font></h3></b></i></center>");
}
```

```
    stmt.close();
    conn.close();
}
catch(SQLException sqle)
{
    //out.println("Sql Error : "+ sqle);
}
```

```
%>
<center><h1><font color="red" face="monotype corsiva"><a href="workflow2.html">Click h
ere to
continue!!!</a></font></h2></center>
<center><h1><font color="red" face="monotype corsiva"><a href="workflow1.1.jsp">Sign b
ack to register
employees</a></font></h1></center>
</body>
</html>
```

```

<html>
<head>
<title>workflow2</title>
</head>
<script language="JavaScript" >
function clea()
{

    document.workflow2.User_id.value=""
    document.workflow2.Emp_pass.value=""

}

function chktxt()
{
if(f)!=1)
{
    document.workflow2.method="post"
    document.workflow2.action="Auth2.jsp"
    document.workflow2.submit()
}
}
function f()
{
    if (document.workflow2.User_id.value=="")
    {
        alert("Login name Should not be Empty");
        document.workflow2.User_id.focus()
        return(1)
    }
    if (document.workflow2.Emp_pass.value=="")
    {
        alert("Employee Password Should not be Empty");
        document.workflow2.Emp_pass.focus()
        return(1)
    }
}
</script>
<form name="workflow2">

<form method="post" action="Auth2.jsp">

<body background="nans\clouds.jpg" text=green alink=orange vlink=black>
<br><br>

```

```
<center><font face="IMPACT"><h2><i><b><u> </u></b></i></h2></font></center>
<center>

    <font size=4 color="green"> Please Enter the following information: </font></c
enter>

<br>

<center><font color=red><h1><b> Welcome To Amrita.net </h1></b></font></center>
<center></center>
<br>
<br>
<center>
<table bgcolor=cyan cellspacing=5 cellpadding=5>
<tr>
<td><b>User name </b></td><td><b>
<input type=text name="User_id" size="20" maxlength="6"></b></td>
</tr>
<tr>
<td><b>Password </b></td><td><b>
<input type=password name="Emp_pass" size="20" maxlength="6"></b></td>
</tr>
</table>
</center>
<center><h2><input type=submit value="submit" name=b1 OnClick="chktxt();"></h2></cente
r>

</form>
</body>
</html>
```

```
/* LOGIN PAGE */
```

```
<html>
<body background="nans\Citrus Punch Bkgrd.gif" text=green link=magenta>


<h1><center><font color=green face=tahoma> Welcome </font></center></h1>
<center></center>
<br><br>
<%
String id=(String)session.getValue("eid");
String eid=(String)session.getValue("emid");

