

# CONFIRMATION APPRAISAL SYSTEM

By

P- 2251

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**A PROJECT REPORT**

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

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**CHENNAI 600 025**

## **BONAFIDE CERTIFICATE**

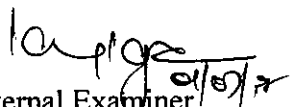
Certified that this project report titled **Confirmation Appraisal System** is the bonafide work of **Mr. C. Anand Kumar** . (Registration Number:71205621002) who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form 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.

*N. Jayakanthan*  
Supervisor

  
Head of the Department

Submitted to Project and Viva Examination held on \_\_\_\_\_

Internal Examiner

  
External Examiner

March 31, 2008

## To whomsoever it may concern

This is to certify that Mr. Anand Kumar as partial fulfillment of his MCA , from Kumaraguru College Of Technology, Coimbatore, TamilNadu , has completed his project for Patni under the guidance of Mr.Rajeev Ranjan. He has worked on "Confirmation Appraisal System". The project traineeship duration has been from 24/12/2007 to 23/6/2008.

Anand has been very sincere & diligent in his job and his performance on the project has been acceptable.

We wish him a bright career and success in all his future endeavors.

(1/2)

For Patni Computer Systems Ltd.

*Pradnya Naidu*

Pradnya Naidu  
Asst. Manager - GRiTHR

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## **CHAPTER I**

### **1. INTRODUCTION**

Confirmation Appraisal System (CAS) deals in evaluating the overall performance of the employee. This system helps the officials to judge an employee during his appraisal period. This system can handle long term and that makes this software a future-proof. The system will handle the evaluation process of the employee by rating him under various competencies and based on his rating the higher officials will confirm his job.

#### **1.1 ORGANISATION PROFILE**

##### **ABOUT PATNI**

Patni Computer Systems Ltd. (Patni) (BSE: PATNI COMPUT, NSE: PATNI, NYSE: PTI) is one of the leading global providers of Information Technology services and business solutions. Over 15,000 professionals service clients across diverse industries, from 22 sales offices across the Americas, Europe and Asia-Pacific, and 20 Global Delivery Centers in strategic locations across the world. It had serviced more than 400 FORTUNE 1000 companies, for over two decades.

Patni delivers high quality, reliable and cost-effective IT services to customers globally. It provides world-class technology services by constantly exploring and implementing innovative solutions that drive long-term value to its customers. As industry leaders, it has introduced offshore development centers, pioneered "follow the sun" development and support frameworks, ensuring compressed delivery timeframes.

Today, the solutions of the company provide a strategic advantage to several most-admired organizations in the world. It has long-standing and vibrant partnerships with over 300 companies across the globe.

## **THE MANY “FIRSTS” ABOUT PATNI**

- Introduced the concept of customer-specific software Development Center in 1985.
- As early as 1986 executed a client server project, HYDRA, for the London Stock Exchange.
- Was the first to undertake IBM mainframe development on remote machines through the satellite link in 1990.
- Was a pioneer of “fixed price application support engagements with defined service levels”.
- Was the first company in the Indian IT industry to undertake a large acquisition like that of Cymbal Corporation, in October 2004.
- As per a survey conducted by ITSMA - leading Consultants for Brand Identity Management in the US, our clients differentiate us from the competition by our “integrity, client-centricity and trustworthiness”.

## **OUR VISION**

To achieve global IT services leadership in providing value-added high quality IT solutions to our clients in selected horizontal and vertical segments, by combining technology skills, domain expertise, process focus and a commitment to long term client relationships.



## **OUR MISSION**

- Seek opportunities in computer technology areas which will maximize value of our services to the customer by:
  - Solving customer's problems
  - Maintaining globally comparable productivity
  - Providing world-class quality
  - Continually upgrading technology
- Develop a competent and prosperous work force by
  - Stressing growth from within
  - Demanding upgradation of skills
  - Providing competitive remuneration
- Maintain adequate profitability

## **OUR VALUES**

Reliability and Service are our watchwords. The set of values based on which all our operations are geared are:

- Excellence in all our endeavors
- Integrity in our conduct and professional practices
- Accountability and onus for any work the company is committed to achieve
- Fairness in dealing with people and problems

## **OUR QUALITY PERCEPTS**

- Maximize customer satisfaction by delivering high quality software projects and services which meet or exceed customer expectations.
- Create, implement and continuously improve internal process and methodologies in order to achieve excellence in these projects and services.
- Inculcate commitment to quality and excellence in every employee and create an environment that encourages employees to do things right the first time, every time.

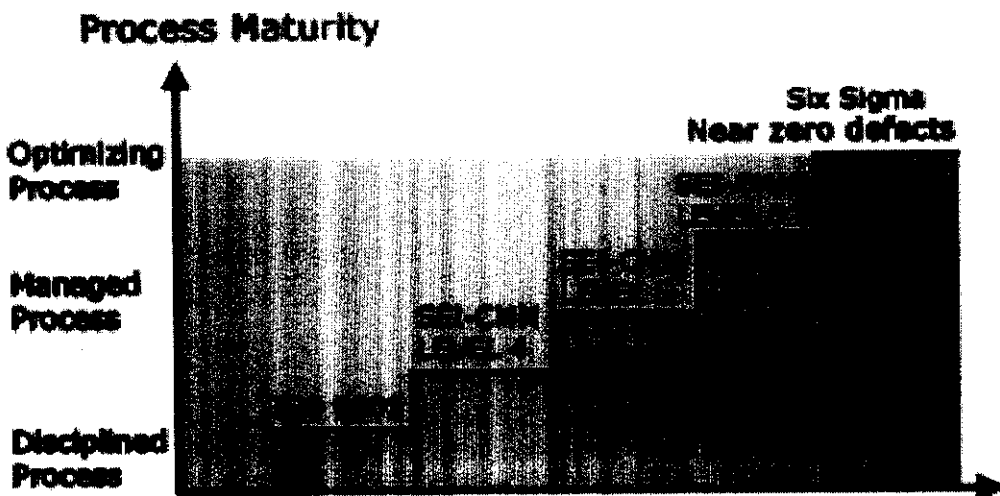
## **KNOWLEDGE MANAGEMENT**

Patni has adopted a 5-tier architecture for effective enterprise wide Knowledge Management (KM). Starting with the Knowledge Center (KC) at the top, it has portals for each business unit, account, project and team member. Local KM portals at each business unit level, help the employees collaborate effectively by providing a single point of access to SMEs, process/project teams, knowledge repositories and applications.

## **QUALITY LEADERSHIP**

Patni's robust methodologies and processes consolidate decades of software development and maintenance experience in delivering and supporting enterprise applications and products. The mature process frameworks effectively reduce risk and unpredictability across the software development life cycle and flexibly integrate with the clients' processes.

Patni is an ISO 9001:2000 certified organizations; assessed enterprise-wide at SEI-CMMI Level 5 (V1.2), SEI-CMM Level 5 and P-CMM Level 3. It has integrated Six Sigma techniques to focus on continuous, measurable process improvement, with powerful analytical tools and sophisticated review processes.



Patni has its advantage in

- Process & Quality Leadership
- Global Delivery Excellence
- Enhanced Business Value
- Thought Leadership
- Business Stability
- Full Service Provider

## **BELIEFS AT PATNI**

We are one team. Our company is united through shared beliefs like:

- **OUR FOCUS**

Reliability and Service are our watchwords. We will live up to them in all our endeavors and activities.

- **OUR ETHICS**

We will practice the highest standards of personal ethics, fair play, honesty and integrity so that in all our relationships we can have pride in ourselves and our company.

- **OUR CUSTOMERS**

We will strive relentlessly to anticipate meet and exceed our customer's expectations by adapting to a changing marketplace.

- **OUR SELVES**

Ours is an organization oriented towards personal and professional satisfaction and growth. We will respect and treat each other as individuals.

## **OUR CORPORATE STRENGTHS**

- Technology driven software organization.
- Over 25 years of international software operations.
- Amongst the Top 10 Indian Software Exporters.
- Worldwide Operations spanning North America, Europe, Asia Pacific, Far East, Japan.
- Over 12,000 professionals servicing a global clientele, from 23 sales offices and multiple global development centers across 8 cities in India, besides in the US and UK.

- Modern Development Centers at Mumbai, Navi Mumbai, Pune, Gandhinagar, Hyderabad, Bangalore, Chennai and NOIDA in India. Branch Offices at USA, Canada, UK, The Netherlands, Sweden, Deutschland, Japan, Korea and Australia.
- Carrier grade International and Domestic WAN backbone with an assortment of DS3, Free Space Optics, RF and T1/E1 links from multiple service providers thus ensuring resiliency and availability.
- Self healing MPLS network accomplished using routing protocols like EIGRP and BGP that converge independently with full transparency .
- State of the art infrastructure encompassing multi-tiered Stateful Inspection Firewalls, Intrusion Prevention Systems, Content Filters, Spam Firewalls, Clusters, Blade Servers, Load Balancers and segregated LAN's.
- Built on Industry wide accepted practices like BS7799 and ITIL with a very strong thrust on Security and Business Continuity.
- A network with the agility to mold to customer necessities but still be managed centrally.

## **OUR COMMUNICATION CHANNELS**

- **MEETINGS**

Meetings are held regularly within and across Groups to facilitate the communication of information within the organization. Attendance at these meetings is important.

- **E-MAIL**

The LAN Facility Connecting the machines in all units can be used to communicate with colleagues. Patni has its own Internet Domain. This allows world-wide communications.

- **IN-HOUSE MAGAZINE**

We publish a quarterly called fwd>>. We look forward to your contributions, personal and professional which could be emailed to [fwd@patni.com](mailto:fwd@patni.com)

- **NOTICE BOARD**

A notice board is provided at every unit to help Patni-ites keep abreast of all happenings at Patni.

## **OUR RESOURCES**

- **PEOPLE**

Employees are our greatest asset. Their growth as people and as professionals is as important to us as exceeding our Customer's expectations. We strive to equip our people with skills and competencies to keep pace with global demands.

- **TECHNOLOGY PLATFORMS**

- **IBM LARGE SYSTEMS:**

CA/Cullinet Products (IDMS/R - ADS/O), IBM Proprietary (DB2, VSAM, IMS, CICS).

- **OPEN SYSTEMS (UNIX BASED):**

Sun-SPARC, HP-9000, IBM/RS-6000, DEC/MIPS, DEC/Alpha, DG/AViiON, C/C++, X11R4, Motif, Oracle/Ingres/Sybase/Informix/Progress.

- **MID-RANGE & SMALL SYSTEMS:**

AS/400, DEC-VAX, Data General, PS/2, Apple Macs., PC/386/486, Novell LANs.

- **EMERGING FOCUS ON:**

Client-Server Technologies & Architectures, Object-oriented Design & Development, Application Areas (Finance, Manufacturing), Internet Technologies.



## 1.2 ABSTRACT

The System CAS mainly deals with the confirming the job of an employee. The “Confirmation Appraisal System” is developed for the use of HR Department. The CAS is a part of “Performance Appraisal System (PAS)”. Confirmation Appraisal System (CAS) deals in evaluating the overall performance of the employee. This system helps the officials to judge an employee during his appraisal period and confirm his job. This system can handle long term and that makes this software a future-proof.

The main users of this software are Appraisee, Appraiser, Reviewer and Administrator

Appraisee is an employee uses this application for filling his achievements of his project during his appraisal period. The achievements are in 3 levels they are self appraisal form, functional competencies and individual development plan.

Appraiser is an employee uses the system for evaluating the performance of the Appraisee. There are two Appraisers for this process namely Appraiser 1 and Appraiser 2.

The required system will handle the evaluation process of the employee by rating him under various competencies and based on his rating the higher officials will confirm his job.

## **CHAPTER II**

# **SYSTEM ANALYSIS**

### **2.1 EXISTING SYSTEM**

The existing system is “Performance Appraisal System (PAS)”. The PAS is used to calculate the overall performance of an employee and gives his feedback. The overall performance such as communication, skills, knowledge, etc., In general it can be mention it as Rating, Calculating the salary increment based on his ability, providing on-site opportunities. Since the system has lot of divisions, it can not process in an effective way for this difficulty the CAS is developed.

### **2.2 PROPOSED SYSTEM**

Confirmation Appraisal System (CAS) is an application developed for evaluating the performance of the employee during the appraisal period. At first the appraise fills his details in self evaluation form and it will be evaluated by the authorized people. This report will be normalized by the HR people and declare the employee’s job confirmation.

#### **In Scope**

- All the employees can use this system, but with a few limitations.
- The Appraise are allowed only to fill the detailed self assessment.
- The Appraiser can review and provide the performance feedback.
- The Reviewer can view the feedback and ensures high performance standard are being achieved.
- This system supports the confirmation type of the appraisal system



- The Appraiser cannot make any changes provided by the Appraise.
- The Reviewer can't make any changes in the comment provided by the appraiser.
- This system supports Internet explorer as its web browser.
- It provides the basic printing facility from the HTML page.

### **Out Scope**

- This system doesn't support the browsers like Mozilla FireFox , Opera and Netscape Navigator
- This system is not supported for annual confirmation.
- This SRS doesn't provide User documentation and training.

