HRMS Customization Based On Evolving Requirements Of STMicroelectronics

Submitted By

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HRMS Customization Based On Evolving Requirements Of STMicroelectronics

Major Project

Submitted in partial fulfillment of the requirements

For the degree of

Master of Technology in Computer Science and Engineering

Submitted By

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Guided By

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May 2015

Certificate

This is to certify that the Major Project Report entitled **"HRMS Customization Based On Evolving Requirements Of STMicroelectronics"** submitted by **Vinay Ranjan Shukla. (Roll No: 12MCEC29)**, towards the partial fulfillment of the requirements for the award of degree of Master of Technology in Computer Science and Engineering of Institute of Technology, Nirma University, Ahmedabad is the record of work carried out by him under my supervision and guidance. In my opinion, the submitted work has reached a level required for being accepted for examination. The results embodied in this project, to the best of my knowledge, haven't been submitted to any other university or institution for award of any degree or diploma.

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Statement of Originality

I, **Vinay Ranjan Shukla**, Roll. No. **12MCEC29**, give undertaking that the Major Project entitled "**HRMS Customization Based On Evolving Requirements Of STMicroelectronics**" submitted by me, towards the partial fulfillment of the requirements for the degree of Master of Technology in **Computer Science & Engineering** of Institute of Technology, Nirma University, Ahmedabad, contains no material that has been awarded for any degree or diploma in any university or school in any territory to the best of my knowledge. It is the original work carried out by me and I give assurance that no attempt of plagiarism has been made. It contains no material that is previously published or written, except where reference has been made. I understand that in the event of any similarity found subsequently with any published work or any dissertation work elsewhere; it will result in severe disciplinary action.

Signature of Student
Date:
Place:

Endorsed by
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(Signature of Guide)

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Abstract

PeopleSoft HRMS package is developed by PeopleSoft Inc., (acquired by Oracle Corporation). It helps the management in planning and managing the basic functionalities of their business economically and efficiently. But it comes as a generalized package which is not exact as per requirements of the company; hence it needs to be customized. Also as vendor understands this requirement, it has provided tools to make customizations into the existing HRMS package.

But customizing whole package in one go is not a good idea, also the process will be highly complicated, hence best practice is to let the system function with minor adjustments and then let users(employees) determine what more is required and what is that is not suiting their requirements.

Now, based on the requirements and experience of the users, customizations should be done in the package. During the course of this project, I shall be incorporating changes and developing logics for adding new functionalities in the package, based on the user's feedback and requests.

Contents

Certificate **iii**

Statement of Originality **iv**

Acknowledgements **v**

Abstract **vi**

List of Figures **ix**

1 Introduction **1**
1.1 PeopleSoft 1
1.2 2 Tier Architecture of PeopleSoft 2
1.3 3 Tier Architecture of PeopleSoft 2
1.4 Internet Architecture of PeopleSoft 3
1.5 Organization of Project Report 4

2 Literature Survey **6**
2.1 PeopleTools 8.52: Application Designer 6
2.2 Application Engine 7
2.3 SQR (Structured Query Reporter) 8
2.4 File Layout 9
2.5 CI(Component Interfaces) 10
2.6 ePA Module 11
2.6.1 Admin+Year Under Review 14
2.6.2 Overall Perf & Career Vision 16
2.6.3 Next Yr obj. Dev Plan and Sign 18

3 Work done during Project **20**
3.1 Customization of Enterprise Learning 20
3.2 Identifying Internal Mobility of employees 21
3.3 Grade Coherence 22
3.4 Mass load of contract data 23
3.5 Quick Hiring 23
3.6 Schedule Job Interface 25
3.7 Data Extraction Using SQR 25
3.8 IPF Module 26
3.8.1 PDF/XLS Download Upload 27
3.9 My Agreement Page 29

3.10 Employee Incentive Enroll Page 30
3.11 Job Data Changes 30

4 Conclusion and Future Work **32**

List of Figures

1.1 PeopleSoft 2 Tier Architecture [11] 3
1.2 PeopleSoft 3 Tier Architecture (Logical) [11] 3
1.3 PeopleSoft 3 Tier Architecture (Physical) [11] 4
1.4 PeopleSoft Internet Architecture [11] 4

2.1 Application Designer [10] 7
2.2 Program structure of Application Engine [2] 8
2.3 Performance Appraisal process flow [9] 13
2.4 Admin+Year Under Review [9] 15
2.5 Overall Perf & Career Vision [9] 16
2.6 Next Yr obj. Dev Plan and Sign [9] 18

3.1 Introduction of KL3 Evaluation Flag [12] 21
3.2 Grid displaying list of applicants to be hired [12] 24
3.3 Grid displaying data successfully entered [12] 24
3.4 Grid displaying data of failed applicants [12] 25
3.5 Search page to find Schedule [12] 26
3.6 Main Page, loaded after search page [12] 27
3.7 Action Buttons(bottom) [12] 28
3.8 My Agreement Page [12] 29
3.9 Setup [12] 30

Chapter 1

Introduction

1.1 PeopleSoft

PeopleSoft Enterprise Solution [11] is made up of many essential elements which are needed for functioning of PeopleSoft Software. All these essential elements are associated with each other and send/receive data and information needed for processing of business requirements.

PeopleSoft operates with various Database Servers, Web Servers, Application Servers, NT File Servers and Clients as its needed and core components, for example here is given a list of various servers in PeopleSoft.

Various Servers for database handling

- Oracle (8i, 9i ,10g, 11i)
- MS SQL Server
- DB2 , Informix , Sybase

Various Web servers

- BEA Web Logic
- IBM WebSphere

Application Server [11]

It is known as the core of PeopleSoft and processes all the business logic. It is the server which provides access to application designer tool, where the whole application is designed and customized. Also, from this server, a developer can directly access Database servers as well and do modifications if required.

NT File Server [11]

Batch server - these servers are used for executing PeopleSoft processes and reports e.g. application engine, sqr reports etc.

Client [11]

PeopleSoft Internet Architecture is accessed easily any browser through any operating system and device. It can be accessed from iPhone, iPad or any other device that has browsers supported by PeopleSoft, for example,

- Internet explorer
- Firefox
- Chrome
- Netscape navigator

1.2 2 Tier Architecture of PeopleSoft

2 tier architecture of PeopleSoft Application [11] portrays straight connection between People Tools and Database. PeopleSoft Application Designer and Peoplesoft Datamover Tool are the best examples of this 2 tier architecture. These tools allow PeopleSoft developers and administrators to develop and customize application according to their requirements, these tools establish direct connection with PeopleSoft Database.

