CORPORATE INFORMATION SYSTEM

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Bonafide Certificate

Certified that this project report titled **Corporate Information System** is the bonafide work of **Mr. Sridhar.P, (Reg. No. 71204621053)** 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.

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. Sridhar.P, (Reg. No. 71204621053),** MCA- Final Year, **Kumaraguru College of Technology, Coimbatore,** has successfully completed project titled **"CORPORATE INFORMATION SYSTEM".** The duration of the project is from January 2007 to June 2007. His performance during the Project period is found to be good.

With warm regards,
For INVICTUS Technology Solutions (P) LTD.,

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Officer-H.R.D

ABSTRACT

The project **"Corporate Information System"** (CIS) provides computerized way to manipulate the information carried out in corporate office. This system maintains structured database to transact information in an efficient manner. Corporate Information System provides user friendly interface where user interact with system in an uncomplicated approach.

This project composed of information about Administration, HR role, Employee details, Client details, Production, Sales & Marketing, Search engine. These modules integrates all the departments of the corporate and the reports of each department are updated and posted on daily basis for the review of the management through internet.

The CIS software is developed using ASP.NET Technology and strictly adheres with 3Tire Architecture strategy. This web application provides services for valid customers to request for products, automate request processing and satisfying the client's needs through online. This application is one of most secure applications. Further this project also provides the facility for the management and the department authorities to communicate each other.

The main objective of this project is to promote business using the existing technologies .The Automation of the corporate helps in the development of the organization in a technical manner. To maintain the activates performed in each department are updated for review to the management through online, it also reduce the waiting time for collecting the details in various branches and generate critical reports to the management for Immediate decision making in the development of the organization.

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CHAPTER 1

INTRODUCTION

1.1 SYSTEM OVERVIEW

The Project titled "**Corporate Information system**" is web based application that manages complete operations of the Corporate and this project integrates all the departments of the Corporate and the reports of each department are updated and posted on daily basis for the review the management through internet. Further, this system also provides the facility for the management and the department authorities to communicate with each other.

The Administration Module deals with creation of new user login and providing access permissions depending on their designation of the users (HR, employee, clients), The Administrator of the systems also to updating Company terms , Policies and to generate the report of the session based on the historical data, also responsible for sending circular to the employees of the organization.

The HR module deals with maintaining the information about the staffs like personnel management, skill sets of the employees, shift scheduling for the employees to perform their tasks, salary details with overtime calculation based on their in time and out time of the employees, incentives & allowances, appraisals provided for the employee, granting permissions for leave as per the user leave request, providing responding to the clients based on their requirements, transferring the employee to the various departments of the corporate office.

The employee can enter their details about their personal information's, passport details, and educational qualifications etc, after getting permission from the administrator and also the employee can apply (or) cancel for leave in the leave form. The Leave can be applied through the leave form to his senior or Admin. The employee can view their leave available, noof leave taken before,

Holiday List, in the leave form. They can also view the details about the project they involved, course of training, shift schedule to them and salary details.

The new Clients can register and get their login and password. After getting permission from Administrator, the client can enter their requirements need for their project, i.e. noof employees, cost. Requirements must be enter by the clients in their own fields, after getting possible feedback from the organization they sign agreement with the organization for their project. They can also view the reports of the employee details, profit or loss, time and cost spent for their Projects.

The production module deals with maintaining the information about the project details with client information ,time period for the completion of the project, under which platform the project is developed ,agreement details and the information's about the employees, team supervisor and location who involved in that project.

The sales & marketing module maintains the information about the vendors and the order placed by the clients to the vendor, advertisement details for recruitment, special offering for projects in the various Medias and it also maintains the information about the invoice details to the clients

This Searching Engine module which is common to all the users to view the information's like leave ledger, employee details, client's details, certificate holders, telephone directory, holiday list, vacancy positions, certificate details etc, can be searched by entering the keyword.

The CIS integrates all the subsystems and the system provides utility for maintaining customer relationship with producers. The main objective of this project is to promote business using the existing technologies and to develop efficient and effective data evaluation procedures & sequence for Customer relationship with the producers.

1.2 COMPANY PROFILE

Invictus Technology Solutions [p] Ltd, has been established by a group of professionals and technocrats with decades of experience in software development, project management, and general management with a group of young, energetic, qualified professionals under the supervision and guidance of an experienced management team power the company's activities.

Invictus Technology is Web-based & Software Development Service Company providing custom technology solutions to enterprises worldwide, combining proven expertise in technology, and an understanding of emerging business domains, that includes e-business solutions, client server applications, web- applications development, and outsourcing solutions. We develop innovative and creative products, services and concepts providing total information and communication solutions.

Our products have resulted in technology-intensive transformations that have met the most stringent of international quality standards. Our experience of over four years in Software development and training for some of the world's leading organizations gives us the unmatched edge that clients need.

Mission

To establish technology partnerships with end users and OEM organizations on a global basis, to deliver the highest quality and most cost-effective software engineering solutions for the emerging network-centric world.

CHAPTER 2

SYSTEM STUDY AND ANALYSIS

2.1 PROBLEM STATEMENT

The centralization of corporate aims to improve a company's operations and reduce costs, while providing a standardized, streamlined, uniform service for clients, making this approach ideal for large companies with extensive customer support needs. To accommodate for such a large customer base, large warehouses are often converted to office space to host all corporate branch operations under one roof.

The corporate staff has to manually enter data's into work sheets and perform various operations and finally submit a copy of the reports generated to the management. The tasks involved in the generation of these reports are repetitive. Often, due to the repetitive nature of the work and the tedious process involved, errors creep into these reports which lead to inconsistent information being submitted to the management. Inconsistent reports lead to less full proof decisions being made to improve the quality of product being provided to clients.

The Project Allotments or the respective documentation is maintained manually in paper, some of the data's are only computerized. Also, the project development is fully based on the client's requirements which are shared among all the departments of the corporate. The data's are not shared systematically. The data sharing is done manually so the information is quite difficult to obtain in case these files are misplaced.

The corporate employee's bio-data is currently filed in paper documents and there are chances that paper are lost or misplaced. This could affect the staff concerned during the appraisal periods. The corporate requires a system which could help ease out the problems faced in each of the scenarios mentioned above.

2.2 EXISTING SYSTEM

The existing of the Corporate Information system all the operations were done by a LAN network application running in Visual Basic 6.0. There was no separate system executing for maintaining the operations carried out in the corporate. The LAN application was also working as separate modules and the integration were not done. Which is quite tedious and more difficulties are arise in the project management system.

