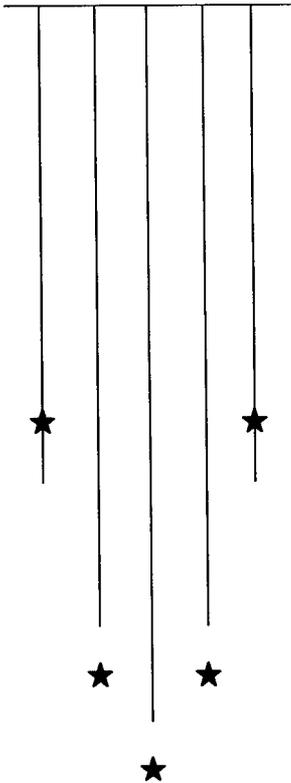
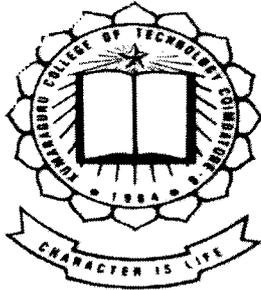


**SKILL SET MANAGER
[SSM]**

PROJECT REPORT

P-833



Submitted By

**A. RAMPRAKASH
9937S0085**

Under the Guidance of

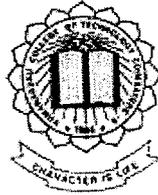
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
KUMARAGURU COLLEGE OF TECHNOLOGY
COIMBATORE - 641 006

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
KUMARAGURU COLLEGE OF TECHNOLOGY

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CERTIFICATE

This is to certify that A. Ramprakash has submitted the project entitled
SKILL SET MANAGER

In partial fulfillment of the award of the degree of
Master of Science in Applied Science – Software Engineering of
Bharathiyar University, Coimbatore
During the academic year 2002-2003

A. Karthikeyan
25/9/2002
.....
Guide

S. Jeyaraj 26/9/02
.....
Head of the Department

Certified that the candidate was examined by us in the Project Work Viva Voce
Examination held on...26.09.2002. And his University Register number is
9937S0085

S. Jeyaraj
26/9
.....
Internal Examiner

S. Jeyaraj
.....
External Examiner

CERTIFICATE



20th September 2002

To Whomsoever it May Concern:

This is to certify that Mr. A. Ram Prakash of Kumaraguru College of Technology, Coimbatore has completed his industrial project with our Organization, as a part of his M.Sc (Software engineering) Curriculum. He was involved in a project on "Skill Set Manager". The duration of the project was from 29th May 2002 to 20th September 2002. He had an opportunity to develop ASP, XML, SQL Server & Dot NET skills.

His contribution was good and we wish him success in all his endeavours.

For **SSI TECHNOLOGIES**,



SRIVIDHAR K.

CHIEF HR OFFICER.

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ACKNOWLEDGMENT

ACKNOWLEDGEMENT

I express our deep sense of gratitude to **Dr. K.K.Padmanaban, B.Sc (Engg), M.Tech, Ph.D**, Principal, Kumaraguru College of Technology, Coimbatore, for giving me the opportunity to carry out this project.

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This project work is a result of 5 months work in SSi Technologies, Chennai, in partial fulfillment of the award for the degree of Master of Science in Applied Science – Software Engineering of Bharathiar University, Coimbatore. It is a matter of privilege and honor for me to place on record **Mr. E.P.Subhash**, Project Manager, and **Mr. J.Ashok kumar**, Senior Software Engineer, SSi Technologies, Chennai for his unstinted co-operation and encouragement at levels to undergo this project work.

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I am also grateful to **Mr. Naresh Vasudhev**, Vice-President, SSI Education, Chennai, **Mr. Rajkumar** Executive Director, Sakthi Textiles and to **Mr. N.Ramkumar** M.D, RKV Enterprises who all had helped us in giving a route to approach the software companies and helping us in getting the project.

I also thank our beloved parents for their moral and financial support without whom the project wouldn't have been completed. We also express our sincere gratitude and thanks to all our intimate friends, well wishers and family members whose good wishes are responsible for crossing an important milestone in my life.

Above all, I thank the Almighty for the completion of this endeavor.

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INTRODUCTION

1.0. Introduction

This document provides comprehensive details about the client i.e. the Human resource department of Ssi technologies, the organization, and the project and about the details of the authority of the project.

1.1. Client

About the HR Department of SSI Technologies:

The human resource department of SSI technologies comprises of more than 40 well efficient human resource executives, who takes care of the all the works pertaining to the resource management. The human resource department of SSI technologies, Chennai takes care of more than 900 employees in the chennai branch alone, it has all the details about the employees including their personal details, skill details and project details.

The Department of Human Resource Department of SSI Technologies provides comprehensive human resource management services to agencies with small or no HR staffs and those without sufficient resources to offer full HR programs. The HR staff has specific agency assignments and provide technical guidance and professional HR consultation covering all aspects of human resources. Staff members respond to all inquiries within all HR areas, including but not limited to:

- ↓ Recruitment and selection.

- ↓ Classification Actions.

- ↓ Wage and salary administration.

- ✦ Employee relations.
- ✦ Equal employment opportunity.
- ✦ Training and organizational development.
- ✦ Benefits.
- ✦ Payroll administration.
- ✦ Performance management.

The Human Resource Department of Ssi Technologies provides consultative generalist services to agencies by working closely with agency heads, program managers, supervisors, and employees to resolve problems and to assist in the accomplishment of strategic goals and objectives. Assistance is provided in policy development and administration to ensure compliance with state and federal laws, regulations, and guidelines.

All the needs of the offshore project is taken by the Human resource Department, and also the needs of the consultants. The Human resource Department is one of the Key Departments of Ssi technologies.

1.2 About the Organization

About SSi Technologies

SSi Technologies is a global software development and consulting service provider, delivering technology and business solutions in the domains of Financial Services (Banking, Insurance & Securities), E-Business, Telecom, Healthcare, Retail, Automotive, Manufacturing, Transportation and Food & Beverage, as well as Enterprise Applications Solutions - CRM (Customer Relationship Management), SCM (Supply Chain Management), ERP (Enterprise Resource Planning), Data Warehousing, Procurement and Project Management. We integrate business and technology through domain focused, cost effective solutions delivered on platforms of your choice.

SSi Technologies is a division of SSi Limited (FY 2001 at US\$ 95 million), a leading end-to-end IT solutions architect which, through its divisions, offers an integrated range of IT services and solutions - software education, development and consulting.

Its key differentiator is their commitment in combining domain and technology expertise in our business operations. Experienced domain professionals occupy critical management, business development and research positions across our Practices. Skilled technical experts who ensure successful state-of-the-art productisation of future-centric concepts in equal measure, aid them

- ◆ Key Strategies
- ◆ Domain expertise
- ◆ Technology skill sets
- ◆ Wide customer base

- ◆ Global reach
- ◆ Quality Focus
- ◆ "C-2-C" - Close to Customer, a unique customer delivery program

Domain Expertise

SSi Technologies apply experienced consultants to business problems that match their expertise. The result? More than 100 Fortune 1000 clients who are willing to place their trust in us - repeatedly.

Its current domains and applications:

- ◆ Domains

Applications

- ◆ Financial services (Securities/ Banking/ Insurance)

Customer Relationship Management

- ◆ Telecom

Enterprise systems

- ◆ Healthcare

Procurement

- ◆ E-Business

Supply Chain Management

- ◆ Diversified services

Project Management

- ◆ Retail

Data Warehousing

- ◆ Automotive / Manufacturing

Content Management

- ◆ CPG/ Food & Beverage

- ◆ Transportation

- ◆ Technology skills

SSi Technologies deliver's solutions on a variety of platforms and technologies. In short, our solutions can be adapted to technologies that work for you. Our current technology skill sets include

- ◆ Microsoft

- ◆ Oracle
- ◆ i2
- ◆ IBM
- ◆ Mainframes
- ◆ Internet technologies

Wide customer base

Over the years, Ssi Technologies have delivered solutions to over 100 Fortune 1000 clients across the world and across a wide spectrum of industries, technologies, geographies and sizes. Whether the solution involved building a trading platform for NASDAQ or a e-Business solution for American Express, we are honored that our customers vouch for our capabilities.

Global reach

SSi Technologies operates as an independent software development and consulting companies in North America, Europe and Asia-Pacific, supported by an Offshore Development Center (ODC) in India.

SSIT North America is an amalgamation of the following erstwhile independent companies - Orion Consulting, Albion International, Client Matrix and the US operations of SSI Ltd.

Orion Consulting began in 1983 as a one-employee operation headquartered in Minneapolis and built its reputation through high quality work with regional companies, such as 3M, Best Buy and Value Vision International, Inc., before growing to become one of the fastest-growing IT consultancies in the Upper Midwest, with

revenues of \$25 million and nearly 200 employees and a roster of clients that includes some of the most recognized companies in the world.

Albion International began operations in 1994 with a focus on building high-end distributed information systems. The Atlanta-based company soon expanded to open offices in Boston, Dallas, and Washington. Albion's clients include The Massachusetts Department of Transitional Assistance, Sprint, Colorado Department of State, New York Division of Criminal Justice Systems, Security First Network Bank, and BellSouth Telecommunications.

In September 2000, Albion and Orion were acquired by SSI Limited.

SSIT Europe Ltd Incorporated in 1999, SSIT Europe Ltd is based in London and Luxemburg and has collected an impressive list of clientele in the last two years.

SSI Technologies Pte Ltd, Singapore is the registered office in the Asia Pacific region having other offices in Singapore (SSI Technologies Pte Ltd), Tokyo, Sydney (SSI Technologies Australasia Pty Ltd), Mumbai and Chennai.

SSI Technologies Offshore Development Center, India - Located at Chennai, India, the Offshore Development division of SSI Technologies is equipped with a versatile and comprehensive resource pool of domain and technology experts, infrastructure and equipment.

Quality Focus

SSi Technologies is an ISO 9001:2000 certified, SEI CMM Level 5 and P-CMM Level 3 assessed company.

The following are the highlights of our quality milestones:

- ◆ Creation of "Knowledge Master" for the organization
- ◆ Metrics collection and analysis for base line
- ◆ Quantitative quality goals aimed at increasing product quality,



- ◆ Productivity and defect reduction measures
- ◆ Life Cycle Models for all types of projects
- ◆ Quality Awareness organization wide
- ◆ Institutionalization of SSIT - QMS processes and procedures
- ◆ Training and online facilitation
- ◆ Evolution of SSIT - Feature Point for estimation and its implementation
- ◆ Process and product audits for all project activities
- ◆ Introduction of role based training programs
- ◆ Certification for ISO 9001:1994 - April 2001
- ◆ First business partner of SWIFT to be certified for ISO 9001:1994 for
SWIFT scope
- ◆ Assessed for SEI CMM Level 4 - October 2000
- ◆ Certification for ISO 9001:2000 - January 2001
- ◆ Assessed for SEI CMM Level 5 - August 2001
- ◆ Assessed for PCMM Level 3 - February 2002

Its SPI (Software Process Improvement) Consulting & Testing Consultancy Division offers a diverse range of solutions for development of quality standards and testing procedures.

C-2-C (Close to Customer) - a unique customer delivery Program

A three-pronged strategy of ensuring customer delight, this aims to service clients' requirements through our On-site, Proximity Development and Offshore Development Centers.

A client gets a close working rapport, control and cost benefits through "C-2-C".