## **CHAPTER III**

# **DEVELOPMENT ENVIRONMENT**

### **3.1 HARDWARE SPECIFICATION**

The minimum hardware configuration of the system on which the project was developed is as follows

#### **Server Requirements**

Processor	- Pentium IV
RAM	- 1.0 GB RAM (2X512) DDR2
CPU Clock	- 2.8 GHz or Above
Hard Disk	- 80 GB SATA
Display	- 17" SVGA 1024 X 768 Resolution or Above
Printer	- HP Laser Printer
Keyboard	- 102 keys
Mouse	- Optical Scroll Mouse

#### **Client Requirements**

Processor	- Pentium IV
RAM	- 512 MB RAM
CPU Clock	- 533 MHz or Above
Hard Disk	- 40 GB SATA
Display	- 17" SVGA 1024 X 768 Resolution or Above
Printer	- HP Laser Printer
Keyboard	- 102 keys
Mouse	- Optical Scroll Mouse

## 3.2 SOFTWARE SPECIFICATION

OPERATING SYSTEM	:	WINDOWS 2000
FRONT-END	:	ASP.NET WITH VB.NET
BACK-END	:	MS SQL SERVER 2005

## SOFTWARE DESCRIPTION

### THE .NET FRAMEWORK

The .NET framework is a new computing platform that simplifies application development in the highly distributed environment of the internet.

#### Objectives Of .Net Framework

- To provides Object-oriented programming environment whether object codes is stored and executed locally and internet distributed, or executed remotely.
- To provide a code-execution environment to minimizes software deployment and guarantees safe execution of code.
- Eliminates the performance problems.
- There are different types of application, such as windows-based application and web-based applications.
- To make communication on distributed environment to ensure that code be accessed by the .NET Framework can integrate with any other code.

#### Components of .net framework

##### The common language run time (clr)

The common language runtime is the foundation of the .NET Framework. It manages code at execution time, providing important services such as memory management, and remoting and also ensures more security and robustness. The concept of code management is a fundamental principle of the runtime code that targets the

runtime is known as managed code, while code that does not target the runtime is known as unmanaged code.

### **The .Net Framework Class Library**

It is a comprehensive, object-oriented collection of reusable type used to develop applications ranging from traditional command-line or graphical user interface (GUI) applications to applications based on the latest innovations provided by ASP.NET, such as Web Forms and XML Web services.

The .NET Framework can be hosted by unmanaged components that load the common language runtime into their processes and initiate the execution of managed code, there by creating a software environment that can exploit both managed and unmanaged features. The .NET Framework not only provides several runtime hosts, but also supports the development of third-party runtime hosts.

Internet Explorer is an example of unmanaged application that hosts the runtime (in the form of a MIME type extensions).using Internet Explorer to hosts the runtime to enables embeds managed components or windows forms controls in HTML documents.

### **Features Of The Common Language Run Time**

The common language run time manager memory; thread execution, code execution, code safety verification, compilation, and other system devices these are all run on CLR.

- Security
- Robustness
- Productivity
- Performance

## **Security**

The run time enforces code access security. The security features of the run time thus enable legitimate internet deployed software to be exceptionally features rich.

With regards to security, managed components are awarded varying degrees of trust, depending on a numbers of factors that include their origin to perform file access operations, registry access operations, or other sensitive functions.

## **Rebustness**

The runtime enforces code robustness by implementing a strict type and code verification infrastructure called the common type system(CTS). The CTS ensures that all managed code is self describing. The managed environment of the run time eliminates many common software issues.

## **Productivity**

The run time also accelerates developer productivity. For example, programmers can write applications in the development language of choice, yet take full advantage of the run time, the class library, and components written in other languages by other developers.

## **Performance**

The run time is designed to enhance performance. Although the common language run time provides many standard run time services, managed code is never interpreted. A feature is called just in time (JIT) compiling enables all managed code to run in the native machine language of the system on which it is executing. Finally, the

run time can be hosted by high performance, server side application, such as Microsoft ® SQL™ sever and internet information services (IIS).

## **VISUAL STUDIO.NET**

### **What's New in Visual Studio .NET**

Visual Studio .NET is the tool for rapidly building enterprise-scale ASP Web applications and high performance desktop applications. Visual Studio includes component-based development Tools, such as Visual C#, Visual Basic, and Visual C++, as well as a number of additional technologies to simplify team-based design, development, and deployment of your solutions.

Visual Studio supports the .NET Framework, which provides a common language runtime and unified programming classes. ASP.NET uses these components to create ASP Web applications and XML Web services. Also included is the MSDN Library, which contains all the documentation for these development Tools.

### **What's New in JScript .NET**

Lists the new and improved aspects of JScript, such as class-based objects, typed programming, and namespaces.

### **Visual Studio .NET SDK**

Describes the new Visual Studio Software Development Kit (SDK), which provides extensibility options and Toolkits.

To learn more about the new and enhanced features available with this version of Visual Studio, select from the links below. These links take you to the various sections within this Topic.

## **The Integrated Development Environment**

Provides information about the new and improved items that are used by all of the Protocol within the Visual Studio Integrated Development Environment (IDE).

## **Sample Applications**

Provides information about the Duwamish and the Fitch and Mather sample applications and the latest updates available with this release.

## **Product Documentation**

Provides information about the Dynamic Help window as well as to display Help within the IDE or in a separate window.

## **The Integrated Development Environment**

The following list of links covers new and improved items that are used by all of the Protocol within the Visual Studio Integrated Development Environment (IDE). These links take you To the various sections within this Topic.

## **Application Templates**

Provides information about application architectural guidance available through Enterprise Templates.

## **Edit Tools**

Provides information about development Tools, such as the code editor, HTML Designer, and Object Browser.

## **Debug Tools**

Provides information about the integrated debugger.

## **Deployment Tools**

Provides information about the deployment features available for this release, such as Windows Installer support and Merge Module support.

## **Macro and Automation Object Model Tools**

Provides information on macro recording and the enhanced automation object model.

## **General Integrated Development Environment Tools**

Visual Basic, Visual C++, Visual C#, and Microsoft Developer Network (MSDN) are hosted within the Visual Studio integrated development environment (IDE). Sharing a single IDE provides many benefits, including consolidating similar Tools from the various Protocol into a set of shared Tools used throughout Visual Studio.

## **Start Page**

The Start Page provides a quick way to set your user preferences for the IDE behaves, including the active keyboard mapping scheme, window layout, and Help filter, as well as access existing or new projects. You can also view links to the latest articles, events, and Topics on MSDN Online. The Start Page appears by default each time you launch Visual Studio and is the default Web browser home page for the IDE.

## **Web Browser**

You can display Web pages directly within the IDE. To display a Web browser window in the IDE, choose **S Browser** from the **Web Browser** submenu available on the **View** menu. The first time you open a Web browser window, the Start Page appears by default.



When a Web browser window is open, the Web Toolbar appears, which allows you to enter URLs, move backward and forward within the navigation history, and return to the Web browser home page. You can also access your Web browser favorites as well as add links to the favorites list from within Visual Studio.

### **Command Window**

The Command window is an amalgamation of a command line and Visual Basic's immediate window. It has two modes: Command and Immediate.

### **SQL SERVER**

The code base for MS SQL Server (prior to version 7.0) originated in Sybase SQL Server, and was Microsoft's entry to the enterprise-level database market, competing against Oracle, IBM, and, later, Sybase itself. Microsoft, Sybase and Ashton-Tate originally teamed up to create and market the first version named SQL Server 1.0 for OS/2 (about 1989) which was essentially the same as Sybase SQL Server 3.0 on Unix, VMS, etc. Microsoft SQL Server 4.2 was shipped around 1992 (available bundled with Microsoft OS/2 version 1.3). Later Microsoft SQL Server 4.21 for Windows NT was released at the same time as Windows NT 3.1. Microsoft SQL Server v6.0 was the first version designed for NT, and did not include any direction from Sybase.

About the time Windows NT was released, Sybase and Microsoft parted ways and pursued their own design and marketing schemes. Microsoft negotiated exclusive rights to all versions of SQL Server written for Microsoft operating systems. Later, Sybase changed the name of its product to Adaptive Server Enterprise to avoid confusion with Microsoft SQL Server. Until 1994 Microsoft's SQL Server carried three Sybase copyright notices as an indication of its origin.

Since parting ways, several revisions have been done independently. SQL Server 7.0 was the first true GUI based database server and was a rewrite from the legacy Sybase code. It was succeeded by SQL Server 2000, which was the first edition to be launched in a variant for the IA-64 architecture.

In the six years since release of Microsoft's previous SQL Server product (SQL Server 2000), advancements have been made in performance, the client IDE tools, and several complementary systems that are packaged with SQL Server 2005. These include: an ETL tool (SQL Server Integration Services or SSIS), a Reporting Server, an OLAP and data mining server (Analysis Services), and several messaging technologies, specifically Service Broker and Notification Services.

### SQL Server Release History

Version	Year	Release Name	Codename
4.21 (WinNT)	1993	SQL Server 4.21	-
6.0	1995	SQL Server 6.0	SQL95
6.5	1996	SQL Server 6.5	Hydra
7.0	1999	SQL Server 7.0	Sphinx
-	1999	SQL Server 7.0 OLAP Tools	Plato
8.0	2000	SQL Server 2000	Shiloh
8.0	2003	SQL Server 2000 64-bit Edition	Liberty
9.0	2005	SQL Server 2005	Yukon
10.0	2008?	SQL Server 2008	Katmai

## **The architecture of SQL Server**

The architecture of Microsoft SQL Server is broadly divided into three components: SQLOS which implements the basic services required by SQL Server, including thread scheduling, memory management and I/O management; the Relational Engine, which implements the relational database components including support for databases, tables, queries and stored procedures as well as implementing the type system; and the Protocol Layer which exposes the SQL Server functionality.

SQL Server normally supports up to 2 GB memory on x86 hardware, though it can be configured to use up to 64 GB if the Address Windowing Extension is used in the supporting operating system. For x64 hardware, it supports 8 TB of memory, and 7 TB for IA-64 systems. However, when running x86 versions of SQL Server on x64 hardware, it can access 4 GB of memory without any special configuration.

### **Relational engine**

The Relational engine implements the relational data store using the capabilities provided by SQLOS, which is exposed to this layer via the private SQLOS API. It implements the type system, to define the types of the data that can be stored in the tables, as well as the different types of data items (such as tables, indexes, logs etc) that can be stored.

### **Protocol layer**

Protocol layer implements the external interface to SQL Server. All operations that can be invoked on SQL Server are communicated to it via a Microsoft-defined format, called Tabular Data Stream (TDS).

## **Data storage**

The main unit of data storage is a database, which is a collection of tables with typed columns. SQL Server supports different data types, including primary types such as Integer, Float, Decimal, Char (including character strings), Varchar (variable length character strings), binary (for unstructured blobs of data), Text (for textual data) among others.

## **Buffer management**

SQL Server buffers pages in RAM to minimize disc I/O. Any 8 KB page can be buffered in-memory, and the set of all pages currently buffered is called the buffer cache. The amount of memory available to SQL Server decides how many pages will be cached in memory.

## **Logging and Transaction**

SQL Server ensures that any change to the data is ACID-compliant, i.e., it uses transactions to ensure that any operation either totally completes or is undone if fails, but never leave the database in an intermediate state.