2.2.1 Drawbacks of existing system

The drawbacks of the existing systems can be summarized as below:

- Access and retrieval of relevant information requires considerable overhead
- Generation of reports is difficult, since various records are to be verified
- Data's are not shared systematically
- Duplication of work
- Message passing is not possible
- Lack of Quality standards
- Lack of technique to make progress visible

2.3 Proposed System

The proposed system is developed as a web application for maintaining client's relationship to the producers in governing before sales and after sales operation. The components developed for the system are fully integrated to each other and the linkages are maintained with consistency across the total project.

The system should provide a confirmed security. Exiting system work occupies unnecessary memory space. Thus the proposed system should overcome these demerits.

The proposed system governs the client's request, for the company, allocating the projects to the employees, identity the status of the project and information provided to the administrator to generate reports. In Typical situation can be easily visualized with the help of attractive reports that helps the entire department to take decisions quickly and meaningfully. The clients, employee those who involved in their project can view their project status later through login pages provided to them.

2.3.1 Advantages of proposed system

The expected benefits of the Proposed System are as follows:

- Strictly adheres with 3Tire Architecture strategy
- The system maintains structured database to transact information in an efficient manner
- Reduces the consumption in the recording of each transaction
- Reduces the time consumption in the preparation of various reports
- Enables quick references of necessary details
- Immediate decision making
- The screen layouts are user friendly with online messages
- The company can receive up-to-date information
- Clients can view the status of the request made by him
- Reduce duplication of works

2.4 Feasibility Analysis

A feasibility study is conducted to select the best system that meets performance requirements. This entity of identification description, an evaluation of candidate systems, and the selection of the best system for the job.

- Economic Feasibility.
- Technical Feasibility.
- Behavioral Feasibility.

2.4.1 Technical Feasibility

Technical analysis centers on the existing computer system (hardware, software etc.) and to what extent it can support the proposed addition. This involves financial considerations to accommodate technical enhancement. If the budget is a serious constraint, then the project is judged not feasible.

2.4.2 Operational Feasibility

An estimate should be made of how strong a reaction the user staff is likely to have toward the development of a computerized system .It is common knowledge the computer installations have something to do with turnover, transfers and changes in employee job status. Therefore it is understandable that the introduction of a candidate system requires special effort to educate, sell, and train the staff on new ways of conducting business.

2.4.3 Economic Feasibility

Economic analysis is the most frequently used method for evaluating the effectiveness of the candidate system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that benefits outweigh costs, and then the decision is made to design and implement the system. Otherwise, further justification or alterations in the proposed system will have to be made if it is to have a chance of being approved.

2.5 Users of the System

The users of the proposed system have been categorized as below and each of the user categories will have a set of rights which manage their use of the proposed system.

- Administrator
- General Manager
- HR
- Employees
- Clients

The Administrator of the system is responsible for creation of new user login and granting access permission to users depending on their designation like HR, employee & clients. The Administrator of the systems also to updating Company terms, Policies and to generate the report of the session based on the historical data, also responsible for sending circular to the employees of the organization.

The General manager is responsible for taking higher level decisions like signing agreements with the clients, providing rights to the administrator to allow new users and he will reviewing the reports generated by the various departments for the development of the organization.

This HR of the system maintains the information about the staffs like personnel management, skill sets of the employee, shift scheduling for the employees to perform their tasks, salary details with overtime calculation based on their in time and out time of the employee, incentives & allowances, appraisals provided for the employee, granting permissions for leave as per the user leave request, transferring the employee to the various departments of the corporate office depending upon the vacancy position, recruitment & training new employees, responding to the clients based on their requirements for the development of projects.

The employee can enter their details about their personal information, passport details, and educational qualification etc, after getting permission from the administrator and also the employee can apply (or) cancel for leave in the leave form. In This Leave Form Modules, the Leave can be applied through the leave form to his Senior or Admin, leave application, Leave Regularization, Holiday List, and Leave Calculation while applying leave to HR. the employee can also view the information about the project they involved ,course of training ,shift schedule to them and salary details .

The new Clients can register and get their login and password. After Getting Permission from Admin, the client can enter their requirements need for their project, i.e. noof employees, cost. Requirement must be Enter by the clients in their Own Fields, after getting possible feedback from the organization they sign agreement with the organization for their project. They can also see the Reports of the Employee Information, Profit or Loss of his Projects, time and cost spent for the project.

CHAPTER 3

DEVELOPMENT ENVIRONMENT

3.1 HARDWARE REQUIREMENTS

The hardware support required for deploying the application

Server Configuration

Processor	:	Pentium 4 or above / Athlon Processor
RAM	:	Minimum 512 MB
Hard Disk	:	20GB or more

Client Configuration

Processor	:	Pentium 3/4 / Athlon Processor
RAM	:	Minimum 256 MB

3.2 SOFTWARE REQUIREMENTS

The software support required for deployment is

Operating System	:	Windows XP SP2
Web Server	:	Internet Information Services
Server Script	:	ASP.NET
Client Script	:	VB Script
Database	:	Microsoft SQL Server 2000
Platform	:	.NET Framework
Web Browser	:	IE 5.5

3.3 Programming Environment

3.3.1 ASP.NET

ASP.NET is more than the next version of Active Server Pages (ASP); it is a unified Web development platform that provides the services necessary for developers to build enterprise-class Web applications. While ASP.NET is largely syntax compatible with ASP, it also provides a new programming model and infrastructure that enables a powerful new class of applications. You can feel free to augment your existing ASP applications by incrementally adding ASP.NET functionality to them.

ASP.NET is a compiled .NET-based environment; you can author applications in any .NET compatible language, including Visual Basic, C# and Jscript.NET. Additionally, the entire .NET Framework platform is available to any ASP.NET application.

Web Forms allows us to build powerful forms-based Web pages. When building these pages, we can use Web Forms controls to create common User Interface elements and program them for common tasks. These controls allow us to rapidly build up a Web Form out of reusable built-in or custom components, simplifying the code of a page.

A Web service is a way to access server functionality remotely. Using services, business can expose programmatic interfaces to their data or business logic, which in turn can be obtained and manipulated by client and server applications. Web services enable the exchange of data in client-server or server-server scenarios, using standards like HTTP and XML messaging to move data across firewalls. Web services are not tied to a particular component technology or object-calling convention. As a result, programs written in any language, using any component model, and running on any operating system can access Web services.

ASP.NET configuration settings are stored in XML-based files, which are human readable and writable. Each of your applications can have a distinct configuration file and you can extend the configuration scheme to suit your requirements. ASP.NET provides easy-to-use Application and Session state facilities that are familiar to ASP developers and are readily compatible with all other .NET Framework APIs. One of the greatest benefits of ASP.NET is that it reduces the amount of coding we will need to write in an application.