1.3 3 Tier Architecture of PeopleSoft

In case of 3 tire architecture setup PeopleSoft Application [11] Designer connects to Application Server by using Tuxedo instead of connecting to the PeopleSoft Database directly, and then in turn Application Server establishes connection with main Database. And, Application Server uses SQL queries in order to communicate with Database.

Figure 1.1: PeopleSoft 2 Tier Architecture [11]

It is when a developer sometimes feels the need to log into Application designer in 3 tire mode, that is where 3 tire Logical setup is required. By logging into Application Designer in 3 tire mode, few features become available, which are otherwise unavailable while logging in using other modes. In order to connect using 3 tire mode, PeopleSoft Configuration Manager is required to be configured and details related to Application Server domain and port numbers are required to be added.

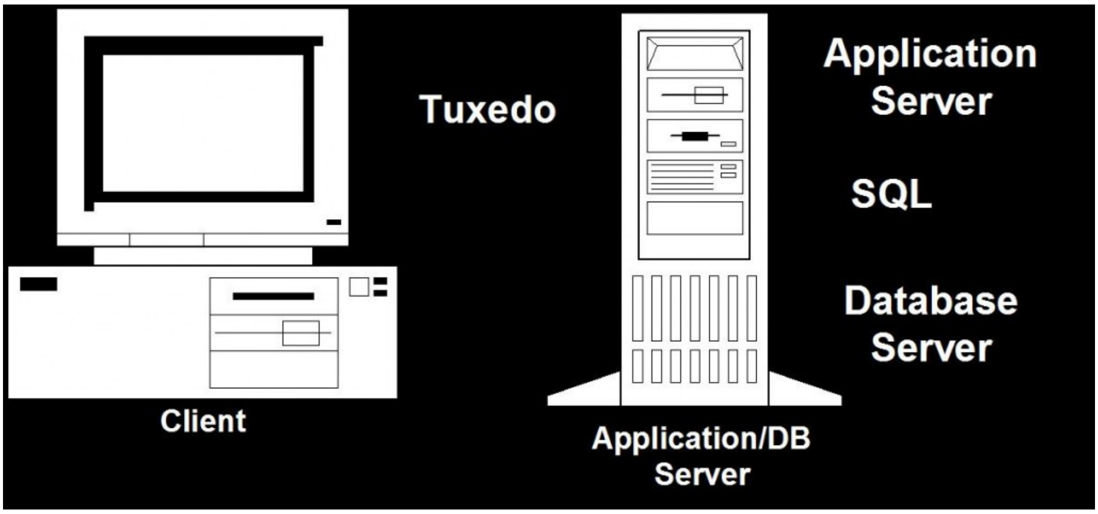


Figure 1.2: PeopleSoft 3 Tier Architecture (Logical) [11]

1.4 Internet Architecture of PeopleSoft

The end to end architecture [11] where PeopleSoft top end application running on user's client browser is interacting with rear end database of PeopleSoft server is known

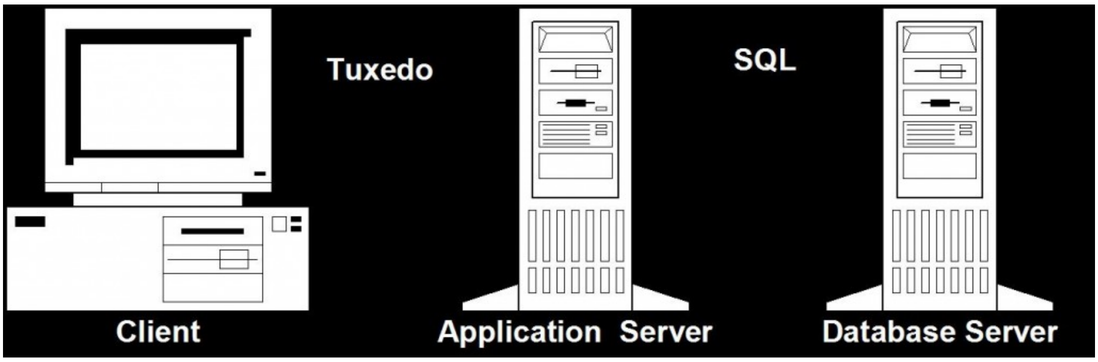


Figure 1.3: PeopleSoft 3 Tier Architecture (Physical) [11]

as Internet Architecture of PeopleSoft. It is shown below in figure 1.4.

- As a first step, browser establishes communication with the webserver using HTTP/HTTPS ports.
- Second step consists of Webserver communicating with Application Server using JOLT port.
- In third step, Application Server finally interacts with central database using SQL commands.

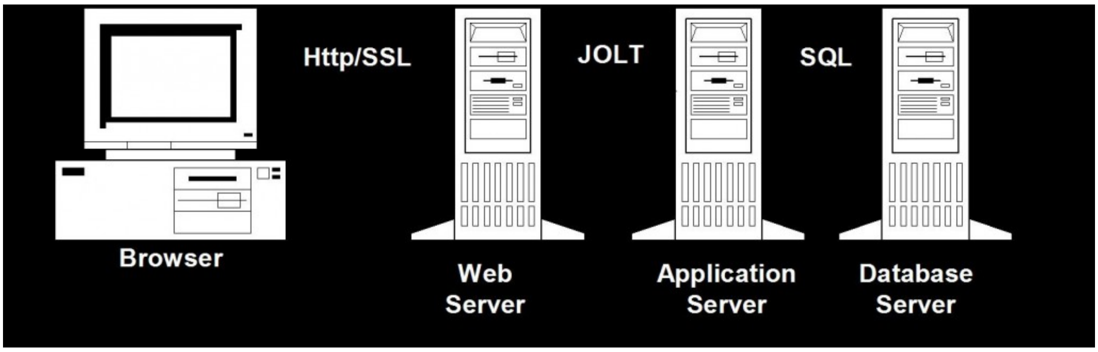


Figure 1.4: PeopleSoft Internet Architecture [11]

1.5 Organization of Project Report

Following this introduction, chapter 2 presents an overview of tools used in PeopleSoft, chapter 4 describes the set of jobs done throughout the thesis period, while working as an intern at the company and an effort is put there to analyze what difference that work brings to the work flow of the company procedures .