## CHAPTER IV

### SYSTEM DESIGN

#### 4.1 TABLE DESIGN

**TABLE NAME** : Basic Details

**PRIMARY KEY** : \* Emp\_id

Field Name	Data Type	Length
Emp_id*	Integer	5
Emp_name	nVarchar	25
Emp_type	nVarchar	15
Desg_id	Integer	3
Loc_id	Integer	3
PSbu_id	Integer	3
CSbu_id	Integer	3
Doj	nVarchar	15
Apr1	Integer	3
Apr2	Integer	3
Reviewer.	Integer	3
Password	nVarchar	25

**TABLE NAME** : Designation

**PRIMARY KEY** : \* Desg\_id

Field Name	Data Type	Length
Desg_id*	Integer	2
Designation	nVarchar	25

**TABLE NAME** : Location

**PRIMARY KEY** : \*Loc\_id

Field Name	Data Type	Length
Loc_id*	Integer	2
Location	nVarchar	25

**TABLE NAME** : Sbu

**PRIMARY KEY** : \* Sbu\_id

Field Name	Data Type	Length
Sbu_id*	Integer	2
Sbu	nVarchar	25

**TABLE NAME** : Project

**PRIMARY KEY** : \* Proj\_id

Field Name	Data Type	Length
Proj_id*	Integer	2
Project	nVarchar	25

**TABLE NAME** : Factor

**PRIMARY KEY** : \* Factors\_id

Field Name	Data Type	Length
Factor_id*	Integer	2
Factors	nVarchar	25

**TABLE NAME** : Timeline

**PRIMARY KEY** : \* Time\_id

Field Name	Data Type	Length
Time_id*	Integer	2
Timeline	nVarchar	25

**TABLE NAME** : Recommendation

**REFERENCE KEY** : \* Emp\_id, Rev\_id

Field Name	Data Type	Length
Emp_id*	Integer	2
Rev_id*	Integer	2
Decision	Text	5
Confirmation	Text	5
Probation	Text	5
Termination	Text	5
Comments	Text	50

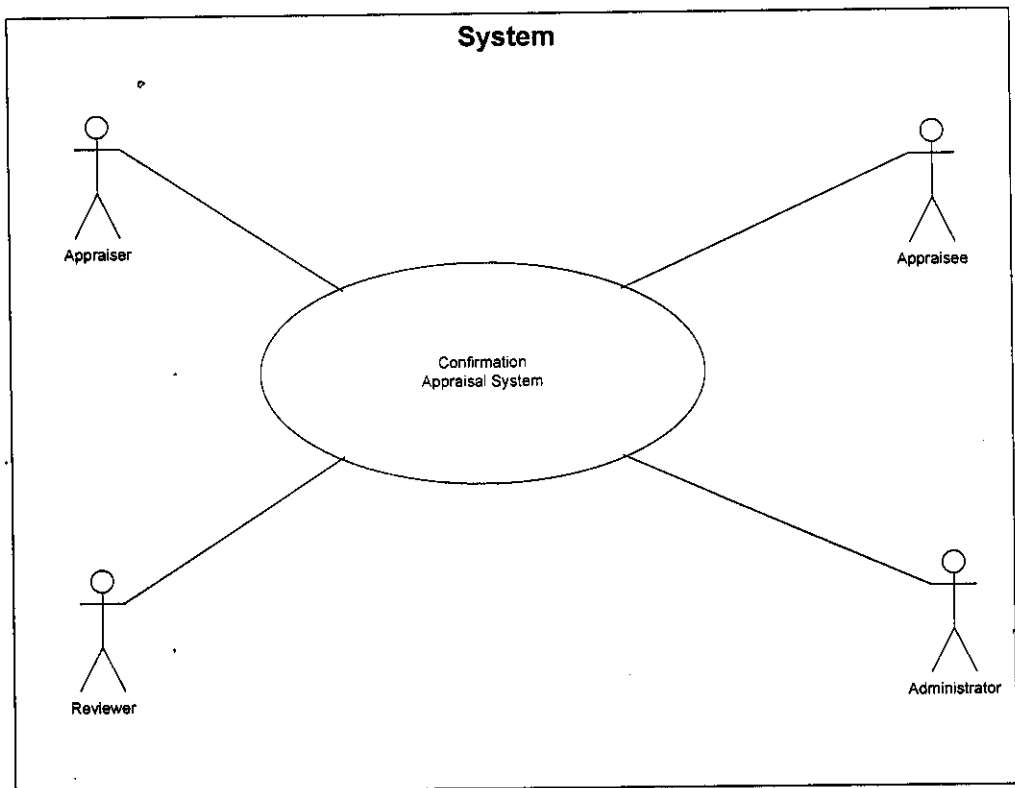
**TABLE NAME** : Appraisee

**REFERENCE KEY** : \* Emp\_id

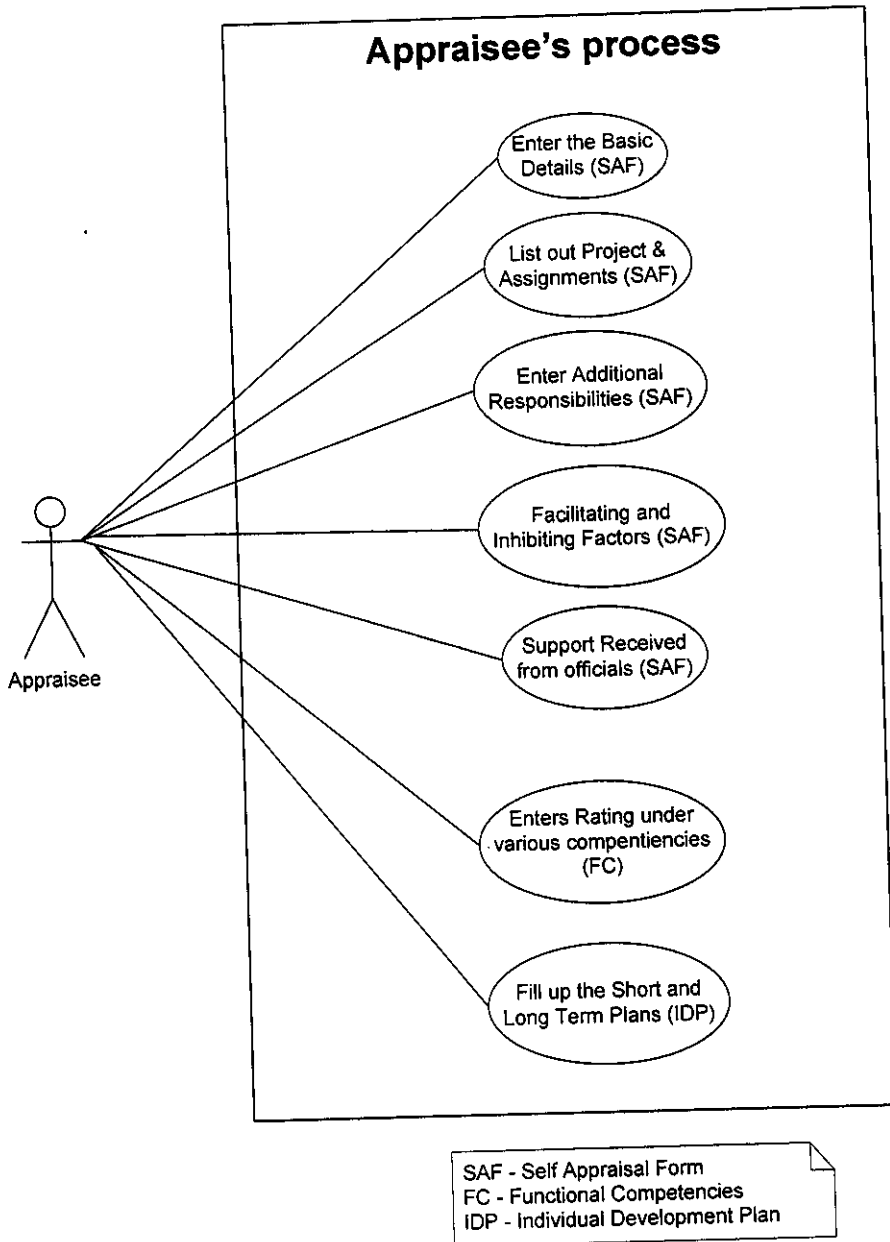
<b>Field Name</b>	<b>Data Type</b>	<b>Length</b>
Emp_id*	Integer	2
App_from	nVarchar	15
App_to	nVarchar	15
Roles	nVarchar	50



## 4.2 USE CASE DIAGRAM



**Fig 4.2.1 : The System**



**Fig 4.2.2 : Appraisee**

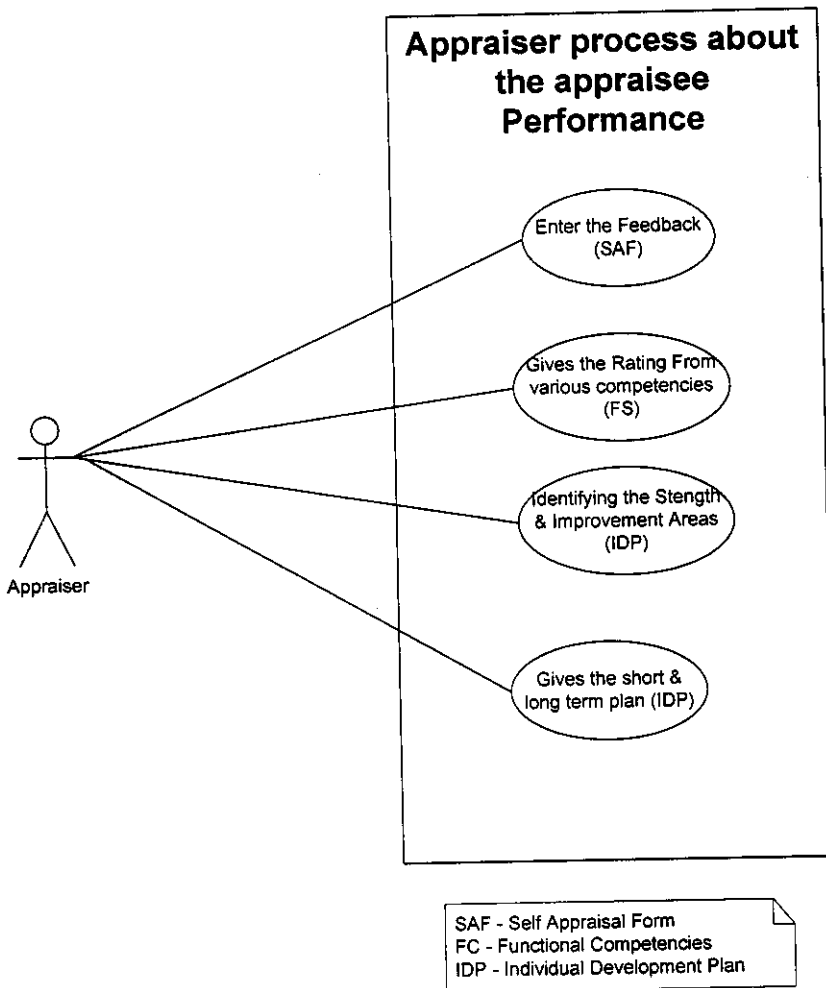
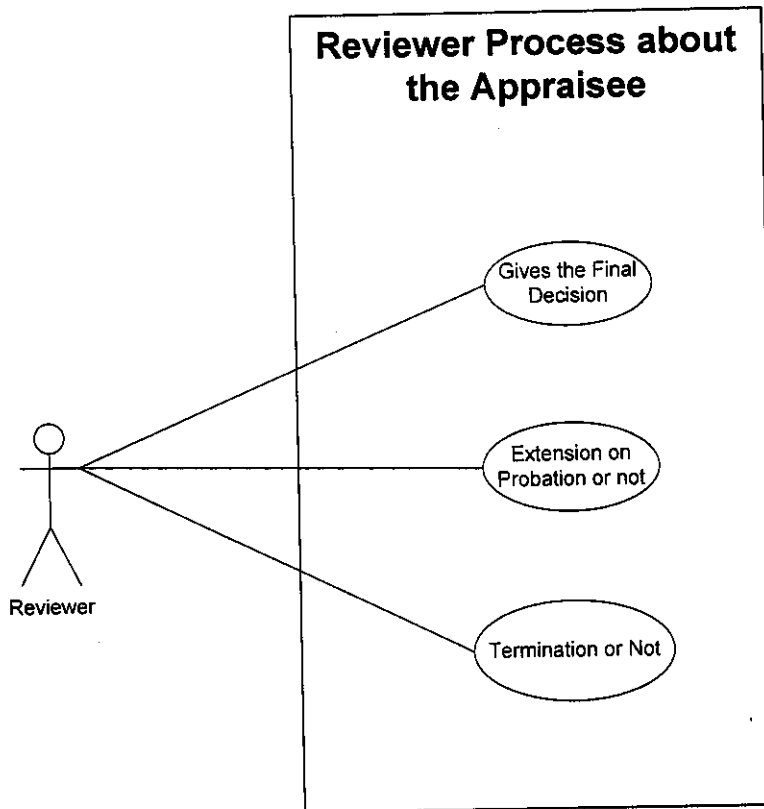
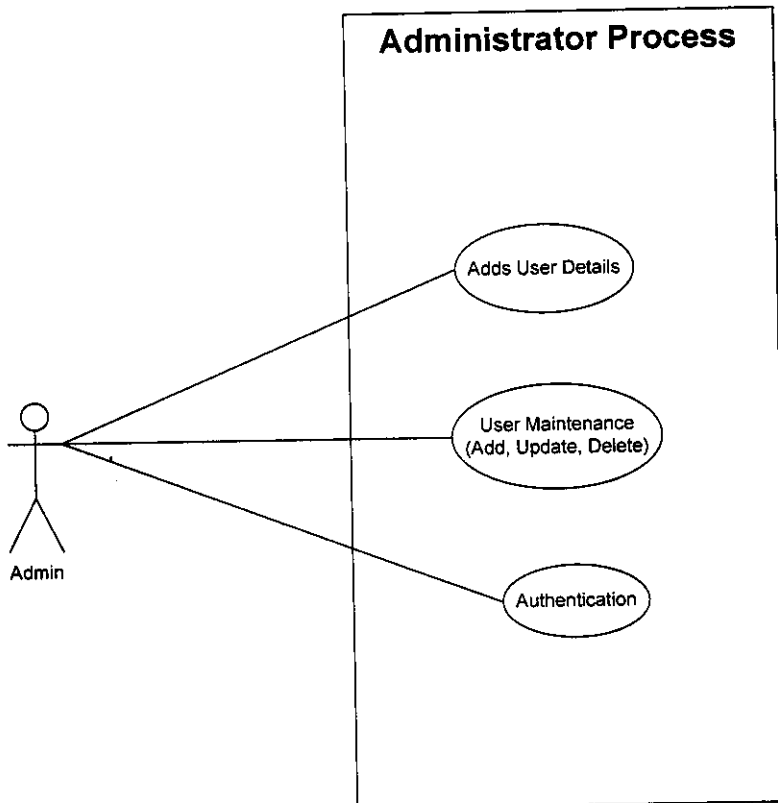


Fig 4.2.3 : Appraiser



**Fig 4.2.4 : Reviewer**



**Fig 4.2.5 : Administrator**

### 4.3 DATA FLOW DIAGRAM

A data flow diagram is graphical tool used to describe and analyze movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. Using two familiar notations Yourdon, Gane and Sarson notation develops the data flow diagrams. Each component in a DFD is labeled with a descriptive name. Process is further identified with a number that will be used for identification purpose. The development of DFD'S is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The lop-level diagram is often called context diagram. It consists a single process bit, which plays vital role in studying the current system. The process in the context level diagram is exploded into other process at the first level DFD.