HTTP Runtime Support accessing databases from ASP.NET applications is an often-used technique for displaying data to Web site visitors. ASP.NET makes it easier than ever to access databases for this purpose - and provides for managing the data in the database.

ASP.NET provides a simple framework that enables Web developers to write logic that runs at the application level. Developers can write this code in either the global. Sax text files or in a compiled class deployed as an assembly. This logic can include application-level events, but developers can easily extend this framework to suit the needs of their Web application. ASP application code, written in the global.asa file, is completely supported in ASP.NET. You can simply rename global.asa to global.

ASP.NET offers complete syntax and processing compatibility with ASP applications. Developers simply need to change file extensions from .asp to .asp to migrate their files to the ASP.NET framework. They can also easily add ASP.NET functionality to their applications with ease, sometimes by simply adding just a few lines of code to their ASP files.

ASP .NET vs. ASP

- ASP .NET has better language support, a large set of new controls and XML based components, and better user authentication.
- ASP .NET provides increased performance by running compiled code.
- ASP .NET code is not fully backward compatible with ASP.

New in ASP .NET

- Better language support
- Programmable controls
- Event-driven programming
- XML-based components
- User authentication, with accounts and roles
- Higher scalability
- Increased performance - Compiled code
- Easier configuration and deployment
- Not fully ASP compatible

Language Support

- ASP .NET uses the new ADO .NET.
- ASP .NET supports full Visual Basic, not VBScript.
- ASP .NET supports C# (C sharp) and C++.
- ASP .NET supports JScript as before.

Web browser

A web application consists of a set of web pages that are generated in response to user requests. The Internet has many different types of web applications, such as search engines, online stores, auctions, news sites, discussion groups, games, and so on.

Web applications are a type of client/server application. In a client/server application, a user at a client computer accesses an application at a server computer. In a web application, the client and server computers are connected via the Internet.

In a web application, the user works with a web browser at the client computer. The web browser provides the user interface for the application. The most popular web browser is Microsoft's Internet Explorer. However, other web browsers such as Netscape Navigator may also be used.

From the users' point of view, the web consists of a vast worldwide collection of documents or Web Pages often just called Pages for short. Each page may contain links to other pages anywhere in the world. Users can follow a link by clicking on it which then takes them to the page pointed to. This process can be repeated indefinitely.

Pages are viewed with a program called Browser of which Internet Explorer and Netscape Navigator are two popular one. The browser fetches the page requested, interprets the text and formatting commands on it and displays the page, properly formatted on the screen.

Web server

The application runs on the server computer under the control of web server software. For ASP.NET web applications, the server must run Microsoft's web server, called Internet Information Services, or IIS. The web server must also have Microsoft's .NET Framework installed. Web applications built with other technologies (such as JSP or Cold Fusion) often use Apache rather than IIS and don't need the .NET Framework.

Modern Web Servers do more than just accept filenames and return files. In fact, the actual processing of each request can get quite complicated. For this reason, in many servers each processing module performs a series of steps.

The steps followed are:

- Resolve the name of the web page requested.
- Authenticate the client
- Perform access control on the client.
- Perform access control on the web page.
- Check the cache.
- Fetch the requested page from disk.
- Determine the MIME type to include in the response.
- Take care of miscellaneous odds and ends.
- Return the reply to client.
- Make an entry in the server log.

3.3.2 Microsoft SQL Server

Microsoft SQL Server is a relational database management system (RDBMS) produced by Microsoft. Its primary query language is Transact-SQL, an implementation of the ANSI/ISO standard Structured Query Language (SQL) used by both Microsoft and Sybase. SQL Server is commonly used by businesses for small- to medium-sized databases, but the past five years have seen greater adoption of the product for larger enterprise databases.

Microsoft SQL Server uses a variant of SQL called T-SQL, or Transact-SQL, an implementation of SQL-92 (the ISO standard for SQL, certified in 1992) with many extensions. T-SQL mainly adds additional syntax for use in stored procedures, and affects the syntax of transaction support. (Note that SQL standards require Atomic, Consistent, Isolated, Durable or "ACID" transactions.) Microsoft SQL Server and Sybase/ASE both communicate over networks using an application-level protocol called Tabular Data Stream (TDS). The TDS protocol has also been implemented by the FreeTDS project in order to allow more kinds of client applications to communicate with Microsoft SQL Server and Sybase databases.

Microsoft SQL Server also supports Open Database Connectivity (ODBC). The latest release SQL Server 2005 also supports the ability to deliver client connectivity via the Web Services SOAP protocol. This allows non-Windows Clients to communicate cross platform with SQL Server. Microsoft has also released a certified JDBC driver to let Java Applications like BEA and IBM Web Sphere communicate with Microsoft SQL Server 2000 and 2005.

Features of SQL Server

- Simplify the integration of back-end systems and data transfer.
- Derive additional value from data using sophisticated data mining tools.
- Obtain results quickly using Microsoft English Query, which allows users to pose questions in English instead of using Structured Query Language (SQL) or Multidimensional Expressions (MDX).
- Create business-to-business (B2B) and business-to-consumer (B2C) Web sites, analyze Web site trends, and implement personalization automatically using Microsoft Commerce Server 2000 and SQL Server 2000.
- Improve productivity with T-SQL enhancements.
- Take advantage of complete, end-to-end analysis capabilities-including data mining-with the integrated SQL Server 2000 extensible Analysis Services.
- Deliver robust, scalable database applications rapidly using the improved SQL Server 2000 development tools.
- Take full advantage of your hardware resources by running multiple, isolated applications on a single computer using SQL Server 2000 multi-instance support.

CHAPTER 4

SYSTEM DESIGN AND DEVELOPMENT

4.1 ELEMENTS OF DESIGN

System Design is the most creative and challenging phase in the development of a software system. Design implies to a description of the final system and the process by which it is developed. The first step is to determine what input data is needed for the system and then to design a database that will meet the requirements of the proposed system. The next step is to determine what outputs are needed from the system and the format of the output to be produced.

During the design of the proposed system some areas where attention is required are

- What are the inputs required and the outputs produced?
- How should the data be organized?
- What will be the processes involved in the system?
- How should the screen look?

The steps carried out in the design phase are as follows

- Modular Design
- Input Design
- Output Design
- Database Design

4.1.1 Modular Design

It is always difficult for any System Development team to grasp a system without breaking it into several smaller systems. These smaller systems will be a part of the original system yet they will be independent in the sense that they will incorporate within them the major functionalities of the proposed system.

A software system is always divided into several subsystems which make it easier to develop and perform tests on the whole system. The subsystems are known as the modules and the process of dividing an entire system into subsystems is known as Decomposition.