The thesis ends with discussing the conclusions derived from the work.

Chapter 2

Literature Survey

2.1 PeopleTools 8.52: Application Designer

PeopleSoft Application Designer [1] [4] is the primary development tool which is used to design and customize various PeopleSoft applications. PeopleSoft Application Designer empowers us to design a wide range of definitions, for example:

- Pages
- Fields (analogous to columns)
- Records (analogous to tables)
- SQL
- PeopleCode
- Components (Main module which can consist multiple pages)
- Menus

In each PeopleSoft Pure Internet Architecture application [11], there exists a collection of interrelated definitions, that coordinate with each other to accomplish a specified task. The process of designing and customizing PeopleSoft applications is a gradual process where we define the definitions and build them, establish relation between the definitions, and security is implemented, PeopleSoft application is executed in an internet browser, and every facet is thoroughly tested. It is PeopleSoft Application Designer, only major

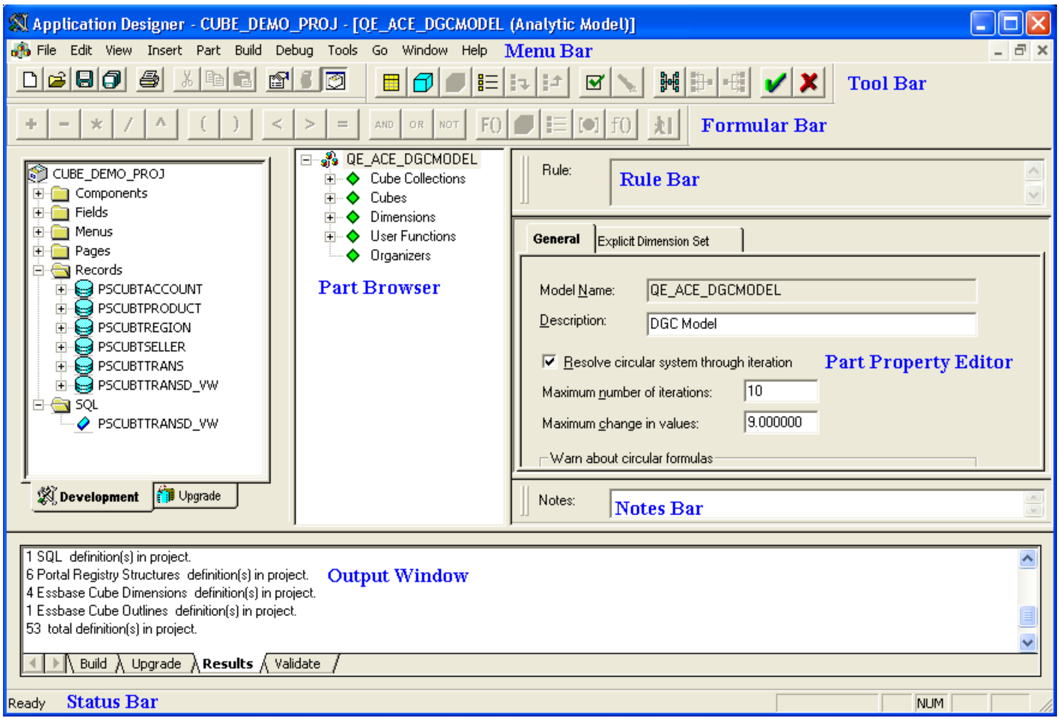


Figure 2.1: Application Designer [10]

interactive tool, which is used for majority of these tasks.

PeopleSoft Application Designer is one such platform, that allows us to work with any number of definitions of a business application and all these integrated in a single development environment.

2.2 Application Engine

Application Engine [2] are programs that contain SQL statements along with People Code in the single program, and executes scheduled task in batch mode as an replacement to using SQR or COBOL programs.

Application Engine facilitates development of SQL processing programs that execute in background, and makes us take combine benefit of SQL as well as people code. Developer needs to have knowledge of SQL, SQL tools as well as People Tools in order to use it.

Application Engine is seen as a replacement to COBOL or SQR programs, as far as background SQL processing is concerned. It does not generate, parse, or understand SQL, it simply execute SQL provided by developer.

The program structure of Application Engine is presented in figure 2.6

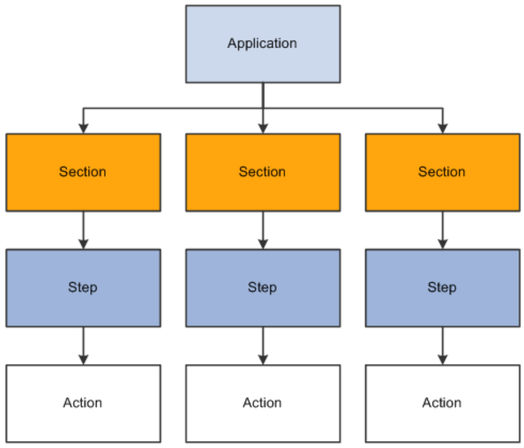


Figure 2.2: Program structure of Application Engine [2]

2.3 SQR (Structured Query Reporter)

Hyperion SQR Production Reporting also known as SQR (abbreviation for Structured Query Reporter) [5] [6] , is a programming language device to generate reports from database management systems. As the name suggests, it is related to SQL (acronym of Structured Query Language). Any SQL statement can be ingrained in an SQR program.

SQR is a specialized programming language in which programs are written that can be used for accessing, manipulating, and reporting enterprize data. Using SQR, we can design other wise difficult to write procedures, that can perform multiple calls to multiple data sources and implement nested, hierarchial, or object-oriented program logic.

Other benefits of SQL are:

- It is flexible and scalable.
- It provides all-inclusive facilities for integrated report and data processing.
- Multiple platform availability.

- Multiple data source compatibility.

Using SQR, we can define various report information such as, page size, footers, headers and layout. SQR allows to format report in various formats, such as, it allows report to be printed as a complex tabular report, or multiple page report or form letters. We can format SQR to display data in columns or produce mailing labels or create HTML or PDF or configured output for laser printers or phototypesetters.

High end programming capability provided by SQR enables us to include procedural logic and control to data source calls. Other types of applications can also be written using SQR, like those for database maintenance and manipulation, table unloading and loading and interactive querying and displaying.