The idea behind the explosion of a process into more process is that understanding at one level of detail is exploded into greater detail at the next level. This is done until further explosion is necessary and an adequate amount of detail is described for analyst to understand the process.

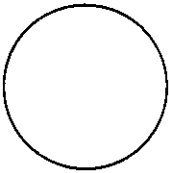
Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical form, this lead to the modular design.

A DFD is also known as a "bubble Chart" has the purpose of clarifying system requirements and identifying major transformations that will become programs in system design. So it is the starting point of the design to the lowest level of detail. A DFD consists of a series of bubbles joined by data flows in the system.

**DFD SYMBOLS:**

In the DFD, there are four symbols

- A square defines a source(originator) or destination of system data
- An arrow identifies data flow. It is the pipeline through which the information flows
- A circle or a bubble represents a process that transforms incoming data flow into outgoing data flows.
- An open rectangle is a data store, data at rest or a temporary repository of data



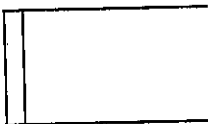
Process that transforms data flow.



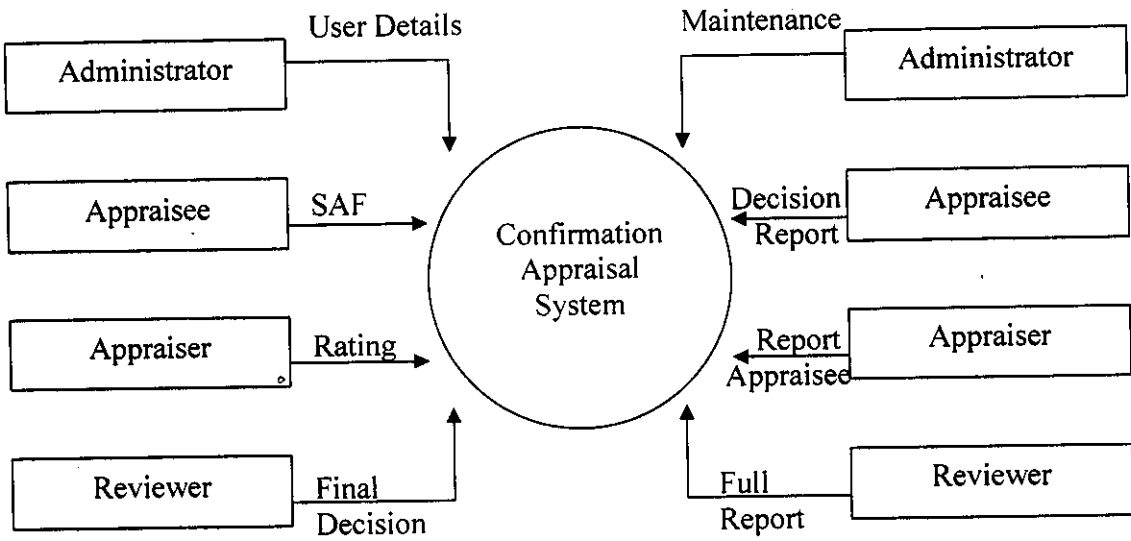
Source or Destination of data



Data flow

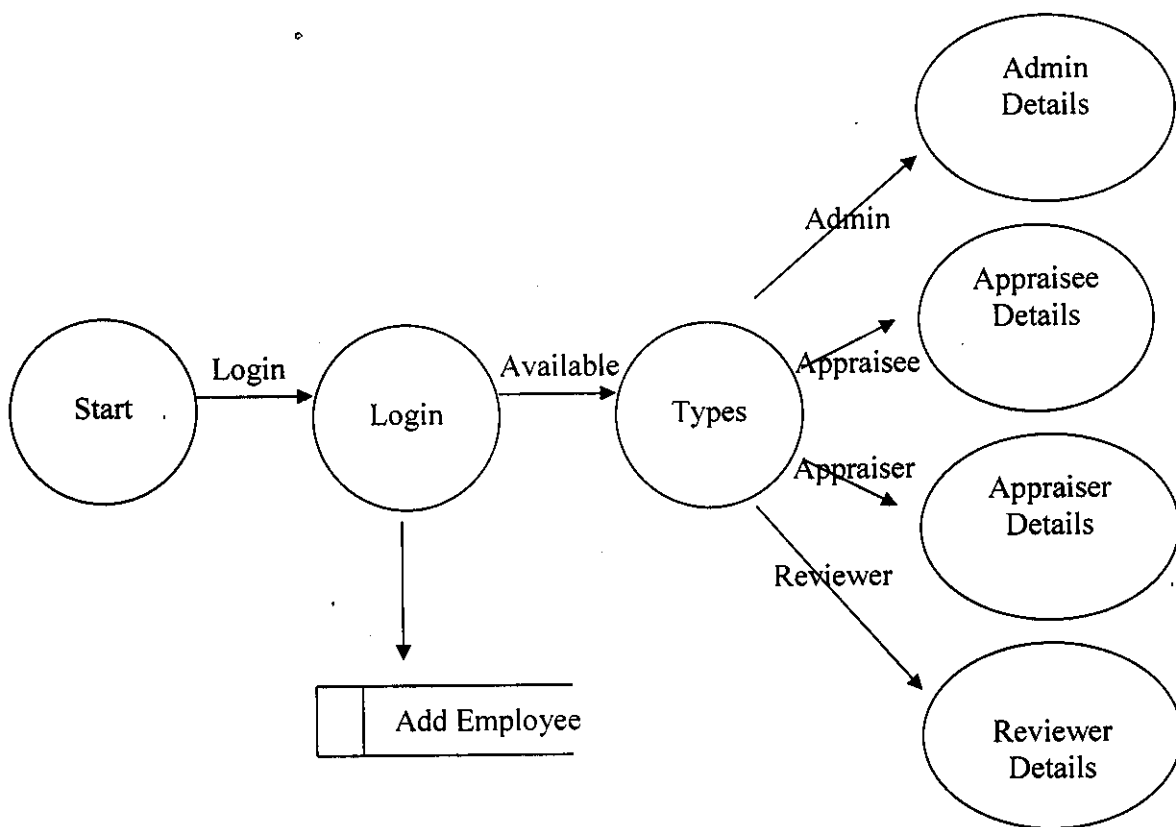


Data Store

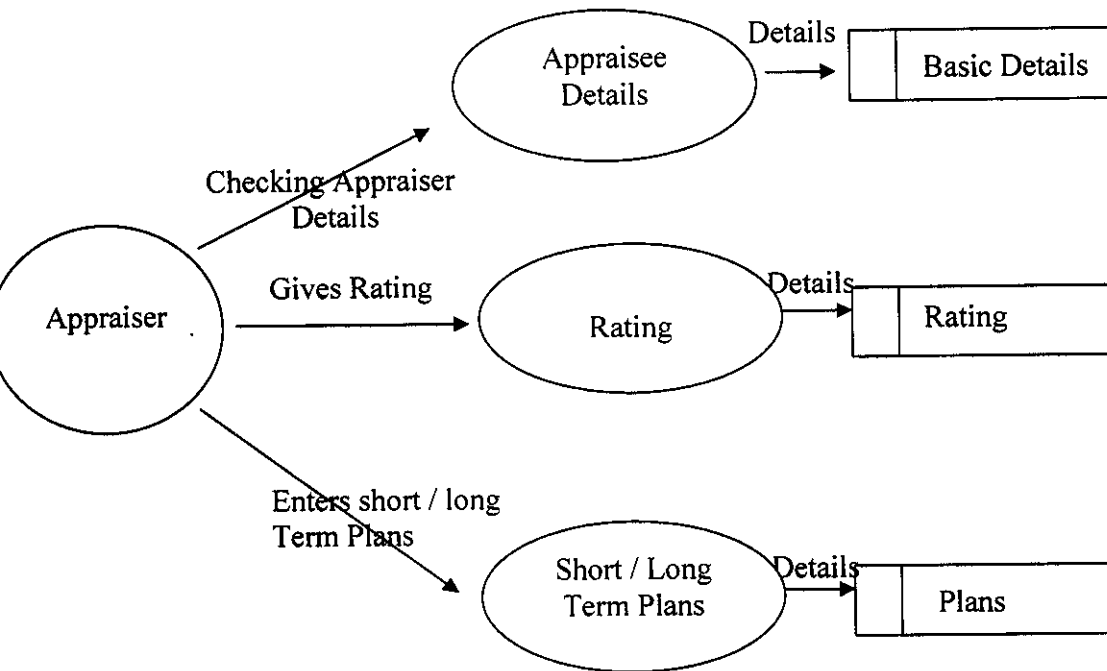


**Fig 4.3.1 :** Level 0 DFD (Context Diagram)





**Fig 4.3.2 : Level 1 DFD (Login)**



**Fig 4.3.3** : Level 2 DFD (Appraiser)

## **CHAPTER V**

# **TESTING**

### **5.1 SYSTEM 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.

Successful implementation may not guarantee improvement in the organization using the new system, but it will prevent improper installation.

### **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.

For example, the dropdowns gather from database, so each dropdowns should be verified whether they are bound to the correct database field. It is done during development of the key artifacts. 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 result analysis, 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.

## **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 the actual intended product that was agreed upon in the beginning. Validation also determines if the system compiles with the requirements and performs functions for which it is intended and meets the organization’s goal 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 Result Repository to check whether each of the functions is done correctly as expected in every module.

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

## 5.2 TESTING

### Introduction

Testing is vital activity that has to be enforced in the development of any system to the success of that 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.

Testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. The user tests the developed system and changes are made according to their needs. The testing phase involves the testing of developed system using various kinds of data.

Standard procedures have been followed in testing the product. Test cases are generated for each screen. These test cases will cover every possibility, which could result in both positive and negative results. These test plans are maintained for any further testing done on the system. The test plan stores information such as, the test script/input, expected output, actual output, comments and the name of the tester. This plan will be followed for all types of testing done in the system.

The objectives of testing are,

- Testing is the process of executing the program with the intention of finding an error.
- A good test is one that has a high probability of finding an as-yet-undiscovered error.
- A successful test is that which uncovers as-yet-undiscovered error.

## **Result Repository Testing Process**

The Result Repository Data Warehouse testing process is mostly manual and partially automated. Once the Data Warehouse and the input data are deployed to the QA environment, QA team will be informed about the Release number, Build number and CR numbers through a mail from the QA manager. QA team will fill the data through the application that cover all the scenarios for the DW requirements and run the ETL process. Once ETL process is complete, QA will verify the data flow throughout the application. If any issues found a CR will be raised in the Star Team against the developer's name. This issue will be fixed by the developer and will be released to the QA team in the next build.

Test scripts for the application are recorded using Test Director 7.2. There are no test data sheets maintained by the QA team. QA team members are having their own local copy of the test data.

Testing cycle consists of

- Unit testing
- Integration testing
- Regression testing
- Smoke testing
- Performance testing.

There is no rigorous performance testing done by the QA team. There is no special tool used for performance testing.

### **➤ 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 this project each module is tested separately as a unit. Initially the flow of control and data through each process 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 test plan. 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.

### ➤ **Integration Testing**

Integration testing tests the process of integrating the various modules to form the completed system. Integration starts with a set of units each individually tested in isolation and ends when the entire application has been built. Integration testing verifies that the combined units function together correctly. It facilitates in finding problem that occur at interface or communication between the individual parts.

Result Repository system followed top-down integration testing. The process is continued from functional level to module level, finally to the system level. In the final stage, the whole system is taken together and tested for integration. A change in one place should be reflected through out the system. Regression testing is done after each change made into the software. The whole set of test cases need to be run again to do the regression testing.

### ➤ **Regression Testing**

Regression testing is any type of software testing which seeks to uncover regression bugs. Regression bugs occur whenever software functionality that previously worked as desired, stops working or no longer works in the same way that was previously planned. Typically regression bugs occur as an unintended consequence of program changes.

Common methods of regression testing include re-running previously run tests and checking whether previously fixed faults have re-emerged.

Regression testing can be used not only for testing the *correctness* of a program, but it is also often used to track the quality of its output. For instance in the design of a compiler, regression testing should track the code size, simulation time and compilation time of the test suite cases

### ➤ **Smoke Testing**

Smoke testing is a preliminary to further testing, which should reveal simple failures severe enough to reject a prospective software release. Smoke testing is done by developers before the build is released or by testers before accepting a build for further testing.