The modules identified for the proposed Corporate Information System are as follows

- Administration
- HR role
- Employee details
- Client details
- Production
- Sales & Marketing
- Search engine

4.1.1.1 Administrator

The Administration Module deals with creation of new user login and providing access permissions depending on their designation of the users (HR, General manager, employee, clients), The general manage grant rights to the administrator to create new user id by forwarding the new recruiters list to the administrator .The Administrator of the systems also to updating Company terms, Policies and sending circular to the employees of the organization.

The administrator also responsible for generating the report of the session based on the historical data, the main purpose of this report is it is better always having a copy for future reference.

4.1.1.2 HR Role

The HR module deals with maintaining the information about the staffs like personnel management, skill sets of the employees, shift scheduling for the employees to perform their tasks, salary details with overtime calculation based on their in time and out time of the employees, incentives & allowances, appraisals provided for the employee, granting permissions for leave as per the user leave request, providing responding to the clients based on their requirements, transferring the employee to the various departments of the corporate office.

4.1.1.3 Employee Details

The employee can enter their details about their personal information's, passport details, and educational qualifications etc, after getting permission from the administrator and also the employee can apply (or) cancel for leave in the leave form. The Leave can be applied through the leave form to his Senior or Admin, leave application, Leave Regularization, Holiday List, and Leave Calculation, while applying leave to HR. the employee can also view the information about the project they involved, course of training, shift schedule to them and salary details.

4.1.1.4 Client details

The new Clients can register and get their login and password. After Getting Permission from Admin, the client can enter their requirements need for their project, i.e. noof employees, cost. Requirement must be Enter by the clients in their Own Fields, after getting possible feedback from the organization they sign agreement with the organization for their project. They can also see the Reports of

the Employee Information, Profit or Loss of his Projects, time and cost spent for the project.

4.1.1.5 Production

The production module deals with maintaining the information about the project details with client information ,time period for the completion of the project, under which platform the project is developed ,agreement details and the information's about the employees, team supervisor and location who involved in that project.

4.1.1.6 Marketing and Sales

The sales & marketing module maintains the information about the vendors and the order placed by the clients to the vendor, advertisement details for recruitment, special offering for projects in the various Medias and it also maintains the information about the invoice details to the clients

4.1.1.7 Search engine

This Searching Engine module which is common to all the users to view the information's like leave ledger, employee details, client's details, certificate holders, telephone directory, holiday list, vacancy positions, certificate details etc, can be searched by entering the keyword.

4.1.2 Input design

The input design is the process of converting the user-oriented inputs into computer-based format. The goal of designing input data is to make sure that the automation is easy, logical and free from errors. Input design is one of the most expensive phases of the operation of computerized system and is often the major problem of a system.

The input design requirements such as user friendliness, consistent format and interactive dialogue which provide users with timely help and correct messages are given high priority.

In the project, the code generation page is made with several easy to use options. For example, to insert a node, we need not write the entire code. Only giving the name will insert all the necessary code itself. Color separation causes easy identification of individual tokens such as tag, attribute and values.

In addition, syntax checking option is provided to check for the valid code entry. Checking often will reduce the wrong code and the input is easy now. In this software, importance is given to automation code generation system, which is an important factor in developing efficient and user-friendly software. For inputting tags tag insertion option is given.

The input forms in this project are as below

- User Login Form

  It is used by the various users of the system and the system restricts access to the data based on the type of user logged in.

- Permitting user Form

  This allows Administrator to grant access permission to the user.

- Circular Form

  This allows Administrator to sent circulars to the employees in the organization.

- Terms & policies Form

  This allows Administrator to add and edit the company terms and policies.

- HR Details Form

  This allows HR to add and to edit their details.

- Response Form

  This allows the HR to respond the clients based on their requirement specified for their projects.

- Leave Form

  This allows the HR to grant permission to take leave for the employee who applied for leave by verifying their leave ledger.

- Shift Schedule Form

  This allows HR to perform shift scheduling to the employee for the development of the project.

- Recruitment & training Form

  This allows HR to add new recruiters and their training details are forwarded to the general manager.

- Transfer Form

  This allows HR to transfer the employee based on the vacancy position in various branches of the corporate.

- Employee Details Form

  This allows employee to add and to edit their details.

- Appling leave Form

  This allows employee to requesting for leave to their higher officials.

- Client Details Form

  This allows clients to add and to edit their details.

- Client review Form

  This allows clients to requesting the HR by specifying their requirements for their project.

- Agreement Form

  This allows clients to sing agreement with the corporate if they get possible reply from the HR.

- Advertisement Form

  This allows the marketing HR to give advertisement for the corporate in the various Medias.

- Search Form

  This allows the users to search various details by specifying the keywords.

4.1.3 Output Design

Output design generally refers to the results and information that are generated by the system for many end-users. The output is the main reason for developing the system and the basis on which they evaluate the usefulness of the application.

In the project, the design view i.e., browser is the output page available. Moreover, the data can be viewed in the tabular form also. The tags present in the file will be printed and displayed separately if necessary.

As the outputs are the most important sources of information to the users, better design should improve the system's relationships with us and also will help in decision-making. Form design elaborates the way output is presented and the layout available for capturing information.

The output reports produced by this project are as follows

- Employee list

  This report contains the details about the employee's personal information.

- Clients list

  This report contains the details about the client's personal information.

- Recruitment list

  This report contains the details about the newly recruited employees for the corporate.

- Agreement Details

  This report contains the details about the agreement signed with the clients.

- Salary Details

  This report contains the salary details of the employees.

- Project Details

  This report contains the details about the project, time and cost spent for the project of the employees.

- Vacancy Details

  This report contains details about the vacancy position in various branches of the corporate.

- Certificate Details

  This report contains details about the certificate holders of the corporate in various branches.

- Holiday list

  This report contains details about the holidays specified in the corporate calendar.

4.1.4 Database Design

Database design deals with the table structure and organization. The purpose of the database is to enable easy access of information for the user. The general theme behind databases is to handle the information as an integrated one.

While designing a database, we have to make decisions regarding how best to take some system in the real world and model it in a database. This process consists of deciding which tables to create and what columns they will contain as well as the relationships between tables. A database is an integrated collection of user related data stored with minimum redundancy, serves many users/application quickly and efficiently.

A database is a collection of inter-related 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. An elegantly designed database can play a strong foundation for the whole system.

4.2 TABLE STRUCTURE

Table 4.2.1 User Login

This table is used to maintain information about the user login to the system

Field Name	Data Type	Description
Uld	Varchar(6)	Primary Key, User ID
Uname	Varchar(20)	User Name
Pwd	Varchar(10)	Password
Type	Varchar(10)	User Type

Table 4.2.2 Employee Master

This table is used to maintain information about the employees working in the company.