2.4 File Layout

A file layout [7] defines the data structure that will be used in a flat text file to be processed. While accessing the file for read or write operation, File layout can be used to guide PeopleCode to identify, access and process the fields and records stored in a plain text format in a way such that they are correctly accessed. File layouts can be used with both non hierarchial as well as hierarchial data, also, they can handle files that combine both data records and non data(audit and control) records.

Accessing data within a file does not always requires to use or create a file layout . People Tools can also be directly used for reading and writing to plain text files, as well as to files whose format is based on a file layout:

- In case of a plain file, strings are used to read or write data from the file.
- In case of the file being based on a file layout, strings, along with rowsets or record objects can be used.

File layout solves the problem of reading, writing and manipulating hierarchical transaction data with PeopleCode. It greatly simplifies the process of accessing the hierarchial transaction data. It also facilitates transactions between a PeopleSoft application and a third-party system, in case the third-party system is other than those which are supported by PeopleSoft Integration Broker or component interfaces.

Applying File Layout to Data Interchanges

We can employe file layouts to move data between a PeopleSoft database and external systems(data interchange) using a flat file as the transmission medium. Using File Layout, we can also:

- Export hierarchical data from PeopleSoft to various flat file formats.
- Map hierarchical incoming file data directly to PeopleSoft tables.
- Preview and troubleshoot data and its formatting provided as the input before importing it.
- Automatically generate the PeopleCode and Application Engine programs that are needed to perform data import.
- Use batch processes to perform repetitive tasks such as large-volume data exports and imports.

2.5 CI(Component Interfaces)

A component interface [8] consists of an application programming interfances(APIs) that can be used to access and modify the PeopleSoft database information programmatically. PeopleSoft component interface enables a PeopleSoft component (a set of related pages grouped as per requirements of a business purpose) to be accessed synchronously from another application, for example, java, C/ C++, or Component Object Model [COM] or even another PeopleCode. A PeopleCode program or an external program(Java, C/ C++, or COM) can view, enter, access, and manipulate PeopleSoft component data, business logic, and functionality. Apart from this, Component Interface Tester can be used to check the validity of the component interface and the Excel to Component Interface utility to manage the data.

Component Interfaces can also be viewed as "black boxes" that encapsulate with in themselves PeopleSoft data and business processes, and hide the details of the underlying page and data from outside view. Component Interfaces can be used to integrate one application with another application or with external systems. Component interfaces provide a higher level of data validation rather than a simple SQL insert by executing the business logic built into the component.

A component interface can be mapped to one, and only one, PeopleSoft component. However, if required we can create multiple component interfaces mapping on to the same component. Like many other objects of PeopleSoft we create component interfaces in PeopleSoft Application Designer. Record fields on the component are mapped to the keys and properties of the component interface. Methods are used to find, create, modify or delete data.

2.6 ePA Module

In this section, I am giving introduction of ePA Module [9], because one of the tasks assigned to me was to develop some modules of IPF i.e. Individual Performance Feedback, which in turn is one of the three modules, (other two being Goal Review(GR) and Goal Settings(GS)) which are being developed by our team in order to replace already existing ePA (employee Performance Appraisal).

Project Goals:

Managers are responsible for managing the performance and supporting the development of the employee. In Performance Management Process, performance appraisal is a time when both manager and employee review past period's achievements and decide upon the next period objectives.

The objective of the EPA tool is to support this key process by providing a common framework for performance evaluation, objective settings and development plan, in a manner consistent across all organizations of the company.

Business Process:

An ePA process involves four actors.

The Employee, responsible for:

- his/her own preparation to the appraisal process.
- taking a proactive role in the appraisal process.

The ePA Direct Manager, responsible for:

- his/her own preparation to the appraisal process.
- scheduling the appraisal meeting and respecting the timeframe of the process.
- ensuring that at the end of the process, all the documentation is completed.
- scheduling an intermediate appraisal if necessary.
- finalizing the employees development plan.
- updating the employees Job Description.
- managing the performance of his/her team members day to day during the year and giving regular feedback to his/her reports.
- End the yearly process of Performance Appraisal.
- Finalizing the employees overall rating.

The ePA HR Responsible, responsible for:

- initiating the appraisal process.
- delivering training sessions to managers on performance appraisal.
- assisting the hierarchical manager and the employee in designing the employee development plan or recovery plan.
- providing with help and support to managers and employees in relation to the overall appraisal process.

The Functional Manager (if any), responsible for:

- sharing identified performance problems with the employee before the appraisal meeting.
- proposing an overall performance rating (indicative only).
- providing his/her comments to the hierarchial manager/employee regarding the employee's overall performance.

The Next level Manager (if any), responsible for:

- sharing identified performance problems with the employee before the appraisal meeting.
- proposing an overall performance rating (indicative only).
- providing his/her comments to the hierarchial manager/employee regarding the employee's overall performance.

Performance Appraisal process flow of ePA works as follows:

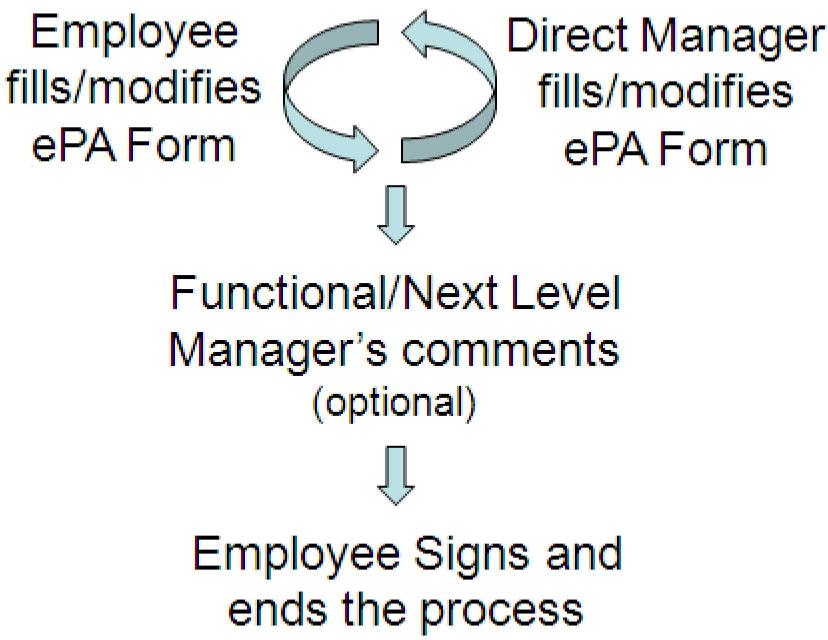


Figure 2.3: Performance Appraisal process flow [9]

ePA's different statuses and their definitions:

Status (and Corresponding Code)	Status Description
Draft	Either Employee or Manager can create ePA draft. When save as Draft, it is accessible and editable only for its creator.
Original Draft For Reference	Even if submit to manager by the Employee or Shared with employee/send back to employee by the manager, the original draft remain available in Read Only for its creator for reference.
Shared with the Employee	When Draft of the manager has been shared with the employee, ePA status becomes Shared with the Employee.
Submitted to Direct Manager	After filled in ePA from, employee can directly Submitted (it) to Direct Manager. In this case, ePA is only editable for direct Manager .Comments can be entered by Next level and Functional managers.
Sent back to Employee	When manager would like the employee to modify some contents in ePA, manager can send it back and it becomes editable to the employee, ePA status becomes Sent back to Employee. Contents are accessible and editable to both employee and manager.
Sent for Employee Signatures	When managers decides that every thing is aligned, then finally he/she sends the ePA for employees signatures.
End of ePA process	The employee can select Yes or No as employee signature and end the process.

The ePA form contains 3 pages

- Admin+Year Under Review
- Overall Perf & Career Vision
- Next Yr obj. Dev Plan and Sign

2.6.1 Admin+Year Under Review

Section 1.0 Major contribution of the year under Review:

The Individual Performance Evaluation is based on the extent to which the Employee:

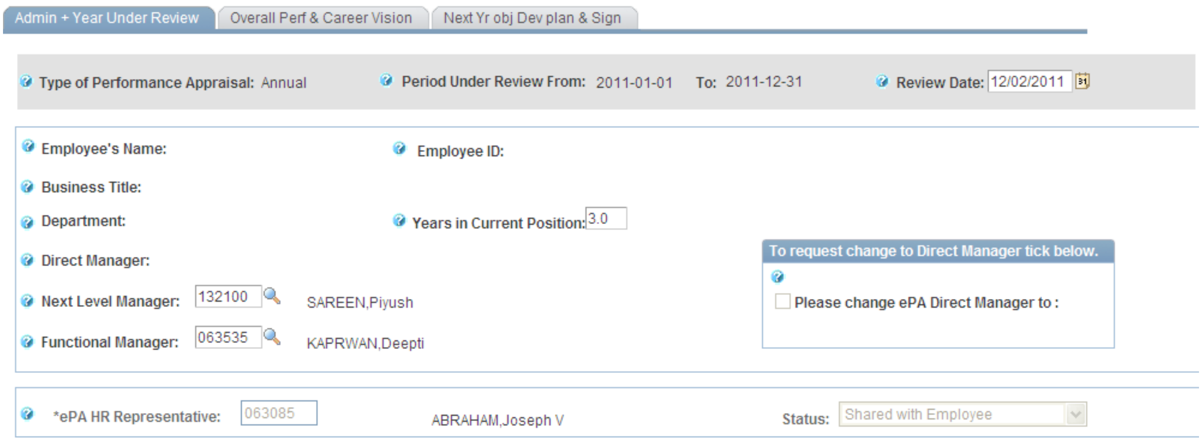


Figure 2.4: Admin+Year Under Review [9]

- has achieved the quantified objectives of the job
- has exhibited desired behaviors in achieving these results
- has mastered the required job accountabilities

Section 1.1 Assessment of objective:

This section is dedicated to the assessment of the level of performance and results achieved by the Employee during last period versus her/his quantified objectives.

Section 1.1.2 VIP Objectives:

Here, are displayed the key areas and expected results filled in section 7.2 previous year, another section as Management Judgment , in which the manager is free to write any key area and change due to reasons like change in priorities etc. here only Weightage & results are editable.

Section 1.2 Assessment of Professional/Leadership Behaviors:

This section is dedicated to the assessment of the respect of Company professional and leadership standards and values by the Employee in the achievement of his/her Objectives.

Based on whether Professional or leadership behaviors are applicable, the direct manager can select the check box to rate the employee on valid behaviors.

Section 1.2.2 Examples of Strengths or Areas of Development in Professional/Leadership Behavior

In this section, the employee or manager can describe a fact based situation where the above behaviors have been clearly demonstrated.

Section 1.3 Assessment of Job Accountabilities and Competencies

This section is dedicated to the assessment of the mastering of the job by the Employee in the day-to-day work versus job required Competencies and Organization requirements.

Section 1.3.1 Job Accountabilities (Contribution Matrix or Job Description)

The assessment is based on the evaluation of the Employee's versus her/his contribution issued from the Contribution Matrix or the Job description (if available). The Description area allows the employee and manager to focus and to assess the most relevant Employee's contributions of the past period, highlighting significant improvements or gaps. When Contribution matrix is not available, the employee and manager will define the key and most relevant contributions and insert them in the Description area.

Section 1.3.2 Specific Job Competencies:

In this section the employee and manager can rate the employee on the job competencies based on the job function of an employee. The ratings are Master, Development, Strength and not applicable. Also the users can enter comments in the comments field or mention any other job competency that is not available in default list.

2.6.2 Overall Perf & Career Vision

Figure 2.5: Overall Perf & Career Vision [9]

Section 2.0 Overall Performance of the year under review

This section is a mandatory section and here, the final review ratings have to be selected for an employee. The rating value should represent the overall performance, evaluated on the 3 dimensions which have been assessed in details in the previous sections:

- Individual achievements
- Professional behavior
- Job fit to this organization needs

The possible values are

- Outstanding: Delivers constantly beyond job requirements and reaches exceptional results. Acts as a role model in terms of adherence to company values and referenced behaviors. Works with a high degree of autonomy and seeks every opportunity to improve and share knowledge and skills across the team and the business. Is above job requirements. An enlarged role or mobility could be considered.
- Exceeds: Exceeds frequently job requirements while exhibiting strong adherence to company values and referenced behaviors. Works under minimal guidance and supervision and seeks every opportunity to improve and share knowledge and skills with other employees. Brings a Key contribution to the activity.
- Masters: Fully meets job requirements while exhibiting adherence to company values and referenced behaviors. Works under normal guidance and supervision and demonstrates capacity to develop knowledge and skills to address business requirements. Brings a solid contribution to the activity.
- Partially Achieves: Achieves many of the job requirements while displaying some areas of development / areas of progress in knowledge, skills or behaviors. Requires some additional guidance and supervision in order to continue to grow. Contribution to the team and the business is significant in certain areas but is lacking in others. Demonstrates capacity to develop into the expected job requirements.
- Needs Improvement: Does generally neither achieve job requirements nor exhibit knowledge, skills and behaviors. Requires excessive guidance and supervision. Contribution to the team and the business is not significant. Does not perform according to the expected job requirements. An action plan to recover and/or a mobility must be planned.