In software engineering, a *smoke test* generally consists of a collection of tests that can be applied to a newly created or repaired computer program. Sometimes the tests are performed by the automated system that builds the final software. In this sense a smoke test is the process of validating code changes before the changes are checked into the larger product's official source code collection. Next after code reviews, *smoke testing* is the most cost effective method for identifying and fixing defects in software; some even believe that it is the most effective of all.

In software testing, a *smoke test* is a collection of written tests that are performed on a system prior to being accepted for further testing. This is also known as a build verification test. This is a "shallow and wide" approach to the application. The tester "touches" all areas of the application without getting too deep; there is no need to get down to field validation or business flows. These written tests can either be performed manually or using an automated tool. When automated tools are used, the tests are often initiated by the same process that generates the build itself.



### ➤ **Performance Testing**

Performance Testing covers a broad range of engineering or functional evaluations where a material, product, or system is not specified by detailed material or component specifications: Rather, emphasis is on the final measurable performance characteristics. It can also refer to the assessment of the performance of a human examinee.

## **USER TRAINING AND DOCUMENTATION**

The implementation of the system includes the training of the system. Training of the system operators includes not only the instruction on how to use the system, but also how to diagnose system errors and mal-functions and ways to resolve the same. So proper training should be provided to system operators. No training is complete without familiarizing users with simple system maintenance activities.

## **CHAPTER VI**

# **PERFORMANCE & LIMITATIONS**

### **6.1 MERITS**

Confirmation Appraisal System (CAS) deals in evaluating the overall performance of the employee. This system helps the officials to judge an employee during his appraisal period and confirm his job. This system can handle long term and that makes this software a future-proof.

This application helps in converting the unstructured way of maintaining data in the Excel Sheet into a structured format application. This will help the end user to retrieve the records based on multiple criteria's.

The major function of this application is to evaluate the performance of the Appraisee and it must provide a feedback to the appraiser and the reviewer.

### **6.2 LIMITATIONS:**

The system CAS is limited in the following ways and each Role in the system will have the following limitation only.

- The scope is limited in such a way that the Appraisee and the Appraiser will not be the same person.
- The appraiser 1 and appraiser 2 may be the same person.
- The final decision maker is the reviewer.
- The system can be accessed according to the privileges provided to the user.
- The system should provide a user interactive environment.

## **ADMINISTRATOR**

- Initially the administrator is assigned with a user id and password.
- The administrator has a central control over the database.
- The administrator sets privilege to all the users.

## **APPRAISEE**

- The Appraisee is requested to fill the self appraisal form.
- The person is allowed to rate him in the functional competencies session.

## **APPRAISER**

- The appraiser 1 and 2 will review the Appraisee's self evaluation form and add his feedback.
- The appraiser 1 and 2 will rate the appraisee in the functional competencies session which is confidential.
- The Individual development plan is filled by the appraiser after sharing with the appraisee.

## **SECURITY REQUIREMENTS**

- The person with the authenticated id and password has the privilege to access the system.
- The user can change the password by entering the security section.

The list of users and their Privileges are given in the following table

System object (Screen/Menu Item/Field)	Access Allowed			
	Add	Update	View	Delete
BDO	X	—	X	—
PM	X	—	X	—
Administrator	X	X	X	X
Resource People	X	—	X	—
Appraiser	X	—	X	—
Viewers	—	—	X	—

X - Access Granted.

— - Access Restricted.

### 6.3 FUTURE ENHANCEMENT

Nothing can exist as such till the end of the world. Changes may occur to all kinds of systems. Likewise, this system is also subjected to changes to meet the ever changing tastes and requirements. The System CAS is developed for the Designation “Software Engineer”. It will be further enhanced for all the Designation and with some of the additional requirements requested from the organizations.

## CHAPTER VII

### APPENDICES

#### SAMPLE SCREENS

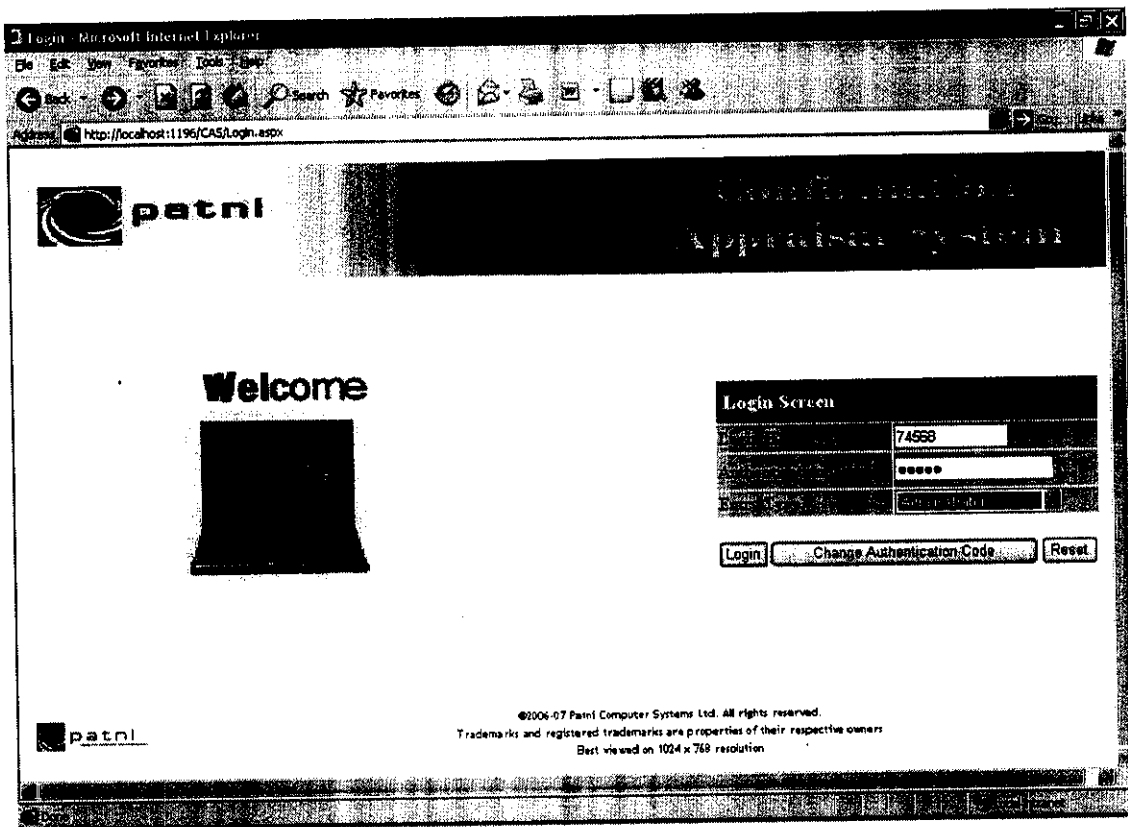


Fig 7.1 : Login

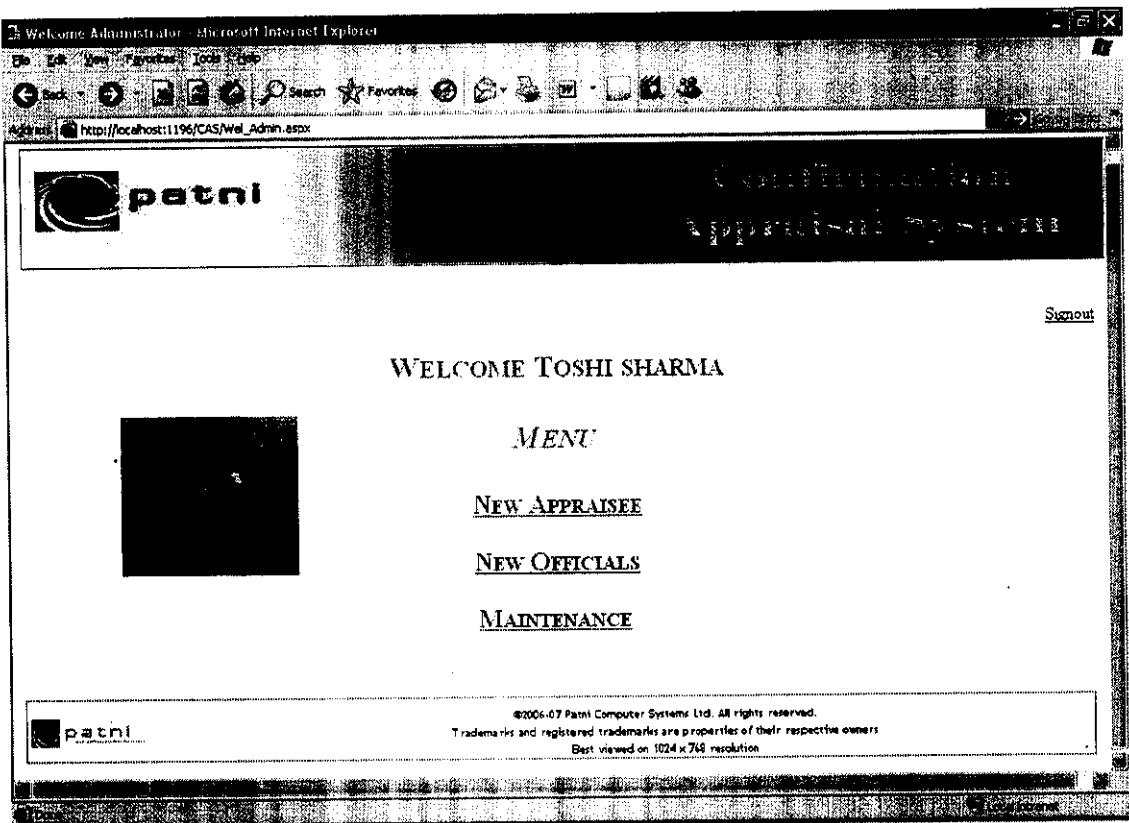


Fig 7.2 : Welcome Administrator

Add Employee - Microsoft Internet Explorer

Address: http://localhost:1196/CAS/Add\_Employee.aspx

Toshi sharma

[<<< Back](#) [Logout](#)

### New Entry

Employee Code	56622	Designation	Software Engineer
Employee Name	Vikram	Parent SBU	PES
Entry Type	Appraisee	Current SBU	PES
Date of joining	04-19-2008		
Location	Airoli Block-A 3rd flr shared area		

Fig 7.3 : New Entry (i)

Address: http://localhost:1196/CAS/Add\_Employee.aspx

Date of joining	04-19-2008
Location	

**Details**

Information Stored Successfully

OK

	ID	Name
Appraiser-1	56967	Indira
Appraiser-2	52641	Konika Bhowal
Reviewer	58214	Sandeep Pathak

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 Best viewed on 1024 x 768 resolution

Fig 7.4 : New Entry (ii)