Field Name	Data Type	Description
Eid	Varchar(6)	Primary Key, Employee ID
Ename	Varchar(20)	Foreign Key ,Employee Name
Desig	Varchar(20)	Designation
Address	Text(50)	Employee Address
Phone	Numeric(12)	Phone Number
Mobile	Numeric(12)	Mobile Number
Email	Varchar(25)	Email ID
Qual	Varchar(20)	Qualification
Dob	Date/time	Date of birth
Doj	Date/time	Date of join
Cert	Varchar(25)	Foreign Key ,Certificate
Pass	Numeric(12)	Passport number

Table 4.2.3 Leave Application

This table is used to maintain information about the employee's leave details

Field Name	Data Type	Description
Eid	Varchar(6)	Foreign Key, Employee ID
Ename	Varchar(20)	Foreign Key ,Employee Name
Fdate	Date/time	From Date
Tdate	Date/time	To Date
Nod	Numeric(2)	Number of Days
Reason	Varchar(25)	Reason

Table 4.2.4 Employee Appraisal

This table is used to maintain information about the appraisal provided to the employees

Field Name	Data Type	Description
Eid	Varchar(6)	Foreign Key, Employee ID
Applev	Varchar(20)	Appraisal level
Inc	Numeric(4)	Inc percentage
Dpro	Varchar(50)	Designation Proposed for Employee
Rem	Varchar(20)	Remarks

Table 4.2.5 Shift Schedule

This table is used to maintain the shift schedule for the employees in a company

Field Name	Data Type	Description
Eid	Varchar(6)	Foreign Key , Employee ID
Ename	Varchar(20)	Foreign Key ,Employee Name
Uname	Varchar(20)	Unit Name
EDate	Date/time	Entry Date
EDay	Date/time	Entry Day
SNum	Numeric(3)	Shift Number
Intime	Date/time	In time
Outtime	Date/time	Out time
Loc	Varchar(20)	Location
OTime	Date/time	Over Time
St Num	Numeric(3)	Seat Number

Table 4.2.6 Invoice Table

This table is used to maintain information about the invoice details

Field Name	Data Type	Description
Invno	Numeric(4)	Invoice Number
Ono	Numeric(4)	Order Number
Vid	Numeric(4)	Vendor Id
Pid	Numeric(4)	Foreign Key ,Project Id
Amt	Numeric(6)	Total Amount
Aotpaid	Numeric(6)	Amount to be Paid
Ampaid	Numeric(6)	Amount Paid

Table 4.2.7 Employee Salary

This table is used to maintain information about the employee's salary details

Field Name	Data Type	Description
Eid	Varchar(6)	Foreign Key, Employee ID
Ename	Varchar(20)	Foreign Key ,Employee Name
Deig	Varchar(20)	Designation
Bp	Numeric(4)	Basic Pay
Gp	Numeric(4)	Gross Pay
Hra	Numeric(4)	House Rent allowance
Pf	Numeric(4)	Direct Allowance
Da	Numeric(4)	Provident Fund
Np	Numeric(6)	Net Pay

Table 4.2.8 Recruitment Table

This table is used to maintain information about the Recruitment details

Field Name	Data Type	Description
Rid	Varchar(6)	Recruitment Id
Rname	Varchar(20)	Recruiter Name
Designation	Varchar(20)	Designation
Location	Varchar(20)	Location

Table 4.2.9 Client Master

This table is used to maintain information about the client details

Field Name	Data Type	Description
Ccid	Varchar(6)	Primary Key, Client ID
Ccname	Varchar(25)	Client Name
Address	Varchar (50)	Client Address
Zip	Numeric (6)	Zipcode
City	Varchar (20)	City
State	Varchar (20)	State
Country	Varchar (20)	Country
Tel	Numeric(8)	Telephone
Mobile	Numeric(12)	Mobile Number
Fax	Numeric(12)	Fax Number
Email	Varchar(25)	Email ID
Address	Text(50)	Client Address

Table 4.2.10 Circular Table

This table is used to maintain information about the circular sent to the employee's details

Field Name	Data Type	Description
Crid	Varchar(6)	Circular Id
CDate	Date/time	Circular Date
CTime	Date/time	Circular Time
CMsg	Varchar(50)	Circular Message

Table 4.2.11 Project Table

This table is used to maintain information about the project details

Field Name	Data Type	Description
Eld	Varchar(6)	Foreign Key, Employee ID
Cid	Varchar(6)	Foreign Key ,Client ID
Pid	Varchar(6)	Foreign Key ,Project ID
PName	Varchar(20)	Foreign Key ,Project Name
Loc	Varchar(20)	Location
Dur	Numeric(4)	Duration
SDate	Date/time	Starting Date
CDate	Date/time	Completed Date
PCost	Numeric(6)	Project Cost
Noof emp	Numeric(6)	Noof Employee
Plt	Varchar(20)	Platform

Table 4.2.12 Update Table

This table is used to maintain information about the Updating of company terms and policies details

Field Name	Data Type	Description
Uid	Varchar(6)	Update Id
UDate	Date/time	Update Date
UTime	Date/time	Update Time
UMsg	Varchar(50)	Updated Message

Table 4.2.13 Agreement Table

This table is used to maintain information about agreement details

Field Name	Data Type	Description
Pid	Varchar(6)	Foreign Key ,Project Id
Cid	Varchar(6)	Foreign Key ,Client Id
Pname	Varchar(20)	Foreign Key ,Project Name
Doa	Date/time	Date of Agreement
Fdate	Date/time	From Date
Tdate	Varchar(50)	To Date
Nemp	Numeric(4)	Noof Employees
Eperiod	Numeric(4)	Extension Period
Pcost	Numeric(6)	Project Cost

Table 4.2.14 Advertisement Table

This table is used to maintain information about the advertisement details of the corporate

Field Name	Data Type	Description
Aid	Varchar(6)	Advertisement Id
Media	Varchar(20)	Advertising Media
Asize	Numeric(6))	Advertisement Size
ALetter	Varchar(20)	Advertisement Letter
Adate	Date/time	Advertisement Date
Aoffice	Varchar(50)	Advertisement Office
A rps	Numeric(6)	Rupees for Advertisement

4.3 DATA FLOW DIAGRAMS

Data flow diagrams are graphical representation depicting information regarding the flow of control and the transformation of data from input to output. The DFD may be used to represent the system or software at any level of abstraction. In fact, DFD can be partitioned into levels.