For more information: www.Ssi-Technologies.com

1.3 About the project:

Skill set manager is an intranet application developed to automate the allocation of software professionals based upon their Skill set and experience. The application is built based on the basis of 3-tier architecture. This application is built over a period of 4 months.

The human resource and the resource group of the Ssi technologies handle this application. The application has six modules, which contains information about project experience, Skill sets and training attended. The skill set manager generates its output in the form of reports. Various kinds of reports are generated for skill sets, project and training. Skill sets report generates a list of employees who have experience in the Skill set asked for. Filters like level, project, experience and current status gives a lot of flexibility and advantage to achieve the required list.

The skill set manager also provides information about the human resource and their skill and the project details of the employee. This helps the human resource department to easily find out the information with the help of the various reports that are generated by the skill set manager. The authenticated human resource department persons are the only authorized persons to give the inputs and can access the whole skill set manager, the Human resource people can only view the reports. Administrator is the person who will take care of maintaining the Skill set manager. The Skill set manager is highly secured one with the help of Windows NT based authentication security system.

The skill set manager is a 3-tier architecture with asp as the front end and XML as the middleware and SQL Server as the backend, which provides an application, which is highly secured.

BACKGROUND

2.0. Background

2.1. Source of data

All the data's, which are used in Skill set manager, is a primary data. All the data's that is used in the Skill Set Manager is provided by the Human Resource department of SSi Technologies. **The primary data provided by the company is highly confidential that it can't be exposed to unauthorized people, Hence We are restricted to publish the data in this document.**

2.2. System Requirement:

2.2.1. Software profile:

Server Side Script Language

Active Server Pages (ASP):

An Active Server Pages is Microsoft's solution to building advanced web sites. Many of the largest, most technologically demanding and most successful commercial web sites running on the internet today –such as dell, HotBot, barnes and noble. comm. and Microsoft where built using Active Server Pages.

Using Active Server Pages, one can:

- ◆ Generate dynamic web pages. An Active Server Page can display different content to different users or display different content at different times of the day.
- ◆ Process the contents of html forms. you can use a active server page to retrieve and respond to the data entered into an html form.
- ◆ Create database driven web pages. An active server pages can insert new data or retrieve the existing data from a database such as Microsoft SQL server.
- ◆ Track user sessions. An asp can be used to store information's about the users from the moment they arrive at your web site until the moment they leave.
- ◆ Detect the capabilities of different browsers. An ASP can detect the features that a browser supports and display content that is appropriate to different browsers.

- Send and retrieve mail. An asp can automatically send e-mail to users and retrieve e-mail sent to your website.
- Integrate custom components into your web sites. An Asp can be extended with custom server side components created with Microsoft script components, VB, VC++.

An ASP is an HTML page that includes one or more scripts (small embedded programs) that are processed on a server before the page is sent to the user. An ASP is somewhat similar to a server-side include or a common gateway interface (CGI) application in that all involve programs that run on the server, usually tailoring a page for the user. ASP is a feature of the Microsoft IIS or PWS, but, since the server-side script is just building a regular HTML page, it can be delivered to almost any browser. Since, ASP is developed for PWS or IIS it is considered for this system. ASP supports scripting languages like VBScript, PerlScript and Jscript. VBScript is native to ASP and hence VBScript is used for server side scripting purposes.

Client Side Script Language

VB Script

VBScript is not considered for Client-side scripting because for compatibility reasons. Netscape does not support VBScript. So using VBScript with Netscape may produce undesirable errors. So the option of using VBScript as the client side scripting language is not considered.

Java Script

Both IE and Netscape support JavaScript as their client side scripting languages. IE has it's own Jscript form of JavaScript. So JavaScript is considered as the client-side scripting language so that compatibility issues can be addressed.

XML

XML stands for the extensible Markup Language. It is a new markup language, developed by the W3C, mainly to overcome limitations in Html. The W3c is the organization in charge of the development and maintenance of most web standards, most notably Html.

Some of the areas where XML is notably used:

- ◆ Large web site maintenance by creating simplified Html documents.
- ◆ Exchange of information between organizations.
- ◆ Offloading and reloading of databases.
- ◆ E-commerce applications where different organizations collaborate to serve a Customer.
- ◆ Handheld devices and smart phones with new markup languages optimized for these “alternative” devices.

2.2.2 Hardware profile

Windows NT

NT refers to the computer's operating system. An operating system dictates how all the parts of your computer work together and how specific tasks are to be performed.

Windows NT 4.0 is similar in appearance and style to Windows 95. Windows 3.11 and NT 4.0 share few of the same characteristics. If one is familiar with the Windows 3.11 environment, he may need to spend some extra time adapting to the new look of the NT 4.0 main screen.

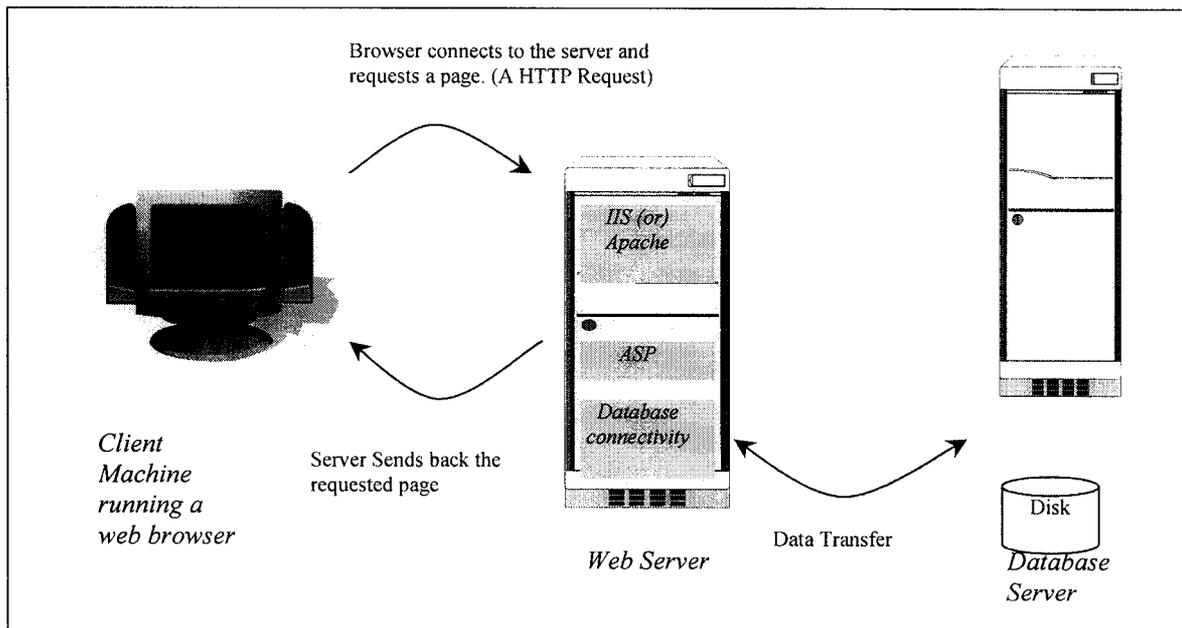
Windows 3.11 is a 16-bit operating system and Windows NT is a 32-bit operating system. One big difference between the two systems is that Windows NT processes information twice as fast as the older Windows 3.11 system. This gives Windows NT the power to process higher-end applications, such as Word 7.0 and Access 7.0.

IIS (Internet Information Server)

IIS, an abbreviation for Internet Information Server, is Microsoft's version of a Web server program which on Windows NT Platform. It is more robust than PWS,

which is web server for the windows based PC's. IIS can be used with a full-time Internet connection to serve Web pages for a Web site. IIS have the capability of hosting more than one website at a time. Since IIS is a product from Microsoft, it natively supports server side ASP scripting which is a web tool from Microsoft. For a web-based tool like Skill set manager this is the ideal web server if the server side scripting language is ASP.

General Architecture



HOW THE WEB SERVER WORKS

When the user tells the browser to go fetch a web page, the browser parcels up this instruction using a protocol called the TCP. TCP ensures that the entire message is correctly packaged up for transmission. Before the packets are sent, the HTTP protocol labels the packets with address so that they can reach wherever they are

destined to reach. The message passed from the browser to the web server is known as an *HTTP request*. When the web server receives the request, it checks its stores to find the appropriate page. If the page is found, it parcels up the data using TCP and sends it back to the server. Otherwise an error message is generated. The Response that is generated by the Web server is called *HTTP Response*. This response contains the html content, which will be understood by the browser, and it will be displayed on the client's machine.

SYSTEM DESCRIPTION

3.0. System Description

3.1. System study & analysis

3.1.1 Purpose

The purpose of this document is to understand the modules in Skill Set Manager. The modules included in the product have been listed along with a detailed description of functions involved in each module.

3.1.2 Scope

The scope of this project is to provide a solution to maintain and manage a centralized Skill Set Information-base about all the technical human resources in SSI Technologies.

Skill Set Manager features

- ✓ Provides comprehensive information about Skill Sets of Human Resources.
- ✓ Intuitive Graphical User Interface
- ✓ Intranet enabled
- ✓ Handy reports
- ✓ Windows NT Integrated Security
- ✓ Uses IE 5.0 and above.
- ✓ The System uses 3-Tier Architecture.

3.2 Skill Set Manager Modules

- ✓ Administration-General
- ✓ Administration-Technical

- ✓ Employee
- ✓ Project & Training
- ✓ Reports
- ✓ Help

☐ **Administration-General**

The Administration-General module details the functions that are required for configuration and management of the Skill Set Manager master data. Master data pertaining to General aspects like Country details, State details, Blood Group Details are managed in this Group.

☐ **Administration-Technical**

The Administration-Technical module details the functions that are required for configuration and management of the Skill Set Manager master data. Master data pertaining to Technical aspects is managed using this module.

☐ **Employee**

The Employee module details the functions that are required for configuration and management of the Skill Set Manager master data. Master data pertaining to Employee details is managed in this module.

☐ **Project and Training**

The Project Training module details the functions that required for the Project, Project Skill set and Training. This function is used to manage the reference data for collecting the project information, Allotment information, Training information and Attendees information.

▣Reports

The Reports module details the functions that give various kinds of reports from the data available on the database. The reports can give details about Project, Training, and Skill set of the employee's.

Survey

The Survey module details the functions that give various kinds of reports on the basis of competency from the data available on the database. The Survey can give details about Project, Training, and Skill set of the employee's.

3.2.1 Definitions, Acronyms & Abbreviations

SSM	Skill Set Manager
HRMS	Human Resource Management System.
SSi	Software Solutions Integration.

3.2.2 Reference

- **Human Resource Management System: A practical approach**
By Rampton, Glenn M, Turm Bull, Ian J and Doran J Allen.
- **People Soft HRMS**
By Adam T.Bromwich.

3.2.3 Overview

▣Administration-General

The Skill Set Manager Application requires reference data for its operation. The reference data is part of various modules of the system and is used by multiple modules. The Administration-General manages this reference data pertaining to Country details, State details, Prefix details, and Blood Group details.

☐ **Administration-Technical**

The Skill Set Manager Application requires reference data for its operation. The reference data is part of various modules of the system and is used by multiple modules. The administration module manages this reference data pertaining to Technical aspects.

☐ **Employee**

The Skill Set Manager Application requires data for its operation. The reference data is part of various modules of the system and is used by multiple modules. The Employee Information module manages this reference data pertaining to Employee details.

☐ **Project Training**

The Skill Set Manager Application requires reference data for its operation. The reference data is part of various modules of the system and is used by multiple modules. The Project Training module manages this reference data pertaining to project info, allotment, training info and attendees.