%>
<br><br>
<center><h3><a href="inbox.jsp">Check mails</a></h3></center><br>
<center><h3><a href="workflow3.html">Screens proforma</a></h3></center><br>
<p><br><br>
</p>
</body>
</html>
```

CODING & TESTING

Coding standards

- ✚ The project entitled " WORKFLOW AUTOMATION " is developed using HTML & JSP tags.
- ✚ The coding part is very simple if the programmer is well versed in web based concepts.
- ✚ The coding consists of 2 stages
- ✚ Client Script is developed using HTML tags & is mainly used to design the web page.(forms)
- ✚ Server Script is designed using JSP/SERVLETS tags. Here JSP acts as a network connectivity .
- ✚ To execute a JSP page a web server is needed called the TOMCAT web server.

Testing

Testing is one of the most important phase in software development. It is actually the final phase in software development. It is mainly used to detect the errors in the software. There are various levels of testing available. They are as follows.

- Unit testing
- Integration testing
- System testing
- Acceptance testing &
- Validation testing

Among all these the fifth testing namely validation testing is performed in my project. Validation testing is mainly done in input forms. It checks whether all the entries are properly entered & if not it displays some message in the dialog box. There are various levels of validation testing & the following are the validation testing performed in my project.

- Field level validation
- Date field validation
- Textbox validation

→ Field level validation is done in order to check whether all the fields available in the form is properly entered.

- Date validation is done to check the Date of birth & Date of joining fields. (i.e; if doj is greater than dob it Prompts an error message.)
- Textbox validation is done mainly to maintain some limit in the input entries.



CONCLUSION



CONCLUSION

Thus the project entitled "WORK SCHEDULE" is successfully completed by using HTML as its front-end, JSP/SERVLETS as a network connectivity & MS-Access at its backend. This project has been successfully enhanced through intranet mailing system. By using web concepts like e-mail the time taken to submit a leave form is also very less & we can immediately get the reply from the branch manager. So intranet mailing system plays a vital role in this project & by using this the time taken to send & receive messages within an organization is also very much reduced.

Scope for future enhancement

The most important modification is that we can enhance Wireless Application Protocol facility.(i.e; send messages through mobile)

SAMPLE SCREENS

AMERTA INDUSTRIAL INC.

work hard right from the base,

Welcome to Amrita Incorporations!!!!

REGISTRATION SCREEN



Employee no	<input type="text" value="10"/>
Employee name	<input type="text" value="vivek"/>
User id	<input type="text" value="am10"/>
Password	<input type="password" value="●●●●"/>

SUBMIT

REGISTRATION FORM

Your number is successfully registered!!

Please Enter the following information:

Welcome To Amrita.net



am10	••••
------	------

submit

Welcome



Check mails

Screens profoma

Employee Maintenance



[View!!!](#)

[Add!!!](#)

[Modify!!!](#)

[<<< SIGN BACK <<<](#)

EMPLOYEE DETAILS

10	vivek	Vivek	Iyer	an10	sales officer
----	-------	-------	------	------	---------------

Leave Apply Form

Leave Type

Casual Leave

Employee no	10	Month	Jan	Year	2003
From	Date 18	Month	Jan	Year	2003
To	Date 19	Month	Jan	Year	2003
Leave Days	1				
Reason	function				
Branch code	01				
Leave address	coimbatore				

SUBMIT

Apply now and make your dreams come true!

LEAVE APPLY FORM

Screens Proforma-Admin

Requisition Form

Personnel Management

--

REQUISITION DETAILS



10

DISP REODET

REQUISITION DETAILS

10/12/2005

10/12/2005

ACCEPT

REJECT

Apply now and make your dreams come true!

REQUISITION DETAILS

sign back!

Inbox

COMPOSE

Addresses

Folders

Settings

INTRANET MAILING SYSTEM-COMPOSE



Mail id	Autonumber
From id	Admin
User id	am10
Subject	am10
Message	Leave is completed

send

clear

Your Mails Are Here

Welcome am12 Have a nice day

<input type="checkbox"/>	56	Admin reply	Thu Mar 20 20:33:16
--------------------------	----	-----------------------------	---------------------

Delete Selected Mails

INBOX

Compose

Addresses

Folders

Settings

INBOX MAILS

From: Admin

Subject: reply

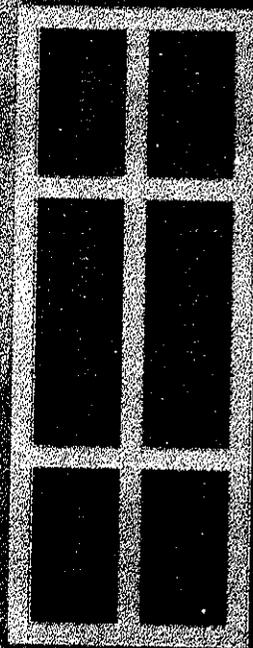