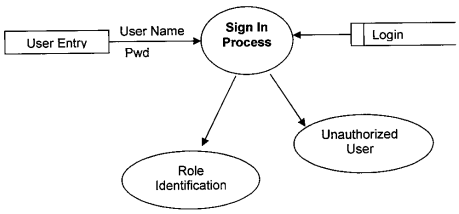


Figure 4.3.1: Sign in process DFD

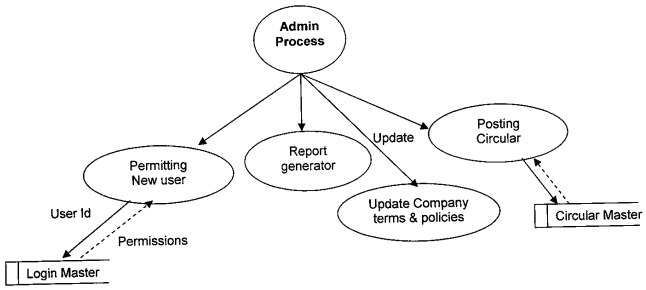


Figure 4.3.2: Admin Process Module DFD

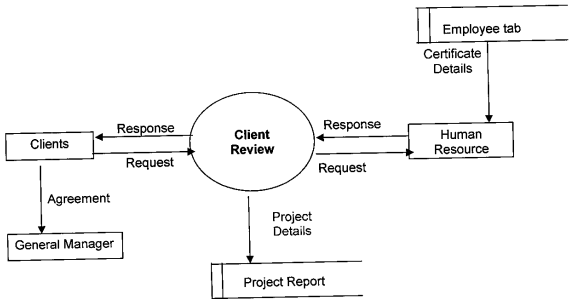


Figure 4.3.3: Client Review DFD

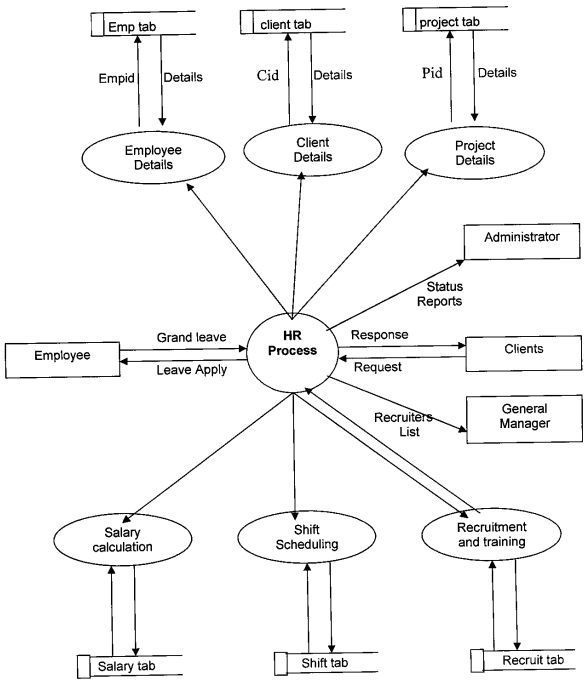


Figure 4.3.4: HR Process Module DFD

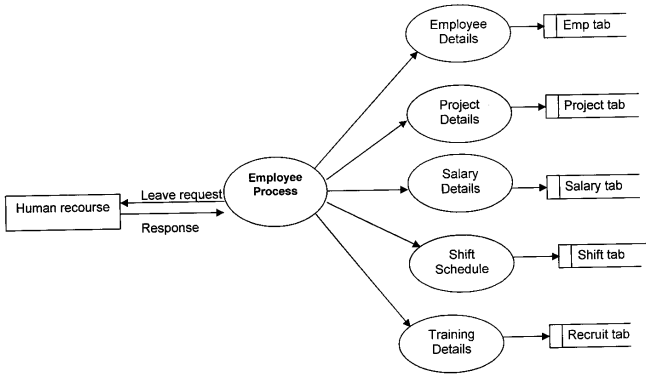


Figure 4.3.5: Employee Process Module DFD

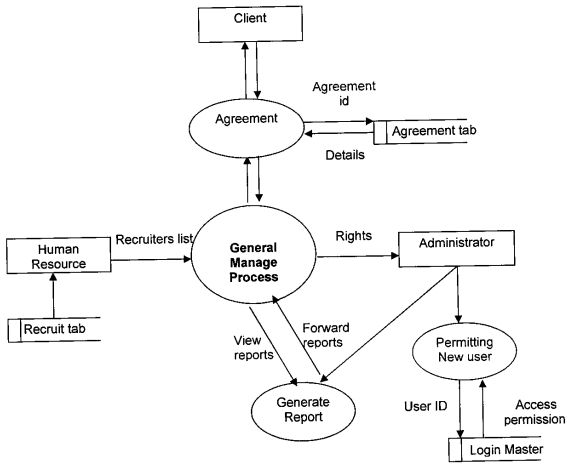


Figure 4.3.6: General Manager Process Module DFD

CHAPTER 5

IMPLEMENTATION

System Implementation is the part of the software engineering life cycle, where, the design artifacts are converted to a working application. Coding is done in this stage using an apt framework and programming language, which would solve the specific problem the best way. Once the design is coded into a working application, it has to be verified, validated and tested in detail. The tested product if successful is deployed in the user environment.

5.1 SYSTEM VERIFICATION

System Verification answers the question "Am I building the product right?" It includes the review of interim work steps and interim deliverables during a project to ensure they are acceptable. Verification also determines if the system is consistent, adheres to standards, uses reliable techniques and prudent practices, and performs the selected functions in the correct manner. In data access, it verifies whether the right data is being accessed, in terms of the right place and in the right way.

Verification is a demonstration of consistency, completeness, and correctness of the software at each stage and between each stage of the development life cycle. In CIS, verification is done during the development itself. Each database bindings are verified after binding to test whether the control is bound to the right data field.

5.2 SYSTEM VALIDATION

Validation answers the question "Am I building the right product?" This checks whether the developer is moving towards the right product, whether the development is moving towards the actual intended product that was agreed upon in the beginning. Validation also determines if the system complies with the requirements and performs functions for which it is intended and meets the

organization's goals and user needs. It is traditional and is performed at the end of the project. In data access, it checks whether we are accessing the right data, in terms of data required to satisfy the requirement.

Validation is performed after a work product is produced against established criteria ensuring that the product integrates correctly into the environment. It determines the correctness of the final software product by a development project with respect to the user needs and requirements.

Functional validation is done in the CIS to check whether each of the functions is done correctly as expected in every page. Each control in a Screen is designed to do some function. These functions are checked against the requirements stated for them.

Field level validation is done in CIS to check whether each of the fields either accepts the data as expected and do the client side validation of data entered.