☐ **Reports**

The Skill Set Manager Application can generate various reports based on the data that are fed thru different modules of the application. Various kind of report like Project, Training, Skill-based, Employee-based (Resume) and Skill Matrix report are available

Survey

The Skill Set Manager Application can generate various competency reports based on the data that are fed thru different modules of the application. Various kind of competency reports like Skill-based, Employee-based (Resume) and Skill Matrix report are available

3.2.4 General Description

Product Perspective

- ✓ At any point of time system provides the Skill Set information for a given Human Resource
- ✓ Automates Skill Set Resource management
- ✓ Easy-to-use system with an intuitive Graphical User Interface (GUI)
- ✓ Helps generate a variety of summaries and reports
- ✓ Maintains comprehensive and integrated information about Employee

Technical Skills

- ✓ Maintains comprehensive and integrated information about Employee expertise in a given skill
- ✓ Maintains comprehensive and integrated information about Employee expertise in a given domain

Product Functions

This product functions have been defined for each module individually.

- ✓ Administration-General
- Country
- State
- City
- Nationality
- Prefix

- Blood Group

- ✓ Employee

 - Employee Information
 - Designation
 - Practice
 - Exit of Resource

- ✓ Reports

 - Training
 - Project
 - Skill Report
 - Skill Wise
 - Practice Wise
 - Level Wise
 - Master Skill DB
 - Employee skill DB
 - Resume
 - Training Cost
 - Employee Skill Matrix

- ✓ Survey

 - Practice wise competency Report

- Skill wise competency Report
- Domain wise competency Report
- Total competency Report
- ✓ Help
- Help

User Characteristics

The user should be able to operate a computer under the Windows operating system.

General Constraints

Some of the constraints when using the application can be listed below

- The Application can be used with browsers of type IE 5.0 and above version at the client end
- The Application uses SQL server as database with IIS 4.0 and MTS.
- The Application uses Window NT security.

Assumptions and Dependencies

The System uses the Window NT security by this the Application is capable of running only on the Intranet environment. The Application is not compatible for version below IE 5.0 and Netscape.

3.2.5 Overview of Modules:

Module	Admin_General
--------	---------------

Module Functions

Functions List

The following are the functions provided by this module –

- ✓ Country
- ✓ State
- ✓ City
- ✓ Nationality
- ✓ Prefix
- ✓ Blood Group

Country

Functional Requirements

This Function is used to collect Country Information. This Country information is used in Employee module to enter the address of the Employees.

Description

When the details of Employees are captured, this function is used to manage the reference data for collecting the Country information. Each Country entered is given a code and the status of the Country should also be entered.

Inputs

The following are the inputs of this function –

- ✓ Country Id (Auto –Generated)
- ✓ Country Name (Mandatory)
- ✓ Status (Mandatory)

Outputs

Country Information gets added or modified.

Process Validations

Country Name should be unique.

Processing Logic

In the Employee module the details of the employees are entered where the address of the employees are also entered. The country names entered here are master entries that should get displayed in the Employee module for entering the address of the Employees. The country name and the status of that country are entered in this form. Each country is given a unique Id. Irrespective of the status details of all countries should be displayed.

State

Functional Requirements

This function is used to collect the reference data for managing State information. This State information is used in Employee module to enter the address of the Employees.

Description

When details of Employees are captured, this function is used to manage the reference data for collecting the State information. Each State is given a code and the status of the state should also be entered.

Inputs

- ✓ State Id (Auto –Generated)
- ✓ State Name (Mandatory)
- ✓ Country (Mandatory –Reference key for the country which the state belongs)
- ✓ Status (Mandatory)

Outputs

State Information gets added or modified

Process Validations

State name should be unique for a country.

Process Logic

In the Employee module the details of the employees are entered where the address of the employees are also entered. The state names entered here are master entries that should get displayed in the Employee module for entering the address of the Employees. The status of the state and the country to which the state belongs should also be entered. Addition and Updating of a state from an Inactive country is not allowed

City

Functional Requirements

This function is used to collect the reference data for managing City information.

Description

When details of Employees are captured, this function is used to manage the reference data for collecting the City information.

Inputs

- ✓ City Id (Auto –Generated)
- ✓ City Name (Mandatory)
- ✓ State Name (Mandatory – Reference key for the state which the city belongs too)
- ✓ Country Name (Mandatory – Reference key for the Country which the city belongs too)
- ✓ Status (Mandatory)

Outputs

City Information gets added or modified.

Process Validations

City name should be unique for a state.

Process Logic

The details of the City should be entered. The state and the country to which the city belongs should also be entered. The status information of the city is also required. The added city comes under the particular state, and country, which are referenced.

Nationality

Functional Requirements

This function is used to collect the reference data for managing Nationality information. The Nationality information is used in Employee module to enter the nationality of the Employees.

Description

When details of Employees are captured, this function is used to manage the reference data for collecting their Nationality information.

Inputs

- ✓ Nationality Id (Auto –Generated)
- ✓ Description (Mandatory)

Outputs

Nationality Information is added or modified.

Process Validations

Nationality should be unique.

Process Logic

The details of the Nationality of the Employees should be entered. The nationality Id and the Description should be entered.

Prefix

Functional Requirements

This function is used to collect the reference data for managing Prefix information, which is used to give the prefix for the employees

Description

When details of Employees are captured, this function is used to manage the reference data for collecting the Prefix information.

Inputs

- ✓ Prefix Id (Auto-Generated)
- ✓ Description (Mandatory)

Outputs

Prefix Information's gets added or modified.

Process Logic

The details of the Prefix should be entered. The Prefix Id and the Prefix Description should be entered.

Blood Group

Functional Requirements

This function is used to collect the reference data for managing Blood Group information

Description

When details of Employees are captured, this function is used to manage the reference data for collecting the Blood Group information.

Inputs

- ✓ Blood Id (Auto- Generated)
- ✓ Blood Group (Mandatory)

Outputs

Blood Group is added or modified.

Process Validations

Blood group should be unique.

Process Logic

The details of the Blood Group should be entered. The Blood Id Blood Group should be entered.

Module	Employee
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Module Functions

Functions List

The following are the functions provided by this module –

- ✓ Employee Info
- ✓ Designation
- ✓ Practice
- ✓ Exit of Resource

Employee Info

Functional Requirements

This function is used to manage the Employee data.

Description

When the details of the employee are captured, this function is used to manage the reference data for collecting the employee information. Moreover this function also caters the information regarding the previous experience of the employee.

Inputs

The following are the inputs of this function are –

- ✓ Employee Id (as allotted by HR department) - Mandatory
- ✓ Prefix - Mandatory
- ✓ First Name - Mandatory
- ✓ Middle Name
- ✓ Last Name - Mandatory
- ✓ Date of Birth - Mandatory
- ✓ Sex - Mandatory
- ✓ Marital Status
- ✓ Date of Joining - Mandatory
- ✓ Passport No
- ✓ Passport Expiry date
- ✓ Passport Issue Place
- ✓ Status
- ✓ Date of Leaving
- ✓ Reason for Leaving
- ✓ Contact Details (Address....)
- ✓ Qualification Details (Qualification, Institute, Major)
- ✓ Previous Company details
 - Designation
 - From Date

- To Date
- Project Details (previous Projects)
- ✓ Previous Experience Skill List Details
- ✓ Certification Details
- ✓ Certification Skill set Details

Outputs

Employee Information gets added or updated.

Process Validations

All the reference data pertaining to the Employee details are already available.

Processing Logic

When given the Employee Id, and the Address details, Previous Company details, Qualification details, Certification details the information gets added. However we can add an employee with minimal information like

First name, last name, sex, date of birth and date of joining. The Employee Information can be updated by fetching the employee details by giving the employee id as the input.

Designation

Functional Requirements

This function is used to display and modify the reference data for designation of the Employee as on date.

Description

The function provides the modification of the designation of an employee as on date specified.

Inputs

The following are the inputs that this function requires –

- ✓ Employee Id (Mandatory)
- ✓ Employee Name (Mandatory)
- ✓ Designation (Mandatory)
- ✓ From date (Mandatory)

Outputs

The Designation details of an employee gets added or modified.

Process Validations

No Person can hold two designations at the same time.

Processing Logic

On selection of the employee name the designation of the employee has to be displayed and it should also have the provision for modification to other active entries too.

Practice

Functional Requirements

This function manages the data, which pertains to the practice details of the Employee.

Description

The employee's practice details are handled in this function, where by giving option to change to different practice from particular date.

Inputs

The following are the inputs that this function requires –

- ✓ Employee Id (Mandatory)
- ✓ Employee Name (Mandatory)
- ✓ Practice (Mandatory)
- ✓ From date (Mandatory)

Outputs

Practice Details of an Employee gets added or updated.

Process Validations

No Employee can be in the same practice at the same time.

Processing Logic

On selection of the employee name the practice of the employee has to be displayed and it should also have the provision for modification to other active entries too.

Exit Resource

Functional Requirements

This function manages the data, which pertains to the exit of the employee from the organization.

Description

The employee's relieving details are handled in this function; where reason for leaving and the re leaving date into the system.

Inputs

The following are the inputs that this function requires –

- ✓ Employee Id (Mandatory)

- ✓ Employee Name (Mandatory)
- ✓ Date of Leaving (Mandatory)
- ✓ Reason for leaving (Mandatory)

Outputs

The Employee is made as one of the exited Resource from the organization.

Process Validations

Already resigned people should not appear in the list. Moreover when an employee resigns he should appear in any of the active list.

Processing Logic

On selection of the employee name the employee Id and Name is displayed, getting the reason for leaving and Date of Leaving makes the Employee – Exit from the organization.

Module	Reports
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Module Functions

Functions List

The following are the functions provided by this module –

- Training
- Project
- Skill Report
- Skill Wise
- Practice Wise

- Level Wise
- Master Skill DB
- Employee skill DB
- Resume
- Training Cost
- Employee Skill Matrix

Training

Functional Requirements

This function is used to fetch the details about the training that were conducted for the organization.

Description

Given the Training Name as the Input the report generate the details of the training, which specifies the start date, End date, premises, Trainer, Skills imparted on training and the list of Attendees.

Inputs

The following are the inputs of this function –

- ✓ Training Name

Outputs

Report, which gives the Details of the Training chosen. Some of the details are Date's the training held, Trainer, Premises, Skills imparted, and the Participants.

Processing Logic

When given the training name the details of the training such as the from date, to date, premises, Trainer, and the skills imparted on the training are given. Moreover it also fetches the list of all employee who had attended the training are also given.

Project

Functional Requirements

This function is used to fetch the details about the projects that were done or continuing in the organization

Description

Given the Project Name as the Input the report generate the details of the Project which specifies the start date, End date, Skill set used on the Project, which practice it belongs, and the list of Team members of the Project.

Inputs

The following are the inputs of this function –

- ✓ Project Name

Outputs

Report, which gives the Details of the Project chosen. Some of the details are start and end date of the Project, Skill sets used for the project, and the Practice which the project belong and the team members of the Project.

Processing Logic

When the Project Name is given as the input the report generate a detailed summary of the project's start date, end date, Domain of the project, and the skill list used in the project and the list of all employee's in the project is also given.

Skills Report

Functional Requirements

This function is used to fetch the list of People who have experience in skill's chosen and in the practice and level specified by the user

Description

Given the Skills, Practice and Level as the Input the report generate the list of employee who have the skill set and in the particular practice specified and also in the level specified.