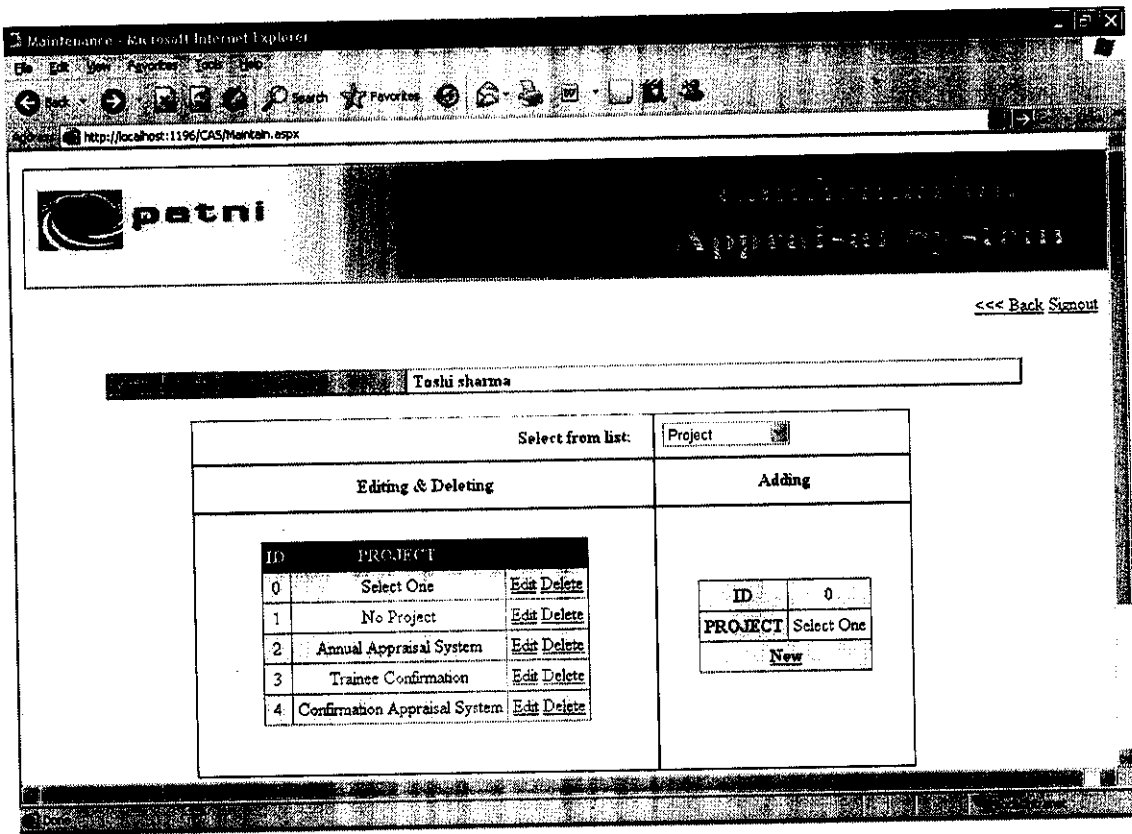


Fig 7.5 : Maintenance

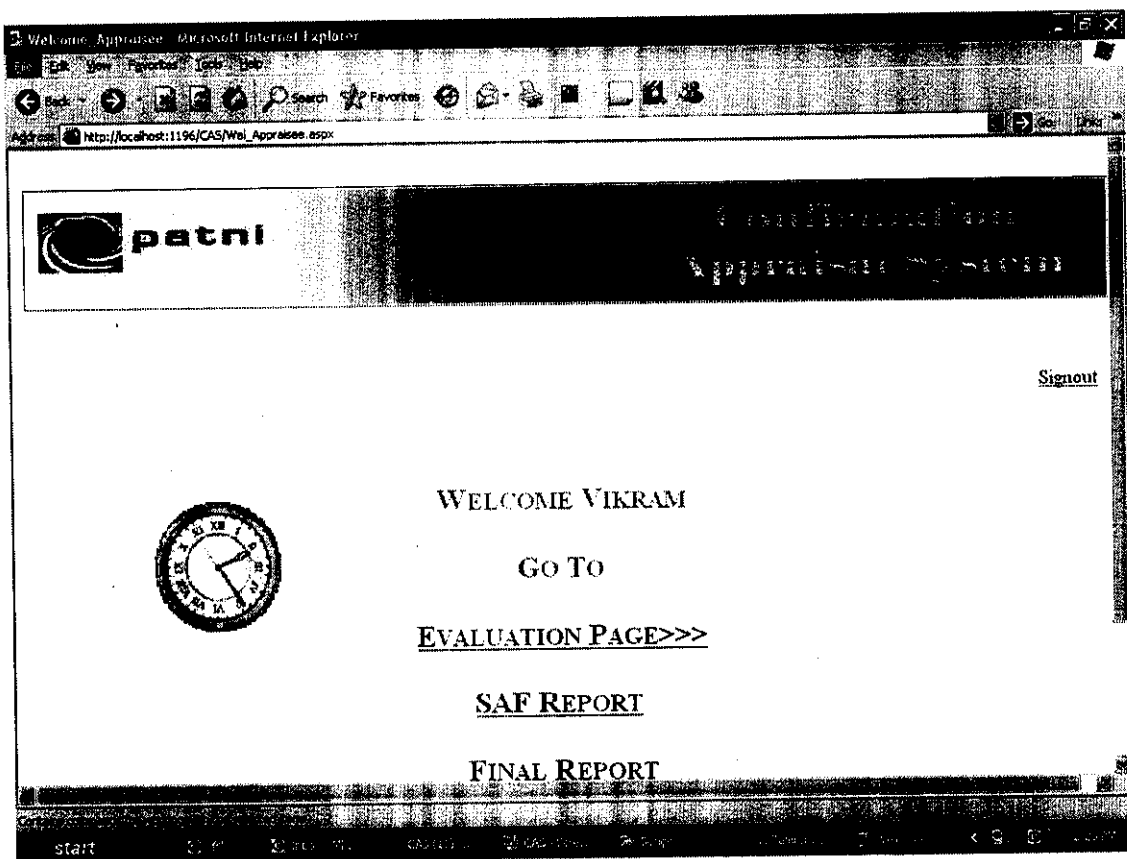


Fig 7.6 : Welcome Appraisee

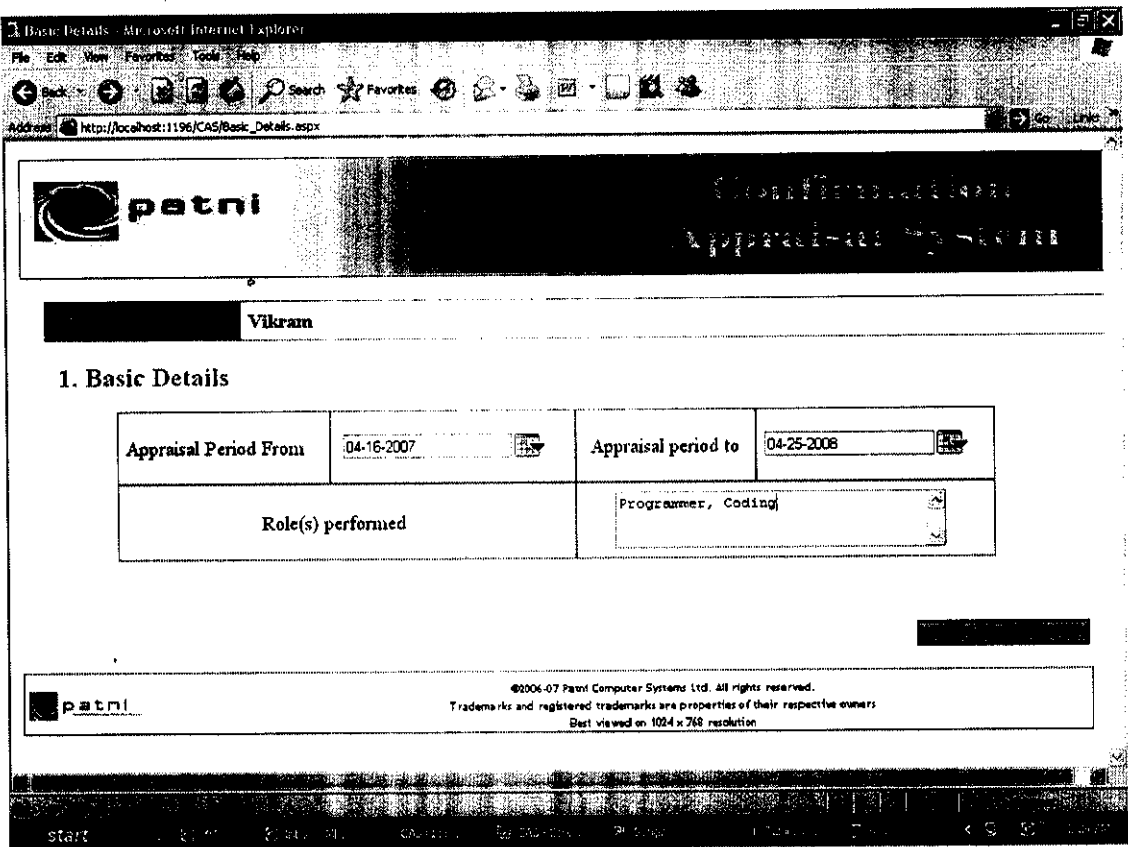


Fig 7.7 : Appraisee – Basic Details

III Corporate Contribution Additional Responsibilities - #Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://localhost:1196/CAS/Add\_Resp.aspx

#### 4. Corporate Contributions / Additional Responsibilities (Max 500 char)

Assignments	Details of Contribution
Conducting Interviews /Screening Resumes	N/A
Conducting Training	N/A
Representative role in SBU (H/w, Training, etc.)	N/A
Representative Organisation in External Forum	N/A
Knowledge Management	N/A
SQA / SPEG	N/A
Company Business Opportunities / Customer relations	N/A
Others	N/A

start

**Fig 7.8 : Appraisee – Contribution & Responsibilities**

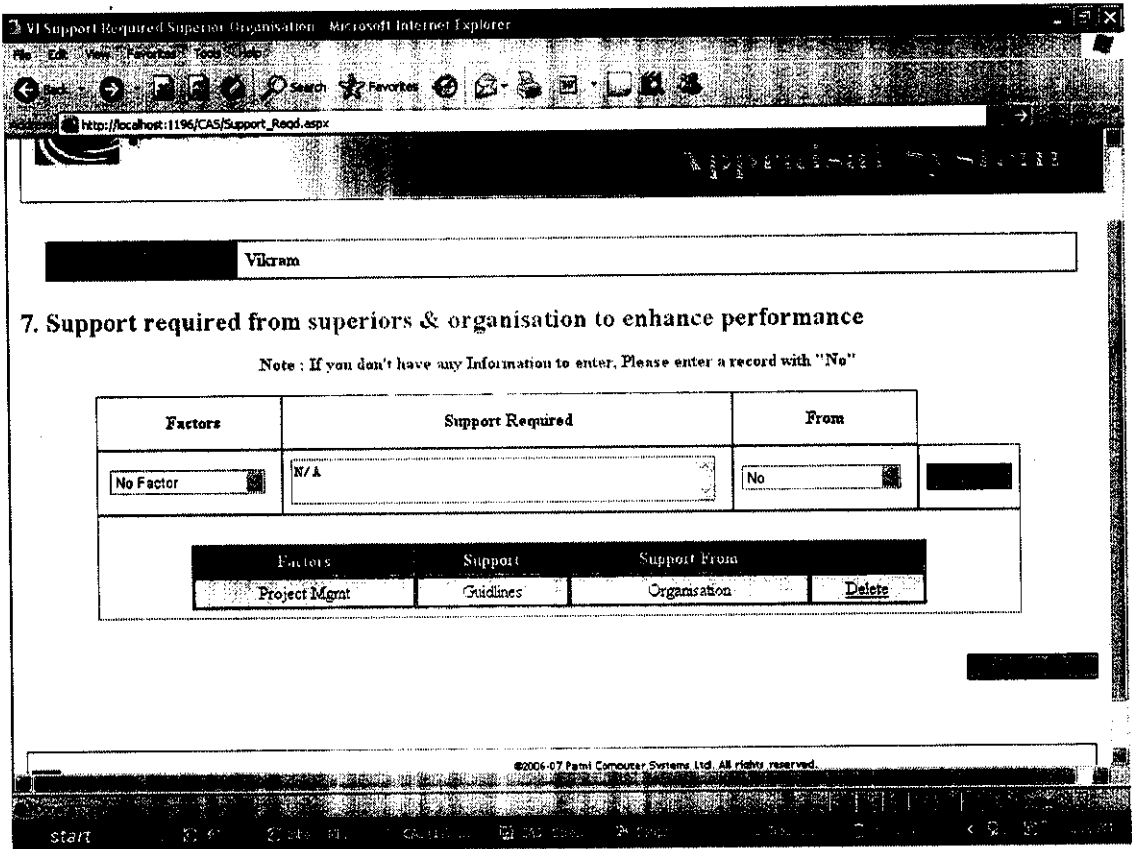


Fig 7.9 : Appraisee – Support Required

Functional Competencies - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Home

Address http://localhost:1196/CAS/App\_Rating.aspx

Vikram

Rating	Description
0	Not Exhibited
1	Meets requirements wih assistance
2	Satisfactory
3	Effective
4	Superior
5	Exceptional

Sr.No	Competencies	Importance	RatingAppraisee
1	Technical knowledge: Knowledge of languages, software development processes, testing / debugging practices.	5	4
2	Quality: Ability to provide quality output and complies with quality and documentation practices.	4	4
3	Problem solving and Analytical ability: Ability to disaggregate and structure problems, states the key issues and develops structured hypothesis to test for solutions.	5	5