The validation is done in a step by step process. First the screen is loaded with the controls. When the user moves between controls on the screen, the validation events for the control that lost the focus are fired and appropriate error messages (if any) are displayed. If the user generates a form save request, the entire form is evaluated for any validation controls that are not valid. If even one control is not valid, the form will not be submitted.

5.3 TESTING

Testing is a critical element of software quality and assurance and represents the ultimate review of specification design and coding. It is a vital activity that has to be enforced in the development of any system. This could be done in parallel during all the phases of system development. The feedback received from these tests can be used for further enhancement of the system under consideration. The testing phase conducts test using the Software

Requirement Specification as a reference and with the goal to see whether the system satisfies the specified requirements.

The testing done will differ in nature and will have different objectives at each level. The focus of all testing will be to find errors, but different type of errors are looked for at each level.

The levels of testing in this project will be:

- Unit Testing
- Integration Testing
- System Testing

5.3.1 Unit Testing

Module or Unit Testing is the process of testing all the program units that make up a system. Unit testing focuses on an individual module thus allowing one to uncover all the errors made logically and while coding in the module.

In CIS each page is tested separately as a unit. Initially the flow of control and data through that page is checked. When considering a module as a unit, the flow of data and control through the whole module is tested. The result is stored in the test plan. In a page, each control is further tested in unit testing. The process is done in all the pages of the system. Once the errors are rectified, the testing procedure is repeated with same test cases to ensure this hasn't produced new errors. Hence this is a continuous process.

The typical tests that will be carried out during unit test include:

- Data validation to check valid and invalid data entered into a text box.
- Field length check to check the maximum length of the field.
- Errors handling to check appropriate front-end validations are being carried out.
- Database validations to check the data entered in the front end is stored into appropriate table in the database.
- Test to ensure that all paths are traversed and branching takes properly.
- Verify operation outside range values.
- Verify operation at normal value range.
- Ensure that all loops are terminated successfully.
- Identify and remove abnormal termination of all loops.

5.3.2 Integration Testing

An integration test plan outlines the process and procedure to be followed for integration testing. Integration testing involves the process of testing two or more tested units that have been fully integrated. The integration testing should look for errors in the following.

- The interfaces between the tested units.
- The function that can be performed by the integrated unit.

Programs are invariably related to one another and interact in total system. Each program is tested to see whether it confirms to related program in the system. Each portion of the system is tested against the entire module with both test and live data before the entire system is ready to be implemented.

CIS followed bottom-up strategy will be followed for integration testing. This would involve integrating the bottom units with the Client requirements and test the functions. Bottom-up test assures that the lower level modules are tested before testing the higher-level modules, which invoke them. The global variables were

traced such that they hold data related to the current module. Regression testing is done after each change made into the software. This tests if the change has affected any part of CIS negatively after the change was made. The whole set of test cases need to be run again to do the regression testing.

5.3.3 System Testing

System testing is actually a serious of different tests, whose primary purpose is to fully exercise the computer-based system. It verifies the entire product after having integrated all software and hardware components, and validates it according to the original project requirement. The system testing takes into consideration the hardware, and the software. That is, CIS should be able to be run on the specified hardware for variety of cases. The CIS is tested against recovery from errors.

5.3.3.1 Security Testing

Security testing is important in system testing. The system in no way shall be accessible to unauthorized users. Testing is done to ensure that a user with respective rights can only view the various forms and reports in the CIS. Each user is applied rights module wise. The menus can be configured to roles are assigned to users dynamically based on the roles assigned to menu items as well as users. If any user tries to perform something beyond his assigned rights corresponding messages should be displayed.

5.3.3.2 Stress Testing

Stress Testing executes a system in a manner that demands resources in abnormal quantity, frequency or volume. CIS was stress tested in the lab by having Customers and employees simultaneous access to various modules in the system.

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

6.1 CONCLUSION

The system has been through all the various testing process, numerous times by developer and then by top authorities, the validation part also functions extremely well and above all proper care has been given to make the system very user friendly also the corporate information system help businesses manage their resources effectively.

Since this system will be placed in the concern, there in need for security. So entry is permitted through ID and Password, the system is gul based, user interactive. It provides facilities to maintain and manipulate data retrieve information and create reports easily, quickly and effectively and it is very useful for the top level management to review the reports and immediate decision making for the development of the organization. This system makes the process very easy, efficient and time saving since Data's are shared systematically.

This system is developed with high modularity and also a high level of compatibility is associated with it. This makes it easy to integrate with other systems. this system can be easily integrated with other compatible systems to ensure efficient and proper automation of the whole system in consideration systems to ensure effective and proper automation of the whole system in consideration.

6.2 FUTURE ENHANCEMENT

The project feature can be further enhanced with all authentication and logon information by encrypting the data when transmitted over customer and the textile web site. In addition, it is possible to configure windows 2000 server networking for further firewall security so that all data that passes between a client and server is secured properly.

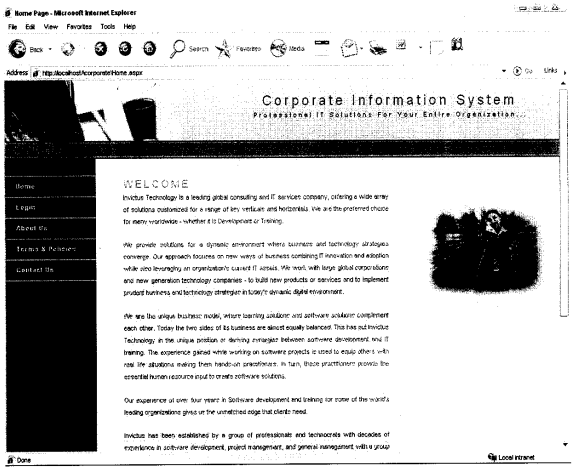
This system has been designed and developed with flexibility according to the current requirement. Based upon additional requirement modules can be added to expand the system functionality. Further reports can be generated in graphical format using graphs and charts that will assist the management to easily review the progress.

The Chat application in this system can be further enhanced by providing VOIP for voice chat operation for the users of the system to communicate among them. By this time taken by the session can be reduced. The help desk can be updated regularly by linking to the project solutions provided by the developers. The review report generated by the information provide by the customer helps to improve the performance of the corporate operations for the development of the project. The salary calculation of each session for a particular employee can be made.