Inputs

The following are the inputs of this function –

- ✓ Skill list
- ✓ Practice
- ✓ Level

Outputs

Report, which gives the list of all employee who have the skill set chosen, and in the practice and level specified. Facility to sort by Empid, Name, and Practice is also available.

Processing Logic

Given the inputs skills, Practice, Level the report generate the list of all employee's who comes under the grade and practice specified and having the skills asked for.

Skill Wise

Functional Requirements

This function is used to fetch the list of People who have experience in skill's chosen and in the practice and level specified by the user.

Description

This Report can be specified as the subset of the Skills Report. Given the Skills, Practice and Level as the Input the report generate the list of employee who have the skill set and in the particular practice specified and also in the level specified. The facility of choosing the employee who have all the skills in not available.

Inputs

The following are the inputs of this function –

- ✓ Skill list
- ✓ Practice
- ✓ Level

Outputs

Report, which gives the list of all employee who have the skill set chosen, and in the practice and level specified. The Result is sorted according to Skill list.

Processing Logic

Given the input of Skill set, Practice and the level the report gives the list of all employee who are in the particular Practice and the level with the skill set chosen, sorted out in the skill list order.

Practice Wise

Functional Requirements

This function is used to fetch the list of People who have experience in skill's chosen and in the practice and level specified by the user

Description

This Report can be specified as the subset of the Skills Report. Given the Skills, Practice and Level as the Input the report generate the list of employee who have the skill set and in the particular practice specified and also in the level specified .The facility of choosing the employee who have all the skills in not available.

Inputs

The following are the inputs of this function –

- ✓ Skill list
- ✓ Practice
- ✓ Level

Outputs

Report that gives the list of people who have some experience in the skill list chosen.

Processing Logic

Report, which gives the list of all employees who have the skill set chosen, and in the practice and level specified. The Result are sorted according to Practice

Level Wise

Functional Requirements

This function is used to fetch the list of People who have experience in skill's chosen and in the practice and level specified by the user

Description

This Report can be specified as the subset of the Skills Report. Given the Skills, Practice and Level as the Input the report generate the list of employee who have the skill set and in the particular practice specified and also in the level specified. The facility of choosing the employee who have all the skills in not available.

Inputs

The following are the inputs of this function –

- ✓ Skill list
- ✓ Practice
- ✓ Level

Outputs

Report that gives the list of people who have some experience in the skill list chosen.

Processing Logic

Report, which gives the list of all employees who have the skill set chosen, and in the practice and level specified. The Result is sorted according to Level.

Master Skill DB

Functional Requirements

This function is used to fetch the list of People who are in the particular practice, with their Skill Details.

Description

This Report gives the detailed history about the member's in the practice, and their skill set.

Inputs

The following are the inputs of this function –

- ✓ Practice

Outputs

Report, which gives the list of all employees who are in the particular practice chosen, with the Skill details for each of them.

Emp Skill DB

Functional Requirements

This function is used to give a crisp report on the skill details of the employee chosen

Description

This Report gives the detailed summary on the employee their skill set.

Inputs

The following are the inputs of this function –

- ✓ Employee Name

Outputs

Report, which gives detailed summary of the Skill details for the employee chosen.

Resume**Functional Requirements**

This function is used to display the complete Resume of a particular Employee chosen.

Description

This Report gives the detailed resume of the Employee chosen.

Inputs

The following are the inputs of this function –

- ✓ Employee Id

Outputs

Resume gives the contact details, Skill Matrix, Training undergone in the organization, Academic summary, and Employment summary, Project Details for the selected Employee.

Training Cost**Functional Requirements**

This report is used to give the summarized details on the training given to the particular Employee chosen.

Description

This report gives the detailed summary on the Training given, with Program name, Start date, end date, Hours, and cost for the Program. Cost of the entire program are added to get the total cost for training.

Inputs

The following are the inputs of this function –

- ✓ Employee Id

Outputs

Based on the Employee Id chosen, the details of the training attended by the person are fetched and a detailed summary is prepared and displayed. It also includes the total cost incurred for him in Training.

Skill Matrix**Functional Requirements**

This report is used to give the crisp summary on the skill set of the employee for the Employee Id chosen.

Description

This report gives the crisp summary on the skill set of the employee chosen. The report groups the skills set and give the relative experience in months

Inputs

The following are the inputs of this function –

- ✓ Employee Id

Outputs

Report which given a crisp summary about the skill details of the employee chosen.

Processing Logic

Based on the Employee Id chosen, the details of the skills of the person are fetched and grouped and a crisp summary is prepared and displayed. It facilitates the

user to get know about the employee and the relative experience of him in a particular skill.

Module	Survey
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Module Functions

Functions List

The following are the functions provided by this module –

- Practice wise competency Report
- Skill wise competency Report
- Domain wise competency Report
- Total competency Report

Practice wise competency Report

Functional Requirements

This function is used to fetch the list of People who have higher experience in skills chosen and in the practice and level specified by the user

Description

This Report can be specified as the subset of the Competency Report. Given the Skills, Practice and Level as the Input the report generate the list of employees who have the skill set and in the particular practice specified and also in the level

specified .The facility of choosing the employee who have all the skills in not available.

Inputs

The following are the inputs of this function –

- ✓ Skill list
- ✓ Practice
- ✓ Level

Outputs

Report that gives the list of people who have higher experience in the skill list chosen.

Processing Logic

Report, which gives the list of all employees who have the skill set chosen, and in the practice and level specified. The Result are sorted according to Practice

Skill wise competency Report

Functional Requirements

This function is used to fetch the list of People who have higher experience in skills chosen and in the practice and level specified by the user.

Description

This Report can be specified as the subset of the Skills Report. Given the Skills, Practice and Level as the Input the report generate the list of employee who have the skill set and in the particular practice specified and also in the level specified. The facility of choosing the employee who have all the skills in not available.

Inputs

The following are the inputs of this function –

- ✓ Skill list
- ✓ Practice
- ✓ Level

Outputs

Report, which gives the list of all employee who have the skill set chosen, and in the practice ,level specified and the rating. The Result is sorted according to Skill list.

Processing Logic

Given the input of Skill set, Practice and the level the report gives the list of all employee who are in the particular Practice and the level with the skill set chosen, sorted out in the skill list order.

Domain wise competency Report

Functional Requirements

This function is used to fetch the list of People who have experience in skill's chosen and in the practice and level specified by the user

Description

Given the Skills, Practice and Level as the Input the report generate the list of employee who have the skill set and in the particular practice specified and also in the level specified.

Inputs

The following are the inputs of this function –

- ✓ Domain

Outputs

Report, which gives the list of all employee who have the skill set chosen, based on the domain specified. Facility to sort by Empid, Name, and Domain is also available.

Processing Logic

Given the inputs skills, Practice, Level the report generate the list of all employee's who comes under the grade and practice specified and having the skills asked for.

Total competency Report

Functional Requirements

This function is used to fetch the list of People who have experience in skill's chosen and in the practice and level specified by the user

Description

Given the Skills, Practice and Level as the Input the report generate the list of employee who have the skill set and in the particular practice specified and also in the level specified.

Inputs

The following are the inputs of this function –

- ✓ Skill list
- ✓ Practice
- ✓ Level

Outputs

Report, which gives the list of all employee who have the skill set chosen, and in the practice ,level specified and the rating. .

Processing Logic

Given the inputs skills, Practice, Level the report generate the list of all employee's who comes under the grade and practice specified and having the skills asked for.

Module	Help
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Module Functions

Functions List

The following are the functions provided by this module –

- ✓ [Help](#)

Help

Functional Requirements

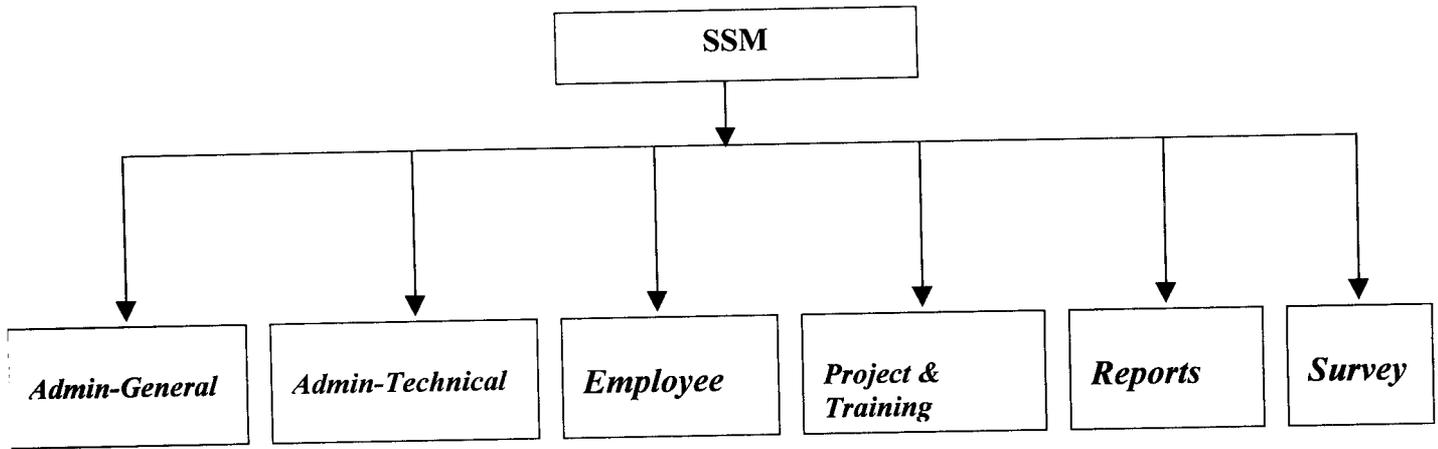
This Function is used to give the details how to work with the system, and how the processing is done.

Description

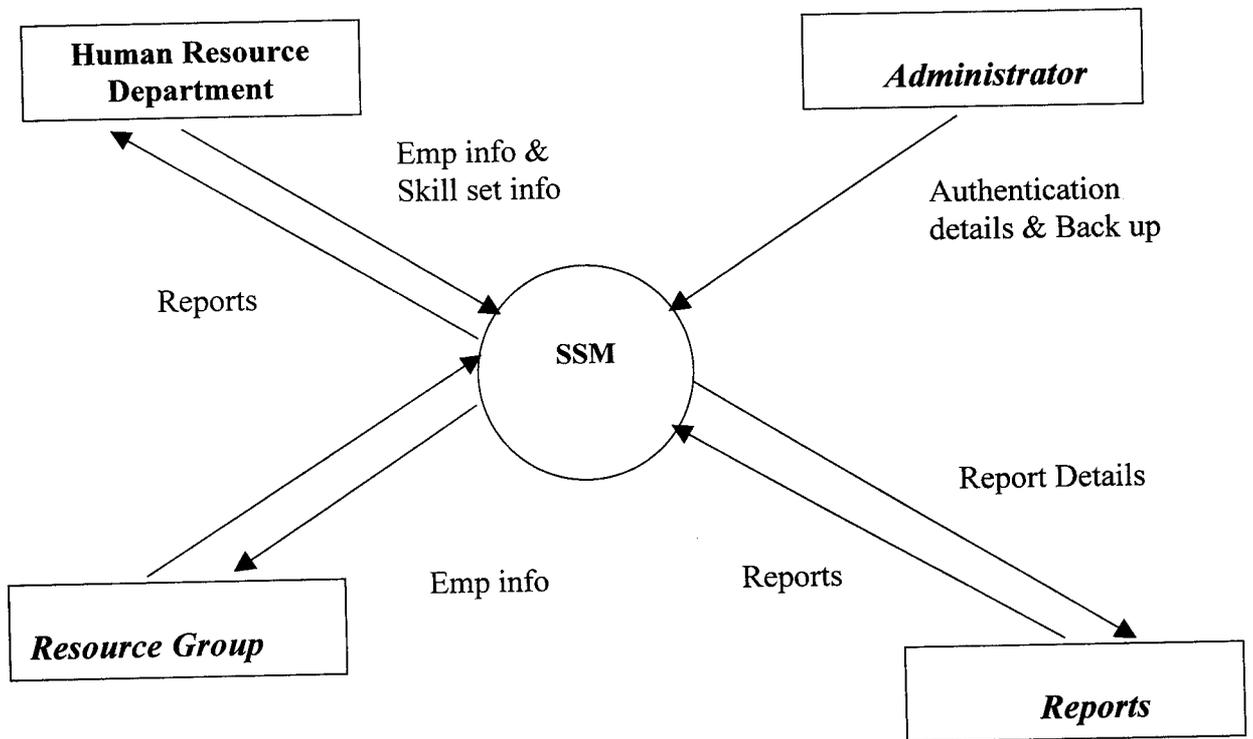
This Function help the user in knowing the full detail of the application, and the working principle of each and every functionality and also describes the function's dependencies. All the functionalities are grouped under its own modules.