Section 2.1/2.2/2.3/2.4 Appraisal summary by direct manager/employee and functional manager/Next level manager (if any)

These sections are used to capture individual comments by the actors involved in the ePA process.

2.6.3 Next Yr obj. Dev Plan and Sign

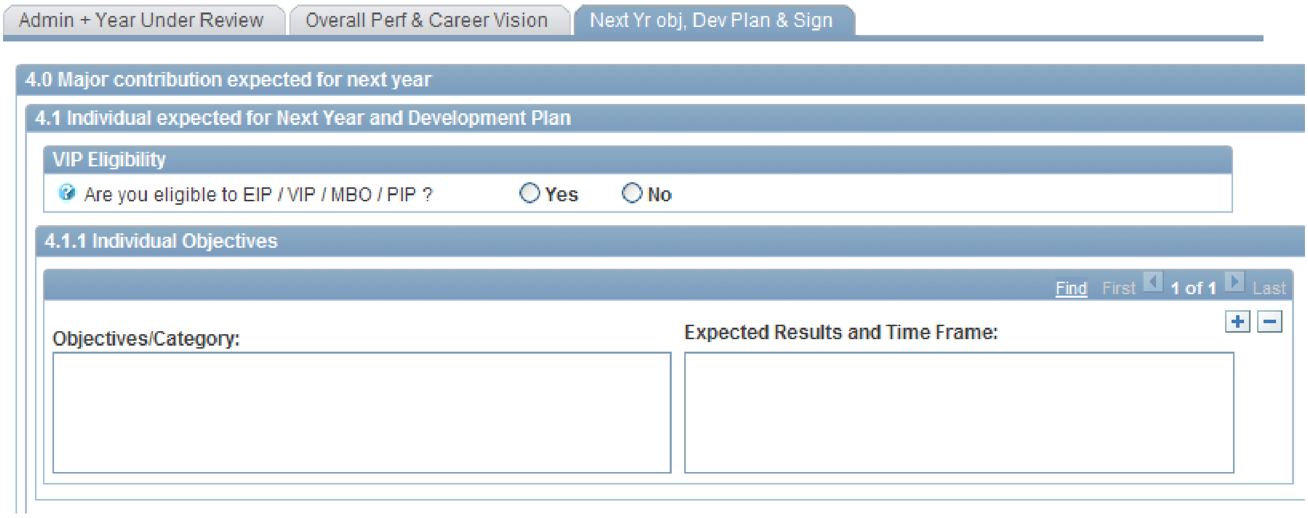


Figure 2.6: Next Yr obj. Dev Plan and Sign [9]

Section 4.0 Major contribution expected for next year

The major contribution expected for next year in terms of objectives and development plan will follow the same scheme than for the past year performance evaluation. This means that it will cover the 3 dimensions already mentioned above:

- the quantified objectives of the job
- the desired behaviors to achieve the results
- the required job accountabilities

Section 4.1 Individual objectives Expected

This section is dedicated to the setting of individual quantified objectives to be achieved by the employee for next year.

Section 4.1.1 Individual Objectives

In this section, next year's individual objectives are to be set along with expected results and time frame. **Section 4.1.2 VIP Objectives**

This section is provided to the users to set their respective VIP/MBO objectives for next year. These objectives are then evaluated next year for providing the ratings and total score.

Section 4.2.1Professional/Leadership behaviors

This section is used to give an action plan for the employee regarding the development of Professional/Leadership behaviors (whichever applicable)in the coming year along the measurement criteria.

Section 4.3 Job Accountability and Competency Development Plan

This section is dedicated to the definition of the development plan and expected results related to the mastering of the job by the Employee in the day-to-day work versus job required Competencies and Organization requirements.

Section 4.3.1 Key Developmental Job Accountabilities

The Contribution Matrix or the Job description (if available) will be the support to select the most relevant Employee's contributions that are expected for the next period. When Contribution matrix is not available, the employee and manager will define the key and most relevant contributions and insert them in the Description area.

Section 4.3.2 Specific Job Competencies where Development is Required

This section is used to define the development plan for job competencies based on the job function of an employee. Also the users can enter comments in the comments field or mention any other job competency that is not available in default list.

Section 4.4 Other Competencies

This section is used to enter any other competency development plan to be entered and tracked.

Chapter 3

Work done during Project

3.1 Customization of Enterprise Learning

There was no provision to mark KL3 evaluation as mandatory for all the sessions of a course. Requirement was placed to make some provision on the form of course definition, which will make it possible to make KL3 evaluation as mandatory for any session of that course.

Another requirement was to make provision to send automatic mail to students and instructors of any course, a day before the time when a particular session is about to start.

Following actions were taken in this requirement:

- Introduction of KirkPatrick Level 3 Evaluation Flag in the course description form, which when checked will make it sure that all sessions of that course are going to have KirkPatrick Level 3 Evaluation as default and mandatory, as when it will be marked as yes at course description level, then any session description form will show it as marked yes and grayed out, so that the user will not be able to change the response.
- Designing of automatic mail sending program which will send mails to all learner and in cc. their manager & Instructor of the sessionone day prior to beginning of the course. An Application Engine program was written which will check for all