Message: sanctioned

LEAVE DETAILS

10

VIEW LEADET

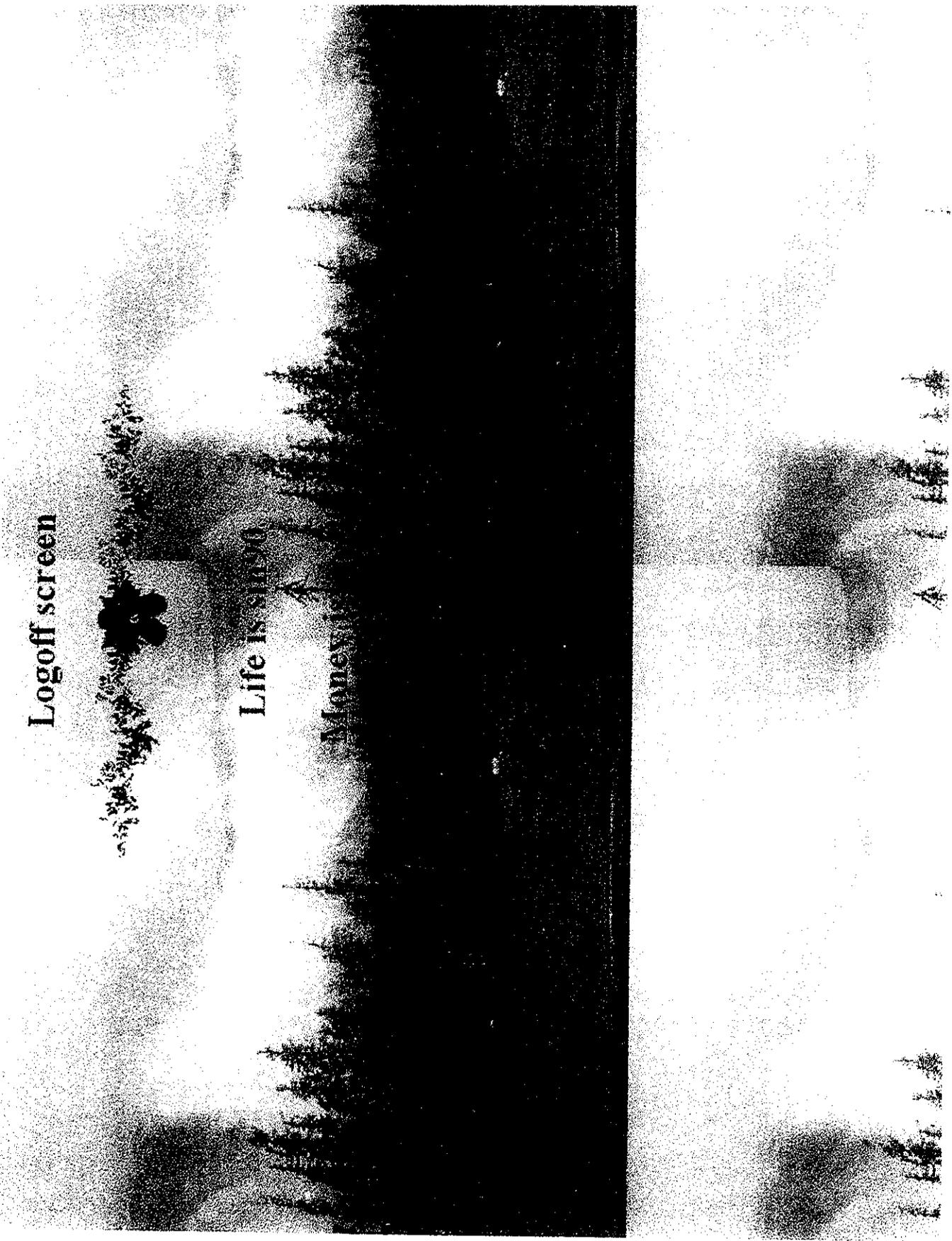
LEAVE DETAILS



Logoff screen

Life is short

Money is





SAMPLE REPORTS



Employee Maintenance Report



10	vivek	sales	12	jan	2000	7- b.K.K.pudur,	M.B.A	male	am10	sales officer
----	-------	-------	----	-----	------	--------------------	-------	------	------	------------------

Bibliography

<u>Book name</u>	<u>Author</u>	<u>Publishers</u>	<u>Year & Edition</u>
→ JSP1.1 (Professional JSP)	Karl Avedal, Danny Ayers, Ray Haynes...	WROX publications	4 th Edition March 2001
→ Complete Reference(Java)	Herbert Schildt	Tata Mcgraw Hill	4 th Edition, 2001
→ Software engineering concepts	Richard Fairley	Tata Mcgraw Hill	4 th Edition , 1988
→ HTML applications	Santi kasman & Eugene	Informatics Publications	4 th Edition, 2001

Summary of terms

Some of the important terms used in the project are as follows.

✦ Client :

On the internet, a client is a computer software that speaks the language of the server with which it is communicating. A World Wide Web is a client that communicates with a server using the language of the web called HTTP.[Hyper Text Transmission Protocol].

✦ Server :

Server is a one which provides services to the client's requests.i.e; it provides response to the client's request.

✦ Intranet :

Intranet is a mailing system which helps the employees to communicate with each other within a concern.

✦ Network :

Two or more computers linked together either locally by cable or remotely by communication media for the purpose of sharing of resources is called a network.

✦ Browser :

Client software that is used to view text & graphics (as opposed to text only) presented on the world wide web. Bit (Binary digit) Binary, or Base-2 in arithmetic terms, is the most basic structure used in all digital computers. A bit represents either a one or zero, and when grouped together, can be interpreted as alpha numeric characters

,arithmetic numbers, picture elements in graphics, switch states(on/off), computer program instructions,etc.. Bits are transmitted over the internet via communications circuits at varying rates of speed called Baud rates.

✦ Host :

In every configuration where one computer communicates with another, i.e; the internet, a local area network (LAN),etc.. one of the systems acts as the host while others are clients -often referred to as a client/server configuration .The host controls the information flow and most often contains the information to be served, such as web pages, news groups, E-mail,etc..

✦ URL :[Uniform Resource Locator]

A standard way of specifying the location and name of information resources anywhere on the internet.A URL is entered into a web browser to tell the Internet that we wan to view that particular website.

✦ Upload :

The process of sending a file to a remote site is called uploading.

✦ Home page :

Information on the world wide web is organized and presented in a format called pages. Each web site has a home page that consists of an indeterminate number of computer screens. Information is presented in the form of text, graphics, audio, video, animations, etc. embedded within the screens.pages arec developed by individuals, business, universities...and are created with a form of computer programming language called HTML.

✚ Web site :

Web site is a collection of web pages.

✚ Web page :

A web page is nothing but the one which gives us information about a particular web site.

✚ HTTP :(Hypertext transmission protocol)

A protocol is a language that computers use to communicate with one another across a network and is transparent to the user. HTTP is the protocol of the World Wide Web and requires software at the Internet Server and the user site(Client) requesting information on the web.

✚ Domain name:

Each site on the internet is associated with a unique Domain name. Individuals, business, Universities.. can apply for a domain name to an organization called interNIC, the only appended to domain names it permit internet users to develop a presence within a domain.

✚ World wide web :

There are many ways to communicate and many forms of data accessible on the internet. The web is a form developed recently for presenting and retrieving data on the internet in formats other than simple text.

✚ Database :

A database is a collection of related information.