DATA FLOW DIAGRAMS

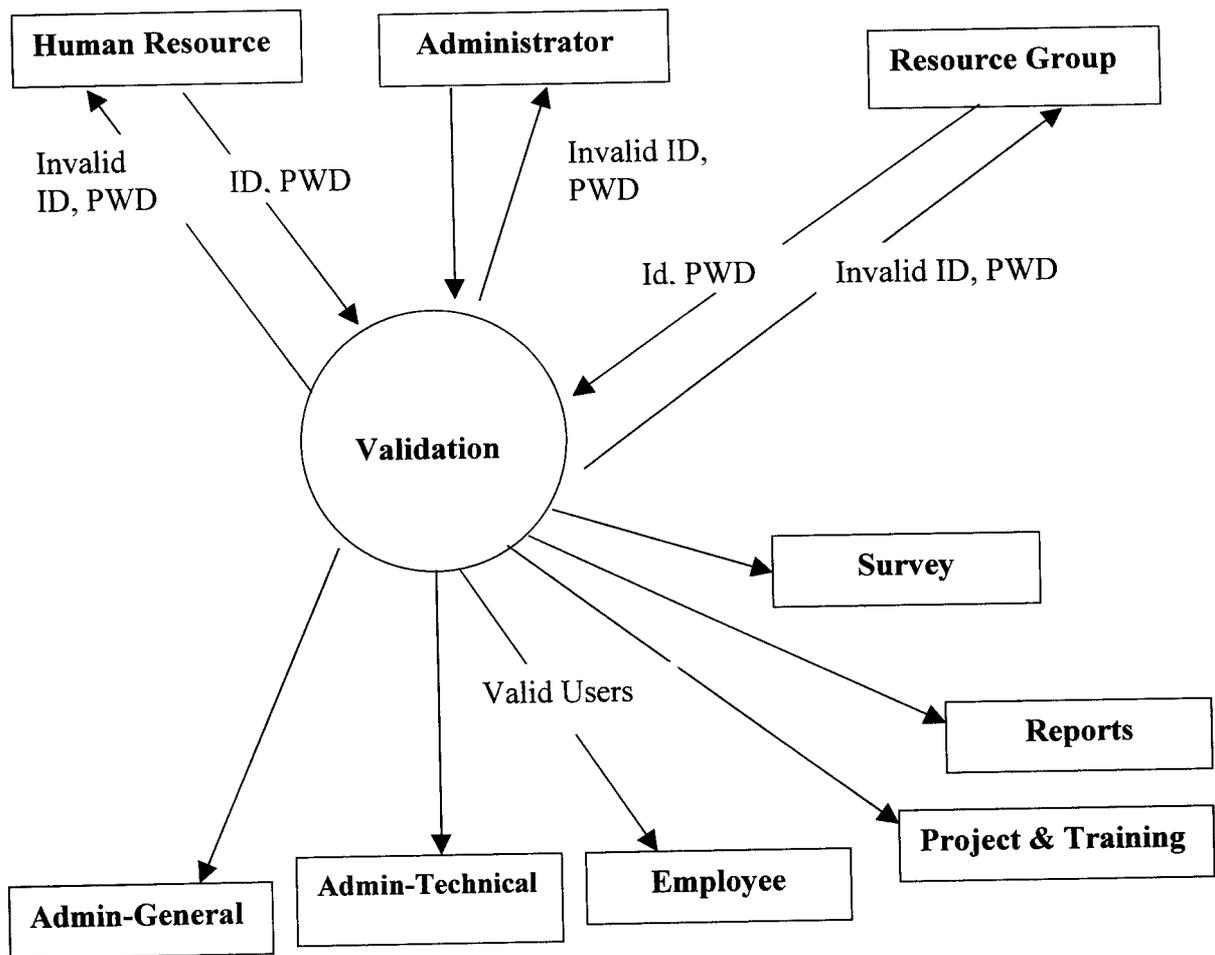
Diagrammatic representation of Modules



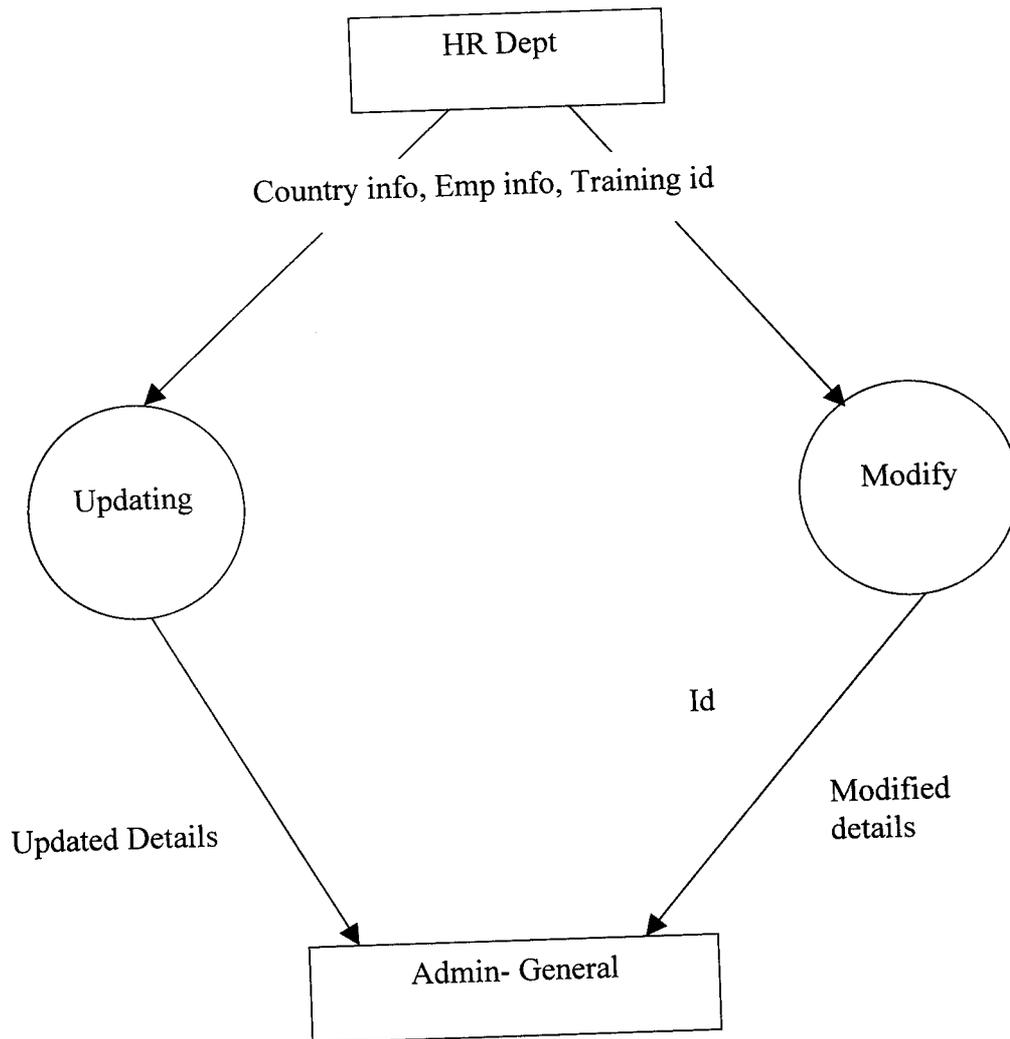
Context Diagram:



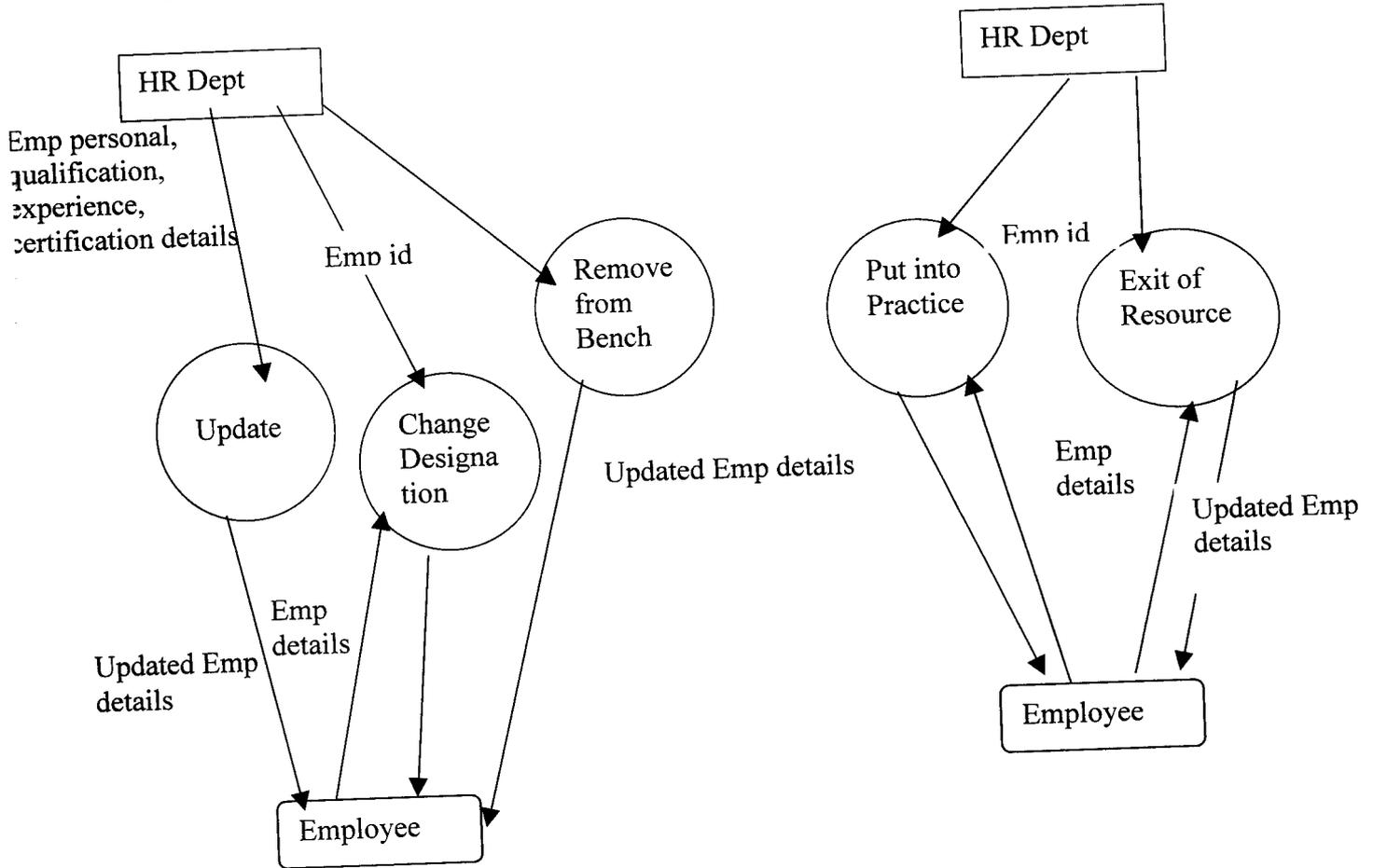
Data Flow Diagram



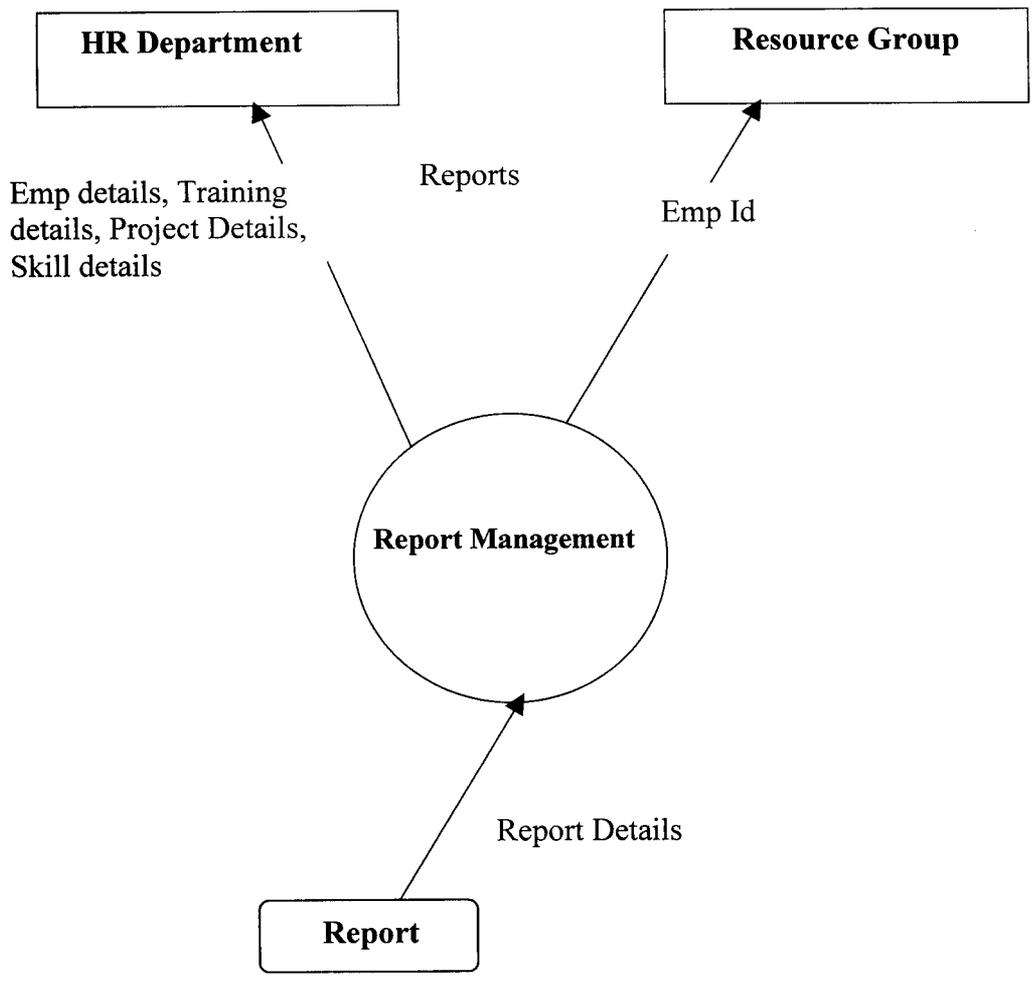
Admin-General:



Employee:



Reports:



Survey:

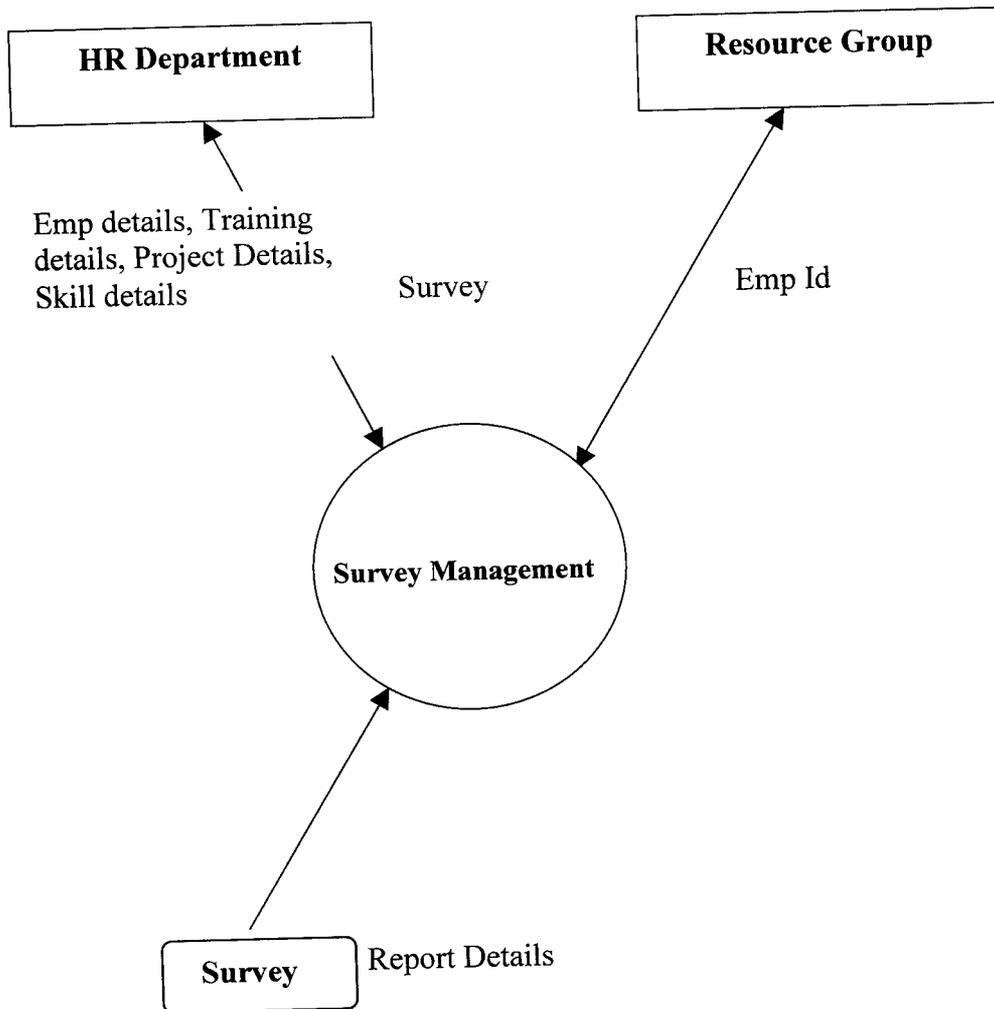


TABLE STRUCTURE AND DESCRIPTION

Table Structure & Description

Table Name		CERTAUTH				
Description		This table stores the various certification authority details.				
Primary Key		CERTAUTHID				
Referential Integrity						
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1.	*	CERTAUTHID	INTEGER	4	N	ID for a Certifying Authority. Primary Key
2.		CERTDESC	VARCHAR	50	N	Description of the Certifying Authority
3.		CERTTYPE	TINYINT	1	N	0-Not a certifying authority. 1- Is a Certifying Authority
4.		TRATYPE	TINYINT	1	N	0-Not a Training Provider. 1-Is a Training Provider.

Table Name		CERTIFICATION				
Description		This table stores the list of certifications.				
Primary Key		CERTID				
Referential Integrity		CERTAUTH.CERTAUTHID				
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1.	*	CERTID	INTEGER	4	N	ID for the Certification. Primary Key
2.		CERTDESC	VARCHAR	50	N	Description for the certificate
3.		CERTAUTHID	INTEGER	4	N	CERTAUTHID referenced from CERTAUTH table with CERTTYPE=1
4.		STATUS	TINYINT	1	N	1-Active / 0-InActive

Table Name		SKILLTYPE				
Description		This table maintains the type of the skills like whether it is a tool or a language.				
Primary Key		SKILLTYPEID				
Referential Integrity						
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks

1.	*	SKILLTYPEID	INTEGER	4	N	Id for Skill Type.
2.		SKILLTYPEDESC	VARCHAR	30	N	Description of the skill list type.

Table Name		SKILLTYPE				
Description		This table maintains the type of the skills like whether it is a tool or a language.				
Primary Key		SKILLTYPEID				
Referential Integrity						
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1.	*	SKILLTYPEID	INTEGER	4	N	Id for Skill Type.
2.		SKILLTYPEDESC	VARCHAR	30	N	Description of the skill list type.

Table Name		PRACTICE				
Description		This table stores the various practices maintained in the company.				
Primary Key		PRACTICEID				
Referential Integrity						
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1	*	PRACTICEID	INTEGER	4	N	Id for the practices. Primary Key
2		PRACTICEDESC	VARCHAR	30	N	Description of the practice
3		STATUS	TINYINT	1	N	1-Active / 0-InActive

Table Name		EMPLOYEE				
Description		This table contains the personal details of the technical employees in the company.				
Primary Key		EMPID				
Referential Integrity		PREFIX.PREFIXID				
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1	*	EMPID	INTEGER	4	N	Id for the Employee. Primary Key
2		PREFIXID	INTEGER	4	N	PREFIXID referenced from PREFIX table
3		FNAME	VARCHAR	30	N	First name of the employee

4	MNAME	VARCHAR	30	Y	Middle Name of the employee
5	LNAME	VARCHAR	30	N	Last Name of the employee
6	DOB	DATE	8	N	Date of Birth
7	SEX	TINYINT	1	N	Sex of the employee
8	DOJ	DATE	8	Y	Date of joining this company
9	DOL	DATE	8	Y	Date of Leaving this company
10	RFLEAVING	VARCHAR	300	Y	Reason for leaving
11	ALLOCATED	TINYINT	1	N	0-Not Allocated / 1- Allocated for a project
12	MARITALSTATUS	CHAR	2	N	Marital status
13	STATUS	TINYINT	1	N	0-Left the Company / 1-With the Company
14	PPNO	VARCHAR	30	Y	Passport Number
15	PPEXPDATE	DATE	8	Y	Expiry Date of the passport
16	PPISSUEPLACE	VARCHAR	30	Y	Passport issue place