start

Fig 7.10 : Appraisee – Rating

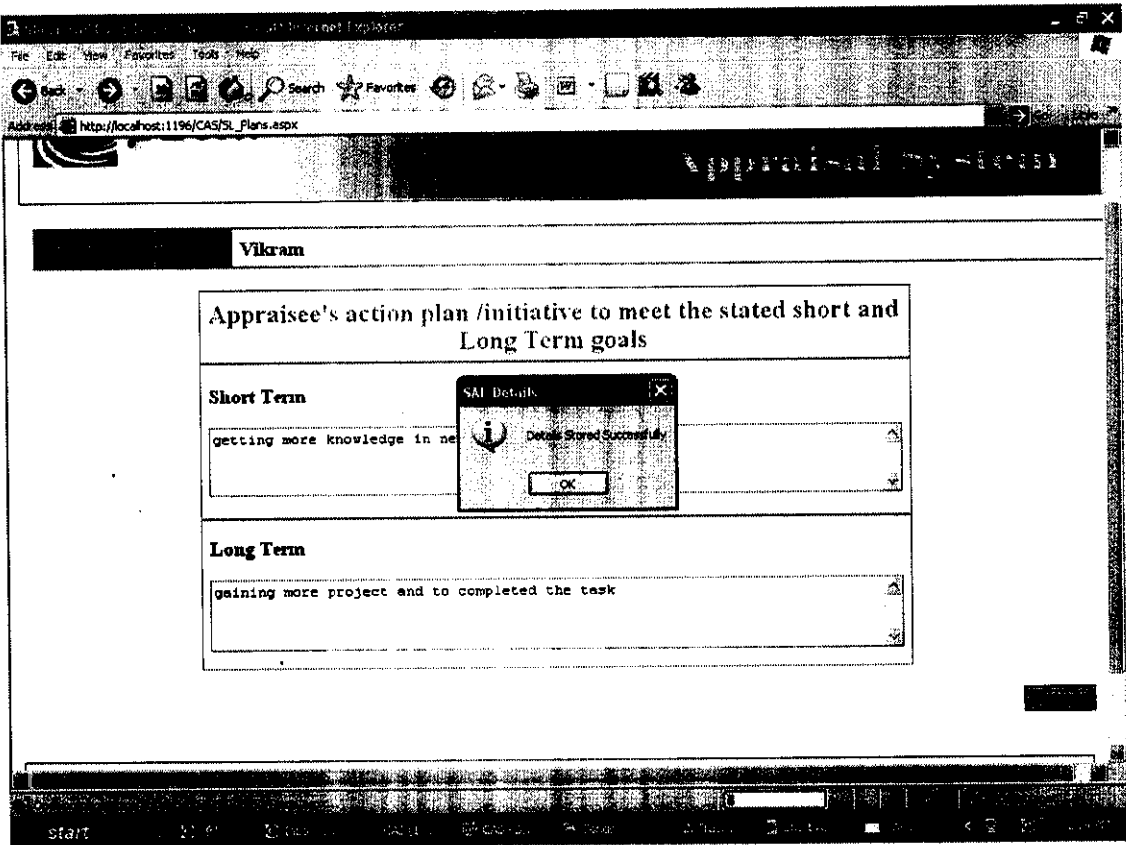


Fig 7.11 : Appraisee – Action plans

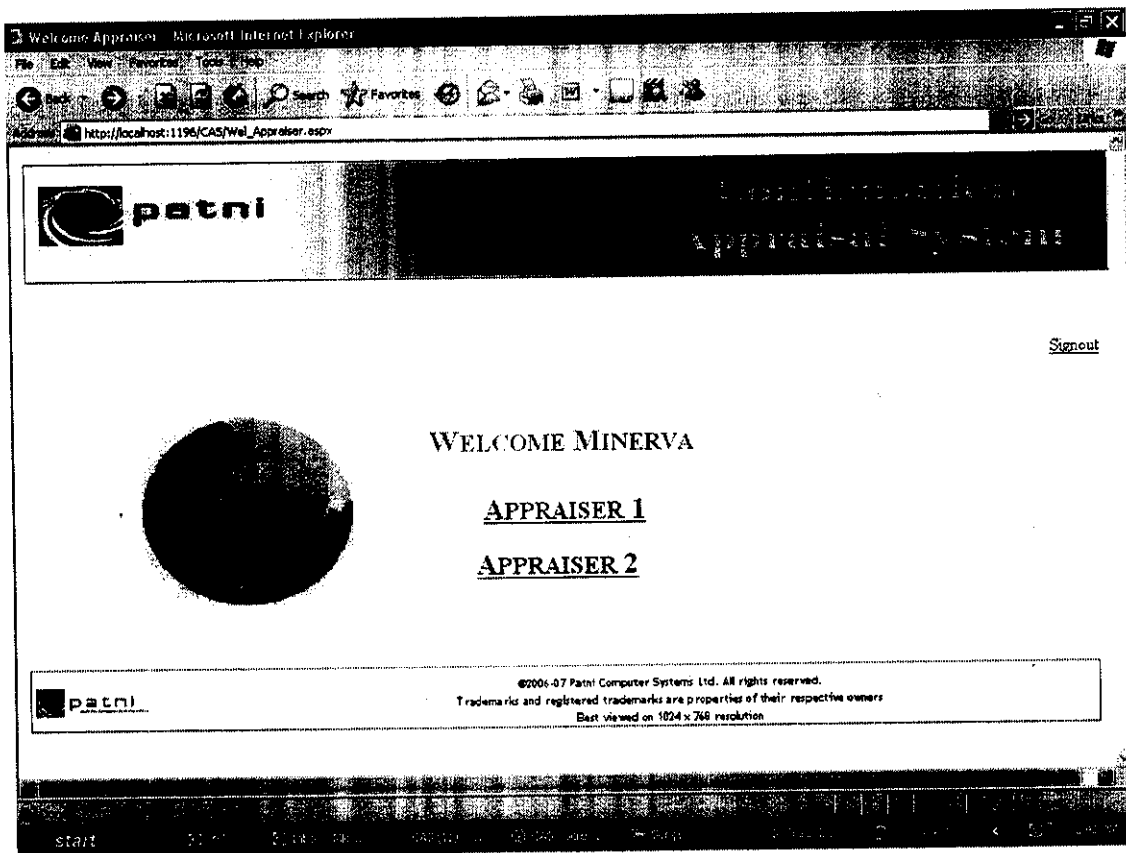


Fig 7.12 : Welcome Appraiser



Candidate Listing Application - Microsoft Internet Explorer

http://localhost:1196/CAS/Apr1\_Candidate\_Listing.aspx

**patni**

<<< Back Signout

Minerva

Employee ID	Emp name	Designation	SAF Submission	Rating	BPP
56822	Vikram	Software Engineer	4/28/2008	Not Completed	Not Completed

**patni**

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 Best viewed on 1024 x 768 resolution

Fig 7.13 : Candidates Listing

Functional Competencies Appraiser1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Home

Address http://localhost:1196/CAS/Apr1\_Rating.aspx?w=56822

[<<< Back](#)

	Minerva
	Vikram

Refer to the detailed BARS(Behaviourally Anchored Rating Scale) that describe different levels of proficiency for each competency. After going through the BARS , rate yourself accordingly.

Rating	Description
0	Not Exhibited
1	Meets requirements with assistance
2	Satisfactory
3	Effective
4	Superior
5	Exceptional

Sr.No	Competencies	Importance	Appraiser Rating	Appraiser 1 Rating
1	Technical knowledge: Knowledge of languages, software development processes, testing / debugging practices.	5	4	<input type="text" value="0"/>
2	Quality: Ability to provide quality output and complies with quality and documentation practices.	4	4	<input type="text" value="0"/>

start

Fig 7.14 : Appraiser1 – Rating

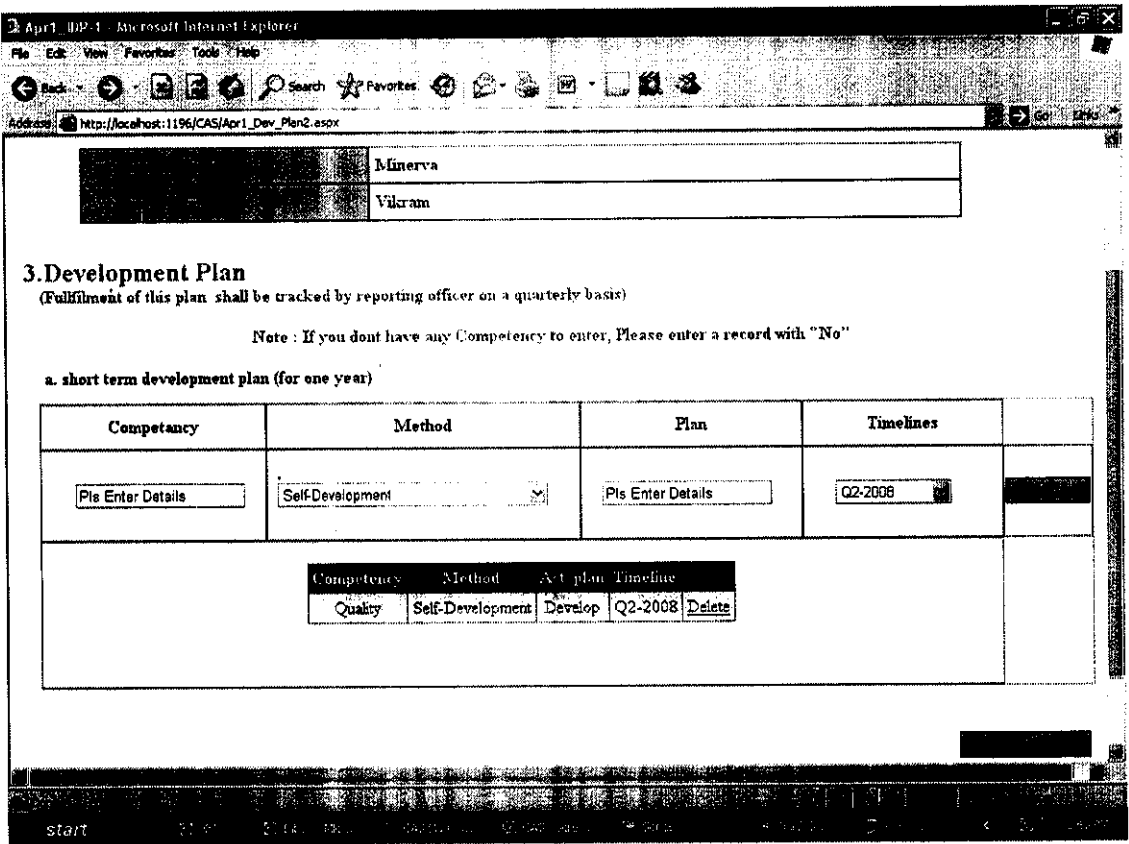


Fig 7.15 : Development Plan – Short Term

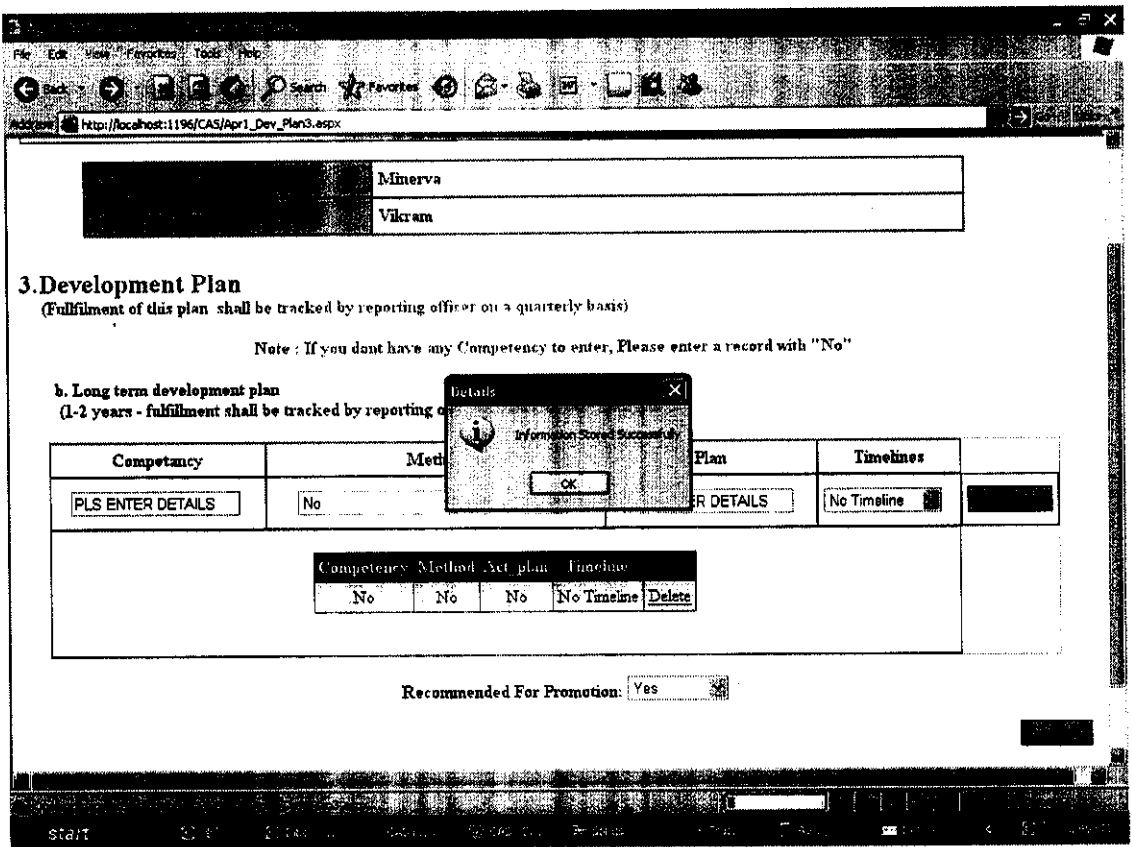


Fig 7.16 : Development Plan – Long Term

Functional Competencies Appraiser 2 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://localhost:1196/CAS/Apr2\_Rating.aspx?w=56622

	Venkat Parwal
	Vikram

Refer to the detailed BARS(Behaviourally Anchored Rating Scale) that describe different levels of proficiency for each competency. After going through the BARS , rate yourself accordingly.