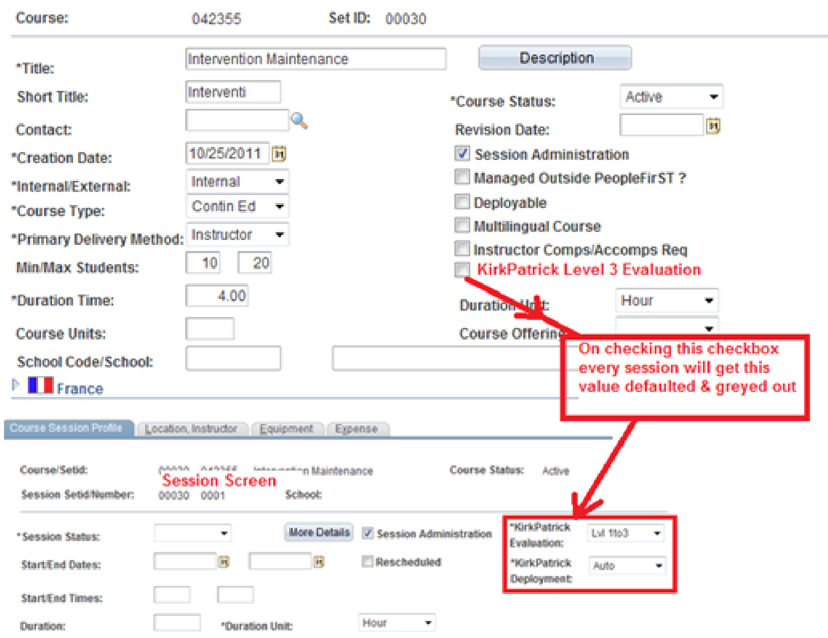


Figure 3.1: Introduction of KL3 Evaluation Flag [12]

Emplids whose entry is there in a course session table and their course start date is current date + 1. Plus it will extract email id of that employee from personal data and will send an email to all the emailids informing them regarding commencement date of that course session. This process will be put in batch mode which will be executed daily and/or manually invoked.

3.2 Identifying Internal Mobility of employees

Objective was to identify job data rows where IM corporate logic is applicable to analyze reorganization cases to update past data accordingly as Currently there is no identification of Internal Mobility happened (as per corporate logic) in job data rows prior to May 17^{th} 2014. They basically needed job data rows of last five and half years(between Jan 2009 to 17^{th} May 2014) where:

- Dept ID and Group ID is not equal w.r.t. previous row of same employee.
- Job code and job function are not equal w.r.t previous row.
- Country linked and location are not same w.r.t. previous row.

An Application Engine was written which will fetch all the rows of employees between the the prescribed dates. As all the rows are effective dated, that is for each change made, there is new row for same employee along with date of that change as effective date, hence it is possible that more than one row of single employee might be present.

Now all the rows with same emplid(employeeid) are grouped and in that group latest row is compared with row just below it, and above mentioned three criteria are verified against them, and this is repeated n-1 times covering all the n rows in that grouped, and when any of the above mentioned criterion is true, then internal mobility is said to be occurred. And for all those employee ids a seperate entry is made in a different table, which is then used to keep record of employees who have been through internal mobility.

3.3 Grade Coherence

Requirement was to:

- Put the new lower JG(JobGrade) in PeopleSoft job data record of the concerned employee and

- No change in compensation structure : base salary, incentive, coefficient, days off, etc

The problem is that in France the JG is every day automatically interfaced from PS(People soft) to GXP (payroll software) and that JG is a very important data for the payroll calculations of each employee.

If we change the JG of an employee in PS and if we do nothing else it's sure that 2nd point will not be met.

Solution proposed for serving this need is to keep the previous JG (before downgrading) also in PS in another field than the Job grade one. It was agreed to have the information in PS provided this is the least visible:

- Use of an existing field (especially not a new field)

- A field not visible by the employee (ess) or manager (mss) or even the HR group
- Ideally a coded field like "+ 1"to indicate that the employee is paid on a higher JG method.

Now many components were impacted and changes were required. I was assigned to write code which will take data set and check if step value is provided or not, and if it is'nt provided then verify that that employee qualifies for higher JG or not, and in case it does, code will generate error for that row.

3.4 Mass load of contract data

Earlier: contract data was loaded one by one, which was very hectic work, in case there are 50-100 profiles to be loaded. Requirement was placed to allow mass load of the data.

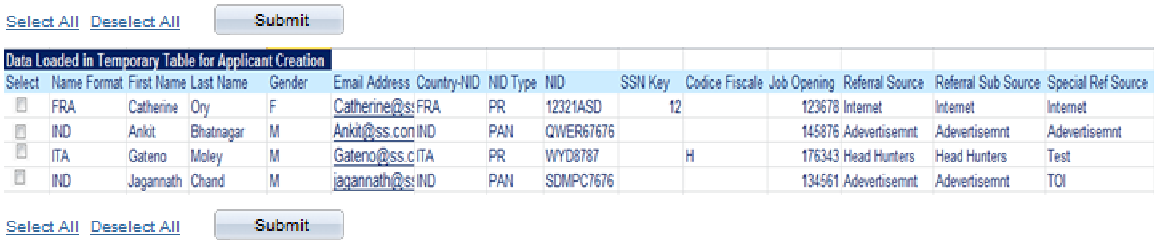
Requirement was placed to Mass load the data of Foreign Contract Workers. Usually entry is done using a form provided on application, but as number of such entries is normally too high, contract data has to be uploaded in the data base from a CSV file using SQL script, which should implements all the business logic on the data that uploading from the form would have done, and then finally upload it to the corresponding tables in the database.

Now: HR User provides us with the CSV file, that is loaded into the PeopleSoft system using File Layout. Then an Application Engine is called, which picks up the rows and performs all the required Business Logic on each row of data, then after all the verifications and validations, corrected data is uploaded in the PeopleSoft database and those rows with error are written with the message in the log.

3.5 Quick Hiring

Before: Hiring was done with entering details of the applicant in the form one by one, which is quite hectic task. Requirement was to provide a portal where data in CSV or XLS format can be fetched just like mass load, but in addition it requires an interface, which interacts with them visually and show them which employees are selected and which are not with proper explanation.

Objective is to enable quick hiring of large number of employees. User will be provided with a list of applicants in a CSV or XLS format, and then he/she will load it into application, it will be stored into a temporary table and displayed in a grid in figure 3.2.