Table Name		EMPPRACTICELINK				
Description		The table links the employee with the practice.				
Primary Key		EMPID+PRACTICEID+FROMDATE				
Referential Integrity		EMPLOYEE.EMPID, PRACTICE.PRACTICEID				
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1	*	TRANSID	INTEGER	4	N	PRIMARY KEY
2		EMPID	INTEGER	4	N	EMPID referenced from EMPLOYEE table
3		PRACTICEID	INTEGER	4	N	PRACTICEID referenced from PRACTICE table
4.		STATUS	TINYINT	1	N	0-Not currently with this Practice / 1-Currently associated with this practice
5.		FROMDATE	DATE	8	N	From date
6.		TODATE	DATE	8	Y	To date

Table Name		EMPPREVEXP	
Description		This table stores the previous experiences of the employee.	
Primary Key		EMPID + SLNO	
Referential		EMPLOYEE.EMPID, DOMAIN.DOMAINID	

Integrity						
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1	*	TRANSID	INTEGER	4	N	PRIMARY KEY
2.		EMPID	INTEGER	4	N	EMPID referenced from EMPLOYEE table
3		SLNO	INTEGER		N	Sl. No. of the company for a employee
4		COMPANY	VARCHAR	100	Y	Name of the company
5		PROJNAME	VARCHAR	100	Y	Project name
6		PROJDESC	VARCHAR	1000	Y	Project description
7		DURATION	INTEGER	4	Y	Duration of the project in months
8		DOMAINID	INTEGER	4	Y	DOMAINID referenced from DOMAIN table
9		ROLE	VARCHAR	30	Y	Role played in the project
10		COMPANYID	INTEGER	4	N	COMPANY ID to identify the company

Table Name	EMPCERT					
Description	This table maintains the details of the certifications owned by the employees.					
Primary Key	EMPID + SLNO					
Referential Integrity	EMPLOYEE.EMPID, CERTIFICATION.CERTID					
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1	*	TRANSID	INTEGER	4	N	PRIMARY KEY
2		EMPID	INTEGER	4	N	EMPID referenced from EMPLOYEE table
3		CERTID	INTEGER	4	N	CERTID referenced from CERTIFICATION table
4		ISSUEDATE	DATE	8	N	Certification issue date
5		EXPDATE	DATE	8	Y	Certification expiry date
6		LASTUPDATE	DATE	8	N	LAST UPDATED date

Table Name	EMPDESIGLINK					
Description	This table stores the employees designation details.					
Primary Key	EMPID + DESIGID					
Referential Integrity	EMPLOYEE.EMPID, DESIGNATION.DESIGID					
Comments						
SN	PKey	Column Name	Data Type	Len	Nullable	Remarks

1	*	TRANSID	INTEGER	4	N	PRIAMARY KEY
2		EMPID	INTEGER		N	EMPID referenced from EMPLOYEE table
3		DESIGID	INTEGER		N	DESIGID referenced from DESIGNATION table
4		FROMDATE	DATE		N	From date
5		TODATE	DATE		Y	To date
6		STATUS	TINYINT		N	STATUS

Table Name		DESIGNATION				
Description		This table stores the various designations maintained in the company.				
Primary Key		DESIGID				
Referential Integrity		GRADE.GRADEID				
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1.	*	DESIGID	INTEGER	4	N	Id for a designation. Primary Key
2.		DESIGDESC	VARCHAR	30	N	Description of the grade.
3.		GRADEID	INTEGER	4	N	GRADEID referenced from GRADE table
4.		STATUS	TINYINT	1	N	1-Active / 0-InActive

Table Name		GRADE				
Description		Stores the GRADE details.				
Primary Key		GRADEID				
Referential Integrity						
Comments						
SN	PKey	Column Name	Data Type	Le n	Nullabl e	Remarks
1	*	GRADEID	INTEGER	4	N	GRADE ID
2		GRADEDESC	VARCHAR	30	N	GRADE Description
3		STATUS	TINYINT	1	N	1-Active / 0-InActive

Table Name		EMPCONTDETAIL				
Description		This table stores the employee's contact details.				
Primary Key		EMPID + SLNO				
Referential Integrity		EMPLOYEE.EMPID, CITY.CITYID, STATE.STATEID, COUNTRY.COUNTRYID				

Comments						
SN	PKey	Column Name	Data Type	Length	Nullable	Remarks
1	*	TRANSID	INTEGER	4	N	PRIMARY KEY
2.		EMPID	INTEGER		N	EMPID referenced from EMPLOYEE table
3.		SLNO	INTEGER		N	Serial number for the contact information
4.		ADD1	VARCHAR	40	Y	Address detail
5.		ADD2	VARCHAR	40	Y	Address detail
6.		CITYID	INTEGER		N	CITYID referenced from CITY table
7.		STATEID	INTEGER		N	STATEID referenced from STATE table
8.		COUNTRYID	INTEGER		N	COUNTRYID referenced from the COUNTRY table
9.		EMAIL	VARCHAR	50	Y	Email information
10		TELEPHONE	VARCHAR	30	Y	Telephone details

Table Name	PROJECT					
Description	This table maintains the project details and the domain in which the project is being done.					
Primary Key	PROJECTID					
Referential Integrity	DOMAIN.DOMAINID					
Comments						
SN	PKey	Column Name	Data Type	Length	Nullable	Remarks
1	*	PROJECTID	INTEGER	4	N	ID for the project. Primary Key
2		PROJECTDESC	VARCHAR	50	N	Description of the project
3		FROMDATE	DATE	8	N	Project Start date
4		TODATE	DATE	8	Y	Project End date
5		DOMAINID	INTEGER	4	N	DOMAINID referenced from DOMAIN table

Table Name	EMPPROJLINK					
Description	This table keeps track of the present project details of the employee.					
Primary Key	EMPID + SKILLISTID + PROJECTID + FROMDATE					
Referential Integrity	EMPLOYEE.EMPID, SKILLIST.SKILLISTID, PROJECT.PROJECTID					
Comments						
SN	PKey	Column Name	Data Type	Length	Nullable	Remarks

1.	*	TRANSID	INTEGER	4	N	PRIMARYKEY
2.		EMPID	INTEGER		N	EMPID referenced from EMPLOYEE table
3.		SKILLLISTID	INTEGER		N	SKILLLISTID referenced from the SKILLLIST table
4.		PROJECTID	INTEGER		N	PROJECTID referenced from the PROJECT table
5.		FROMDATE	DATE		N	From date
6.		TODATE	DATE		Y	To date
7.		LASTUPDATE	DATE	8	N	LAST updated date
8.		STATUS	TINYINT	1	N	STATUS

Table Name		SKILLLIST				
Description		This table stores the skill details.				
Primary Key		SKILLLISTID				
Referential Integrity		SKILLTYPE.SKILLTYPEID				
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1.	*	SKILLLISTID	INTEGER	4	N	Id for a skill. Primary Key
2.		SKILLLISTDESC	VARCHAR	30	N	Description of the Skill
3.		SKILLTYPEID	INTEGER	4	N	SKILLTYPEID referenced from SKILLTYPE table

Table Name		EMPTRAINING				
Description		This table stores the training details of the employees imparted at ssit.				
Primary Key		EMPID + TRAININGID				
Referential Integrity		EMPLOYEE.EMPID, TRAINING.TRAININGID				
Comments						
SN	PKey	Column Name	Data Type	Len	Nullable	Remarks
1	*	TRANSID	INTEGER	4	N	PRIMARY KEY
2		EMPID	INTEGER		N	EMPID referenced from EMPLOYEE table
3		TRAININGID	INTEGER		N	TRAININGID referenced from TRAINING table

Table Name		TRAINING				
Description		This table stores the details of the training provided to the ssit employees.				
Primary Key		TRAININGID				
Referential Integrity		CERTAUTH.CERTAUTHID				
Comments						
SN	PKey	Column Name	Data Type	Len	Nullabl e	Remarks
1.	*	TRAININGID	INTEGER	4	N	Id for the training conducted. Primary Key
2.		TRAININGDESC	VARCHAR	50	N	Description about the training
3.		FROMDATE	DATE	8	N	Training begin date
4.		TODATE	DATE	8	Y	Training end date
5.		PREMISES	VARCHAR	50	N	Training conducted place
6.		CERTAUTHID	INTEGER	4	N	CERTAUTHID referenced from CERTAUTH table with TRRAINTYPE = 1

Table Name		Security				
Description		This table maintains the userid and the password.				
Primary Key		userid				
Referential Integrity						
Comments						
SN	PKey	Column Name	Data Type	Le n	Nullabl e	Remarks
1.	*	USERID	Varchar	20	N	Id for the User.
2.		PWD	VARCHAR	20	N	Password.

Table Name		Tbl employee				
Description		This table keeps track of the present project details of the employee.				
Primary Key		Iempid				
Referential Integrity						
Comments						

SN	PKey	Column Name	Data Type	Len	Nullable	Remarks
1.		Sno	INTEGER	4	N	Sno
2.	*	IEMPID	INTEGER	4	N	EMPLOYEE ID
3.		Empname	VARCHAR	30	N	Employee name
4.		Location	VARCHAR	30	N	Location
5.		SLevel	VARCHAR	10	N	Skill level
6.		SSI Exp	DECIMAL	5	N	Experience
7.		Dprevexp	DECIMAL	9	N	Previous experience
8.		TotalExp	DECIMAL	5	N	Total Experience

Table Name		Tblcompskill				
Description		This table maintains the Compskill				
Primary Key						
Referential Integrity						
Comments						
SN	PKey	Column Name	Data Type	Len	Nullable	Remarks
1		Iempid	INTEGER	4	Y	ID for the employee. Primary Key
2		SSkillset	VARCHAR	50	Y	Skillset
3		Iskillistid	INTEGER	4	Y	Skill list id
4		Crating	VARCHAR	50	Y	Rating
5		Test id	INTEGER	4	Y	Testid

SAMPLES FORMS AND REPORTS

Sample Forms and Reports

Skill Set Manager

[Home](#) | [Admin-General](#) | [Admin-Techn](#) | [Employee](#) | [Project/Training](#) | [Survey](#) | [Reports](#) | [Help](#)

Change Password

<ul style="list-style-type: none">▶ Total Report (Skills)▶ Practice Wise Report (Skills)▶ Competency Report (Skills)▶ Competency Report (Domain)▶ Competency Skills/Emp▶ Competency Domain/Emp▶ Certification Employees <hr/> <p>▶ User Security</p>	<p>User <input type="text"/></p> <p>Old Password <input type="text"/></p> <p>New Password <input type="text"/></p> <p>Re-enter Password <input type="text"/></p> <p style="text-align: right;"><input type="button" value="Submit"/></p>
--	--

▶Country

▶State

▶City

▶Nationality

▶Profession

▶Blood Group

▶Training Skills

Admin - General

Skill Set Manager

Home | Admin-General | Admin-Tech | Employee | Project & Training | Query | Reports | Help

Certifn ID	Certification Description	Issued By	Status
<u>5</u>	Software Technology and System Management	NIFT	Active
<u>29</u>	SQL Server 7.0	Microsoft	Active
<u>120</u>	Sun Certified Programmer	Sun	Active
<u>135</u>	Sun certified System administrator	Microsystem	Active

MODE : Update Certification

Certification ID:
 Description:
 Certified By:
 Status:

- ▶ Domain
- ▶ Practice
- ▶ Qualif. Master
- ▶ Major Subject
- ▶ Qualification
- ▶ Grade
- ▶ Designation
- ▶ Skill Type
- ▶ Skill Set
- ▶ Certifying Authority
- ▶ Certification