Rating	Description
0	Not Exhibited
1	Meets requirements with assistance
2	Satisfactory
3	Effective
4	Superior
5	Exceptional

Sr.No	Competencies	Importance	Appraiser Rating	Appraiser 1 Rating	Appraiser 2 Rating
1	Technical knowledge: Knowledge of languages , software development processes, testing / debugging practices.	5	4	0	<input type="text" value="0"/>
2	Quality: Ability to provide quality output and complies with quality and documentation practices.	4	4	0	<input type="text" value="0"/>
3	Problem solving and Analytical ability: Ability to disaggregate and structure problems , states the key issues and develops structured hypothesis to test for solutions.	5	5	0	<input type="text" value="0"/>
	Good operating practices: To update the progress to project				

start

Fig 7.17 : Appraiser2 - Rating

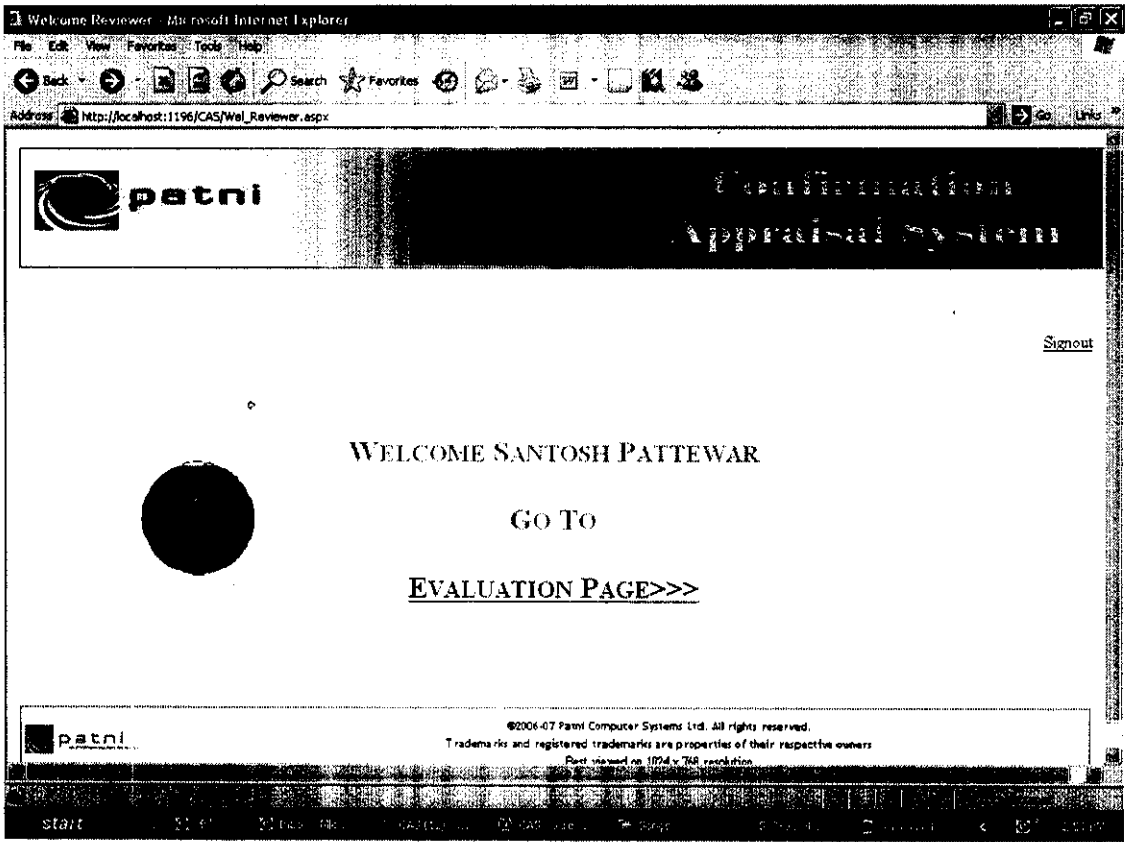


Fig 7.18 : Welcome Reviewer

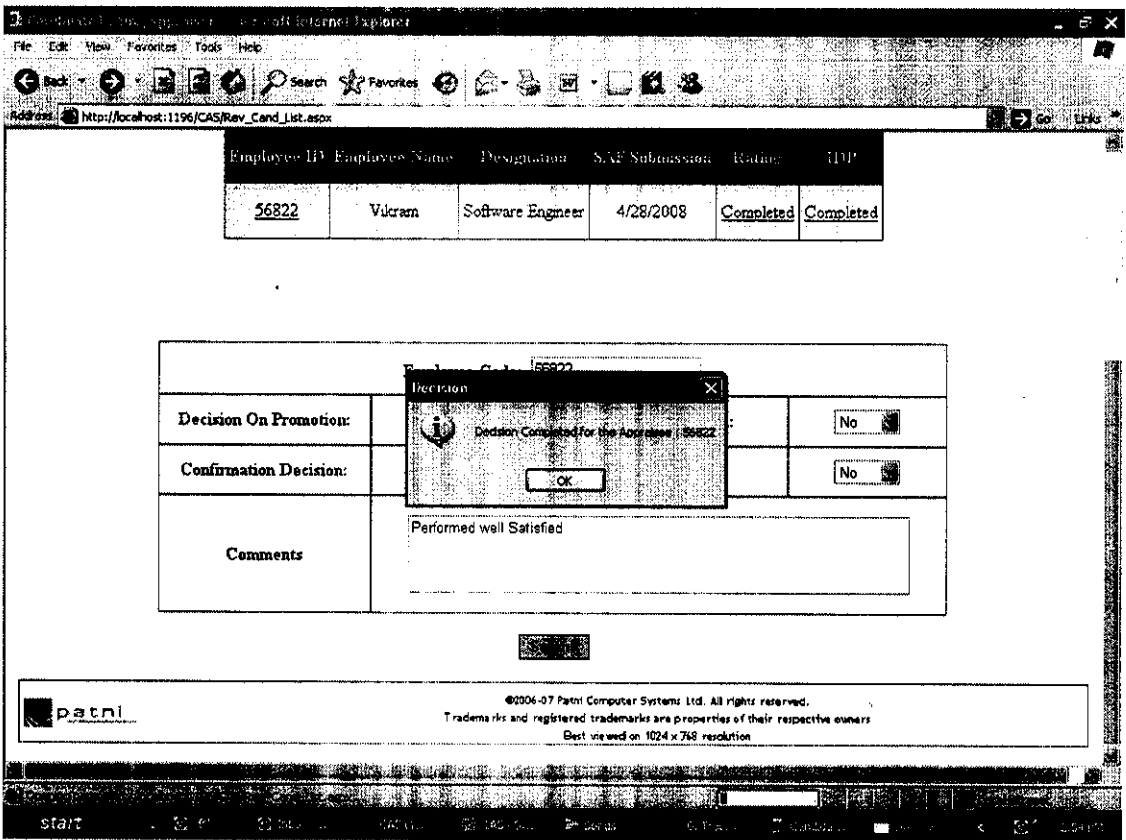


Fig 7.19 : Candidate Listing & Decision

## 7.2 OVERALL REPORTS

Report Rating Complete View - Microsoft Internet Explorer

Address: http://localhost:1196/CAS/Report\_App2\_Rating.aspx

**patni**

[Next>>>](#) [Logout](#)

	56822 / Vikram
	56987 / Minerva
	52641 / Venkat Parwal

**RATING**

Sr.No	Competencies	Importance	Appraisee Rating	Appraiser 1 Rating	Appraiser 2 Rating
1	Technical knowledge: Knowledge of languages, software development processes, testing / debugging practices.	5	4	0	3
2	Quality: Ability to provide quality output and complies with quality and documentation practices.	4	4	0	5
3	Problem solving and Analytical ability: Ability to identify and structure problems, state the key issues and	5	5	0	3

Fig 7.20 : Rating (i)



Report Rating Complete View - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites

Address http://localhost:1196/CAS/Report\_App2\_Rating.aspx

2	<b>Quality:</b> Ability to provide quality output and complies with quality and documentation practices.	4	4	0	5
3	<b>Problem solving and Analytical ability:</b> Ability to disaggregate and structure problems, states the key issues and develops structured hypothesis to test for solutions.	5	5	0	3
4	<b>Good operating practices:</b> To update the progress to project leader / manager and to highlight issues / concerns; Performs given tasks within deadlines; Returns calls / follows-up on tasks etc. File management and individual version control.	4	4	0	4
5	<b>Inter personal skills:</b> Collaborates with others and is a team player.	4	5	0	3
6	<b>Communication skills:</b> Oral and written communication skills; Listening ability; Ability to synthesize; Uses these skills in proposal writing, client and internal interaction.	4	2	0	4
7	<b>Achievement orientation:</b> Sets stretch targets for himself / herself and does all it takes to achieve them.	5	3	0	4
8	<b>Initiative Taking:</b> Goes beyond the call of duty to spot opportunities and is ready to help others or get involved in activities beyond the immediate scope of work.	5	2	0	4
9	<b>Knows and understands patni values.</b>	5	2	0	3
<b>Total</b>			140	0	149
<b>Functional Competencies Score on 500-point Scale</b>			341	0	363
<b>Promotion Recommendation</b>				Yes	No

[Next>>>](#)

start

Fig 7.21 : Rating (ii)

Report Appraiser-1 IDP - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites

Address: http://localhost:1196/CAS/Report\_Appr1\_IDP.aspx

### APPRAISER - 1 : IDP

	56822 / Vikram
	56987 / Minerva

Comments

Comments	Qusite	Strength	Improvement Areas
No Comments	NO	Coding	Communication

Short Term Plan:

Competency	Method	Action Plan	Timeline
Quality	Self-Development	Develop	Q2-2008

Long Term Plan:

Competency	Method	Action Plan	Timeline
No	No	No	No Timeline

start

Fig 7.22 : Appraiser1 - IDP

Report Appraiser2 - IDP - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites

Address http://localhost:1196/CAS/Report\_Appr2\_IDP.aspx

**patni**

[Next>>>](#) [Signout](#)

### APPRAISER - 2 : IDP

	56822 / Vikram
	52641 / Venkat Parwal

**Comments**

Comments	Weakness	Strength	Improvement Area
NO	NO	NO	NO

**Short Term Plan:**

Competency	Method	Action Plan	Timeline

start

**Fig 7.23 : Appraiser2 - IDP**

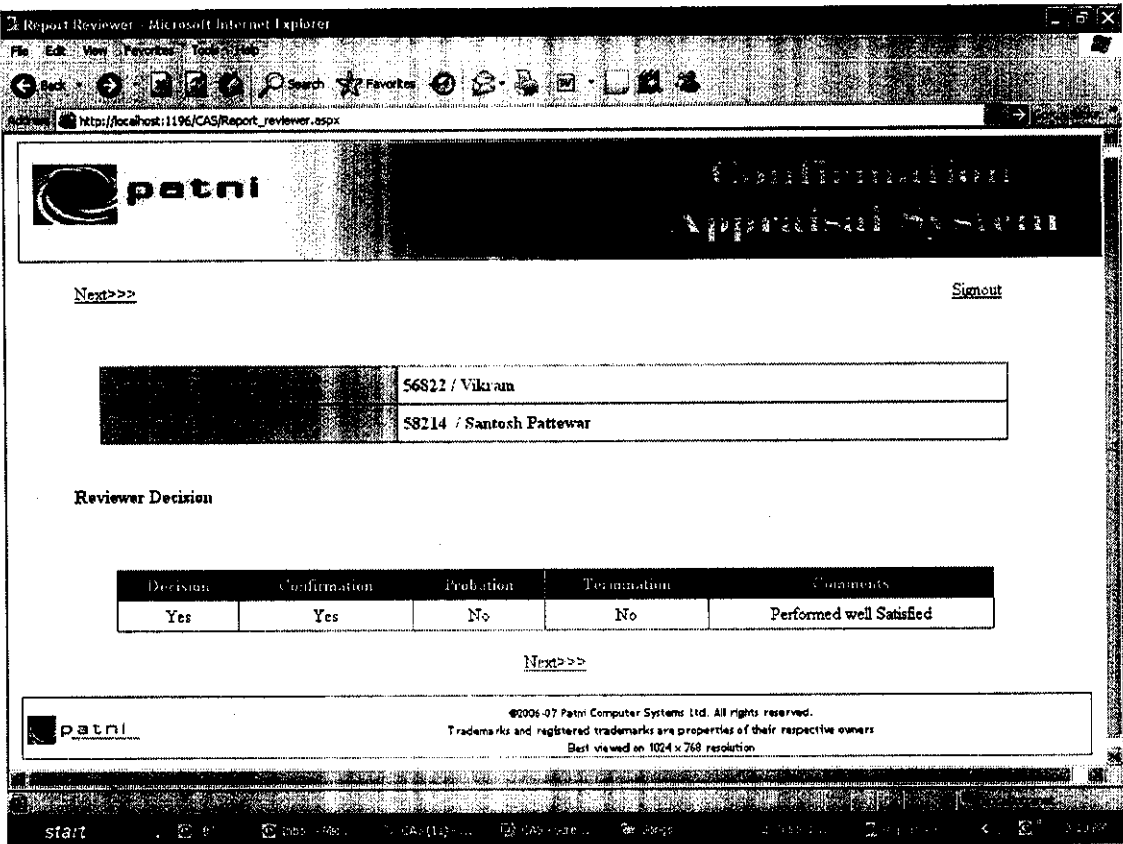


Fig 7.24 : Reviewer Decision

## CHAPTER VIII

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### WEBSITE

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<http://www.beansoftware.com>  
<http://www.microsoft.com>  
<http://aspnet.com>