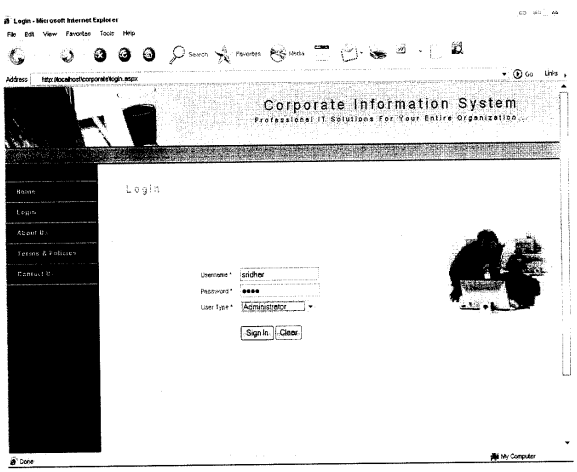
Enhancing various elements, which are not required for the current set of the business process, can further develop the project. It should be possible to check the authentication then there required by any personnel of the Company. This would help in avoiding the non-authenticated users modifying the data improperly.

APPENDICES

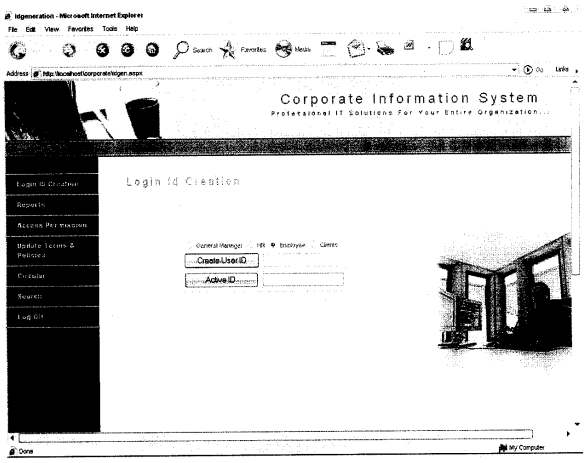
Home Page



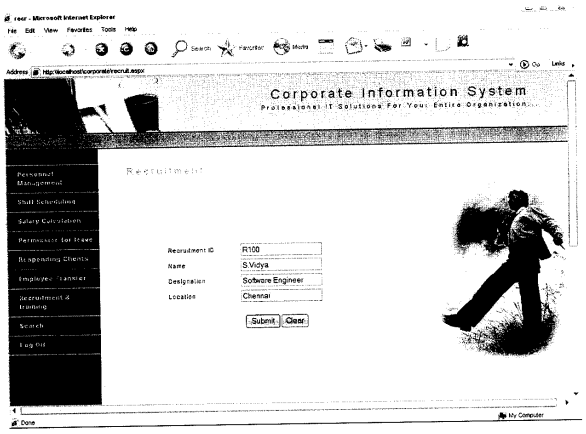
Login Form



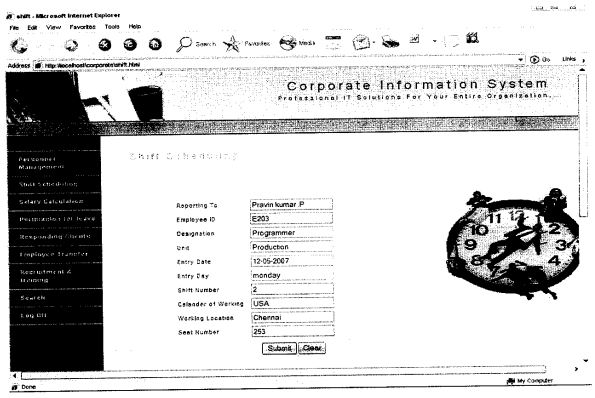
Login ID Creation



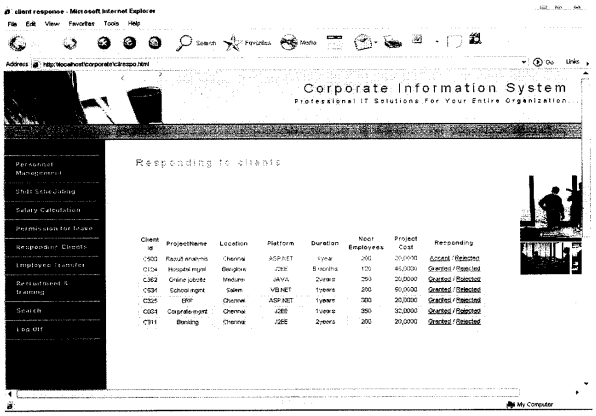
Recruitment



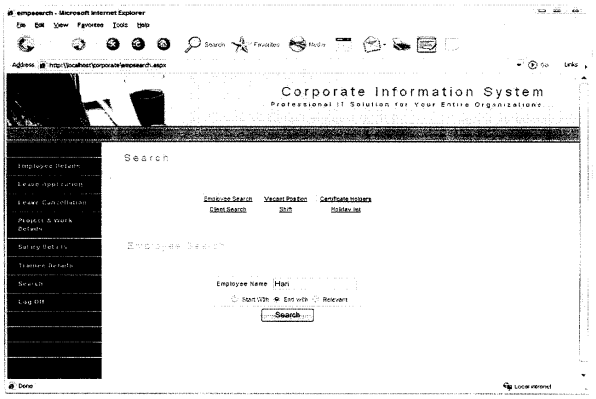
Shift Scheduling



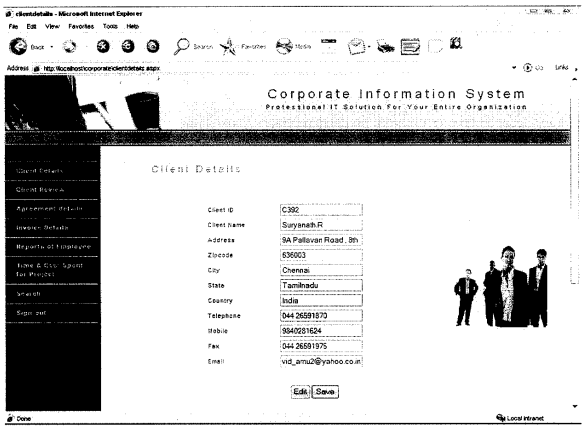
Responding to Clients



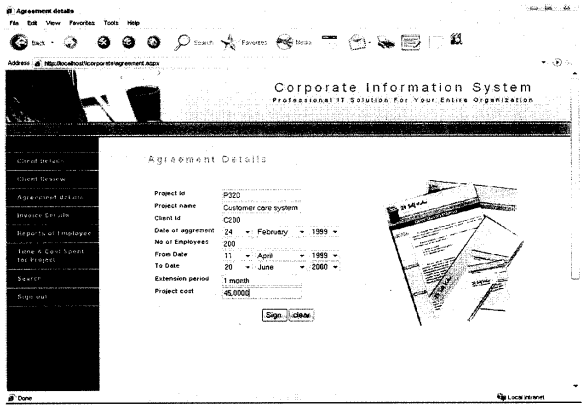
Employee Search



Client Edit / Update



Client Agreement



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