SSI Technologies

Competency Skill Matrix Report

Emp ID	Name	Practice	Grade	Skill	Rating
56	RadhaVK	Banking	M6	.Net	Academic
99	RaviKumarN	E-Business	M6	.Net	Project Exp
143	SangeethaKR	Banking	M8	.Net	Academic
144	Venkata Reddi	E-Business	M6	.Net	Academic
147	RajaShekharS	Banking	M7	.Net	Academic
156	Duraiswamy K	Banking	M7	.Net	Academic
172	Tobby Abraham	Banking	M7	.Net	Project Exp
174	GananandMK	Banking	M7	.Net	Expert
181	Stanly Cyriac	Banking	M7	.Net	Academic
207	SatheeshKumarP	Banking	M6	.Net	Academic
300	Lakshmi Gayathri	Diversified Services	M7	.Net	Project Exp
339	SureshNarayananD	Banking	M6	.Net	Academic
354	SelvamuthukkumaranJB	Banking	M7	.Net	Academic
379	Raghunandan S	Banking	M7	.Net	Academic
384	Kalyanaraman V	Banking	M4 (B)	.Net	Academic
396	DineshaVS	Securities	M6	.Net	Project Exp
401	Aby Tonio	Banking	M6	.Net	Academic
419	Jerald Dominic	Banking	M7	.Net	Academic
627	Srikanth Pasham	Telecom	M5	.Net	Academic
686	Jayakamala V	Tech and Tools	M7	.Net	Project Exp
Total :					20

Skill Set Manager

| Home | Admin-General | Admin-Techn | Employee | Projects & Training | Query | Reports | Help

- ▶ Total Report (Skills)
- ▶ Practice Wise Report (Skills)
- ▶ Competency Report (Skills)
- ▶ Competency Report (Demand)
- ▶ Competency Skills/Emp
- ▶ Competency Demand/Emp
- ▶ Certification Employees
- ▶ User Security

Skills		Selected Skills
386 Unix	» «	.Net
3D Animator		
486 Unix		
Acrobat Writer		
Active X		
Active X DLL		

Practice	Level
- All -	- All -
Administration	M1
Banking	M2 (A)
CEOs OFFICE	M2 (B)

Must Have All Selected Skills

Generate

Employee ID

Personal Detail

Employee Info.

Designation

Make Available

Remove From Bench

Practice

Equip of Resource

Emp ID	<input type="text" value="18"/>
Prefix	<input type="text" value="Mr."/>
First Name	<input type="text" value="Baskaran"/>
Middle Name	<input type="text"/>
Last Name	<input type="text" value="Ramasamy"/>
Date Of Birth	<input type="text" value="04"/> <input type="text" value="Mar"/> <input type="text" value="1974"/>
Sex	<input type="text" value="Male"/>
Marital Status	<input type="text" value="Single"/>
Date of Joining	<input type="text" value="06"/> <input type="text" value="May"/> <input type="text" value="1999"/>
Allocated	<input type="text" value="Yes"/>
PassPort No.	<input type="text" value="A 0636258"/>
PP. Exp. Date	<input type="text" value="03"/> <input type="text" value="Jul"/> <input type="text" value="2006"/>
PP Issue Place	<input type="text" value="Trichy"/>
Status	<input type="text" value="Active"/>
Date Of Leaving	<input type="text"/> <input type="text"/> <input type="text"/>
Reason for Leaving	<input type="text"/>

Contact Details

Home

User Name

Password

LOGIN/SSM

Grade : M8
Name : Sujatha KR

Sl.No	Database	Duration(In Month-days)
1	MS SQL Server	12m - 0d

Sl.No	Design Tool	Duration(In Month-days)
1	Rational Rose	2m - 0d

Sl.No	Front End	Duration(In Month-days)
1	VB	12m - 0d

Sl.No	Hardware Platforms	Duration(In Month-days)
1	PC	13m - 0d

Sl.No	Middleware	Duration(In Month-days)
1	COM	12m - 0d
2	MTS	12m - 0d

Sl.No	O/S	Duration(In Month-days)
1	Windows NT	13m - 0d

Sl.No	Web Tool	Duration(In Month-days)
1	HTML	12m - 0d
2	ASP	12m - 0d
3	IIS	12m - 0d

- ▶ Training
- ▶ Project
- ▶ Skills Report
- ▶ Skill Total Report
- ▶ Skill Practicewise Report
- ▶ Master Skill DB
- ▶ Emp Skill DB
- ▶ Feature
- ▶ Training cost
- ▶ Employee Skill Matrix

Skill Set Manager

Home | Admin-General | Admin-Tech | Employee | Project Training | Survey | Reports | Help

Project: COM Bank

Aby Tonio
Alamelu R
Amamath G
Amamath Reddy C
Amita Bajaj
Anand C G



Raja Shekhar S
Duraiswamy K
Shyam Prakash
Lakshmi Gayathri
Girinath G



Empid 156 **Name** Duraiswamy K

SkillDesc	FromDate	ToDate	StatusCode
MS SQL Server	22 May 2001	22 Jun 2001	NoChange
JavaScript	22 May 2001	22 Jun 2001	NoChange
ASP	22 May 2001	22 Jun 2001	Deleted
Active X DLL	22 May 2001	22 Jun 2001	NoChange
Rational Rose	22 May 2001	22 Jun 2001	NoChange
VBScript	22 May 2001	22 Jun 2001	NoChange

Skill Set

ASP
Assembly Language
AST Server

From Date

22 May 2001

To Date

22 Jun 2001

- ▶ Project Info.
- ▶ Allotment
- ▶ Make ProjectEmp Available
- ▶ Make PracticeEmp Available
- ▶ Training Info.
- ▶ Attendees

skill Set Manager

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 - [-] Qualification-Master details
 - [-] Major subject details
 - [-] Qualification details
 - [-] Grade details
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 - [-] Master-Skill DB details
 - [-] Emp-Skill DB details
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Skill Set Manager

Qualification Details

This function is used to manage the reference data used to collect Qualification information.

Description
When the details of the Employee Qualification information are captured, this function is used to manage the reference data for collecting the Qualification details.

Inputs
The following are the inputs of this function -

- Qualification Id
- Basic Qualification Name
- Major Subject Name

Hide Methods

Add	It Adds the master data Qualification for getting that reflected in the Employee Addition. The basic reference data like Basic Qualification and Major Subject information are already available.
-----	---

Process
Nil

[Return to Top](#)

Employee: Amita Bajaj

Generate Report

Refresh List

TRAINING COST REPORT

EMPID: 238

EMP NAME: Amita Bajaj

Date: 9/11/02

PROGRAM	FROM DATE	TO DATE	HOURS	COST
JavaApplets	16 Dec 1999	18 Dec 1999	24	1,500
JavaScript	27 Dec 1999	28 Dec 1999	16	1,000
ASP	21 Dec 1999	21 Dec 1999	8	1,000
TANDEM	12 Jan 2000	01 Feb 2000	130	150,000
PCMM Orientation	19 Dec 2000	20 Dec 2000	8	0
Japanese Lang. Course	20 Nov 2000	23 Jan 2001	100	3,214
RBT - Design	25 May 2000	25 May 2000	4	0
SQA CMM	09 Dec 2000	09 Dec 2000	8	0
PMS Orientation Training	29 May 2001	29 May 2001	2	0

Total

Hrs :300 Rs: 156,714

Total Training Days: 37

---End of Report---

- ▶ Training
- ▶ Project
- ▶ Skills Report
- ▶ Skill Total Report
- ▶ Skill Practicewise Report
- ▶ Master Skill DB
- ▶ Emp Skill DB
- ▶ Expense
- ▶ Training cost
- ▶ Employee Skill Matrix

SYSTEM TESTING

System Testing And Implementation

Testing

Testing is an important phase in development in software development and application development in the world wide web. Testing will lead the error free application to the client. For this Automating Resources Time Scheduling there is a need of six types of testing.

They are

Unit Testing

Validation Testing

Integration Testing

Output Testing

Acceptance Testing

User Acceptance Testing

Unit Testing

Unit testing comprises the set of tests performed by an individual programmer prior to the integration of the unit into the large system. A program unit is usually small enough that the programmer who developed the unit can test it. Then the unit is integrated into the large part of the system. Unit testing is always white-box oriented and the step can be conducted in parallel for modules.

Validation Testing:

Software testing and validation is achieved through a series of black box tests that demonstrate conformity with the requirement. A test plan outlines the classes

to test to be conducted and a test procedure defines specific test cases that will be used to demonstrate conformity with the requirements. Both, the planned the procedures are designed to ensure that all functional requirements are achieved, documentation is correct and other requirements are met. After each validation test case has been conducted, one of the two possible conditions exists. They are the function or performance characteristics conform to the specification and are accepted.

A deviation from specification is uncovered and a deficiency list is created. This project is validated under different test conditions. The requirements as per the specification are met. The performance is tested at full capacity of users, accessing, saving and modifying the alumni details.

Integration Testing:

Bottom-up integration is the traditional strategy to integrate the components of the software system into the functional unit. Bottom-up integration consists of unit testing of the entire system.

Modules are tested in isolation from one another in an artificial environment, known as a "test harness", which consist of the driver programs and data necessary to exercise the modules.

Moreover Integration testing addresses the issues associated with the dual problem of verification and program construction. After the application has been integrated a set of high-order tests were conducted.

Output Testing:

The outputs are thoroughly tested by giving sample data, for which results are known. The outputs from the system are matched with that of the known values and the results are found to be accurate. Test data of about 50n username are validated on the registration form. The results were found to be accurate.

Acceptance Testing:

Acceptance testing involves planning and execution of functional tests, performance tests, and stress tests in order to demonstrate that the implemented system satisfies its requirements.

In addition to the functional performance tests, stress tests are performed to determine the limitations of the system. Tools of special importance during acceptance testing include a test coverage analyzer, a timing analyzer and a coding standard checker. Testing is the process of executing test cases with the intention of exposing the errors.

System Implementation

Implementation is the stage where the theoretical design is converted into working system. It consists of

Testing and Debugging

Error Correction

Training the user

Change over

Implementation includes equipment installation and user training. For the system to begin operation, a sufficient number of users have been trained to the system. Several hours were scheduled for a number of users so that they were able to fully understand the new system and had an opportunity to familiarize themselves with the various input screens and the generation of output.

The change over is another important aspect of the implementation process and had to be handled carefully. The existing system is changed to the new system and the system is found to meet its objectives. Data from the previous system,

static content, is ported to the new system and the result produced are compared with that of the previous system. The new system is found to satisfy the user needs.

It allows the result to the new system to be compared with the old system before acceptance by the user, thereby promoting the user confidence.

Maintenance of the System:

It is very essential to maintain any system. The categories in maintenance namely perfect, adaptive and corrective maintenance are used in maintaining the system. The web server performance is monitored at equal intervals of time. The database records are backed up at regular time.

CONCLUSION

Conclusion

The project Skill Set Manager was successfully designed and developed for the client for their Human Resource activities.

The application is very user-friendly and after successful testing and implementation the feed back was taken from the client users that it works efficiently and the application was fruitful.

The application does not include the salary details of the employees which will be included after the client request.

This application will be used by the Human Resource Department of SSIT Europe and SSIT North America in near future.

Thus I conclude that this project has been developed successfully satisfying the requirements put forth.

REFERENCES

References:

- www.ASP.com

- **Human Resource Management System: A practical approach**

By Rampton, Glenn M, Turm Bull, Ian J and Doran J Allen.

- **People Soft HRMS**

By Adam T.Bromwich.



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