Select All Deselect All Submit

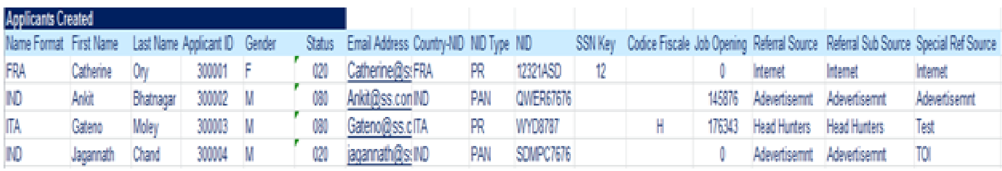
Data Loaded in Temporary Table for Applicant Creation

Select	Name Format	First Name	Last Name	Gender	Email Address	Country-NID	NID Type	NID	SSN Key	Codice Fiscale	Job Opening	Referral Source	Referral Sub Source	Special Ref Source
	FRA	Catherine	Ory	F	Catherine@ss	FRA	PR	12321ASD	12		123678	Internet	Internet	Internet
	IND	Ankit	Bhatnagar	M	Ankit@ss.con	IND	PAN	QWER67676			145876	Adevertisemnt	Adevertisemnt	Adevertisemnt
	ITA	Gateno	Moley	M	Gateno@ss.c	ITA	PR	WYD8787		H	176343	Head Hunters	Head Hunters	Test
	IND	Jagannath	Chand	M	jagannath@s:	IND	PAN	SDMPC7676			134561	Adevertisemnt	Adevertisemnt	TOI

Select All Deselect All Submit

Figure 3.2: Grid displaying list of applicants to be hired [12]

Now here user will select rows which are to be uploaded, and will submit the data. After pressing submit, business logic will be executed on the data and depending upon the criteria of application selection/rejection of applicant wil l be done. After that rows passing the business logic will be updated into the database and will be displayed on the second grid as shown in figure 3.3.



Applicants Created

Name Format	First Name	Last Name	Applicant ID	Gender	Status	Email Address	Country-NID	NID Type	NID	SSN Key	Codice Fiscale	Job Opening	Referral Source	Referral Sub Source	Special Ref Source
FRA	Catherine	Ory	300001	F	020	Catherine@s:	FRA	PR	12321ASD	12		0	Internet	Internet	Internet
IND	Ankit	Bhatnagar	300002	M	080	Ankit@ss.con	IND	PAN	QWER67676			145876	Adevertisemnt	Adevertisemnt	Adevertisemnt
ITA	Gateno	Moley	300003	M	080	Gateno@ss.c	ITA	PR	WYD8787		H	176343	Head Hunters	Head Hunters	Test
IND	Jagannath	Chand	300004	M	020	jagannath@s:	IND	PAN	SDMPC7676			0	Adevertisemnt	Adevertisemnt	TOI

Figure 3.3: Grid displaying data successfully entered [12]

And those who failed the logic will be simply displayed into the third grid with label ”Rejected Applicant Data” stating the reason of rejection as shown in figure 3.4.

Rejected Applicant Data						
Name Format	First Name	Last Name	Gender	Email Address	Job Opening	Reject Reason
IND	Joe	Smith	M	joe.smith@.com	156334	No available job opening

Figure 3.4: Grid displaying data of failed applicants [12]

3.6 Schedule Job Interface

Before: There was virtually no portal to manage and to check what all schedules are running and what all files are being exchanged between PeopleSoft and various other applications intracting with it. Anyone who was in a need to know anything needed to refer to various documentations to know.

A requirement was placed to design a new portal which will make details of various running schedules, their jobs and files received/send by those jobs to the user. It will allow user to view details of any schedule running, and get details of various jobs and that schedules is executing plus various files those jobs are generating/sending/receiving.

Using this portal, user can search for schedule using various search criteria, like he can search by schedule name, job's name, job's criticality, job's type etc., apart from viewing, it also allows user to add new schedule/new job to a schedule/new file/process to an existing job, i.e. it allows user to customize the information and add new information to keep database in sync with actual changes. Here customization is effective-dated, that is, it will add a new row in database with current system date whenever a customization is made in record instead of modifying that row. This will help keeping maintain the history of changes for a particular record, and user will be able to track the changes made to it.

3.7 Data Extraction Using SQR

Requirement was to extract data from some PeopleSoft tables in a report format based on certain conditions related to location details, department details and employee details.

I wrote a SQR which when executed will extract the data from corresponding PeopleSoft tables and based on the requirements arrange it in the report format.

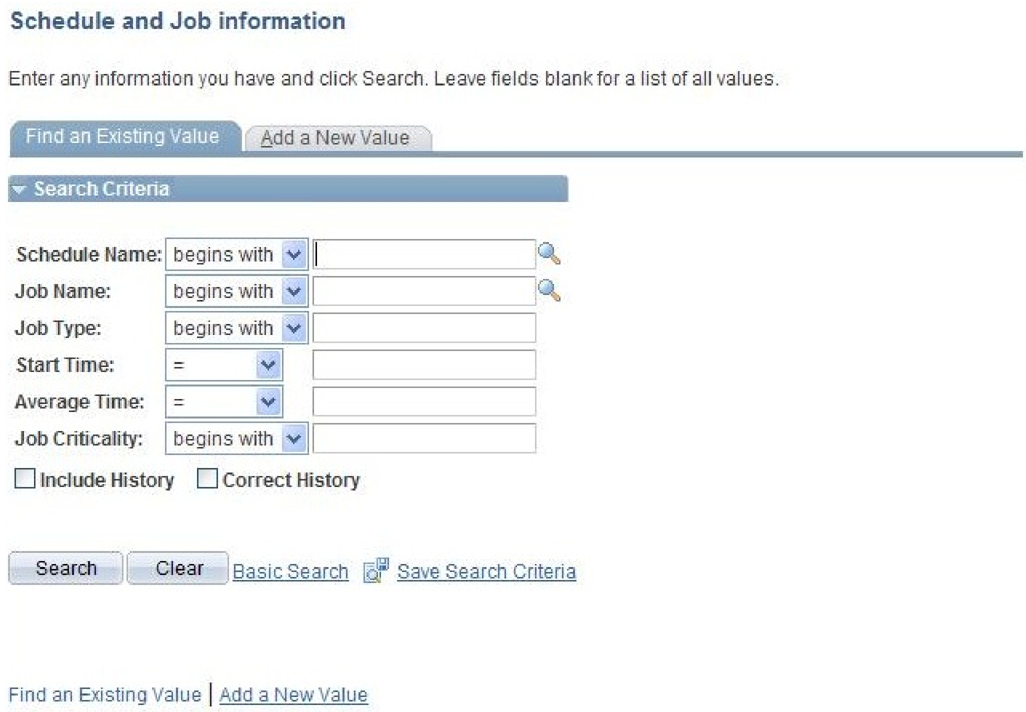


Figure 3.5: Search page to find Schedule [12]

3.8 IPF Module

Before: ePA was used for employee performance appraisal purpose, manager can set goal for their team and also review and rate it (more about ePA is described in the literature survey section) . ePA was to be replaced by 3 new applications namely: Goal Settings, Goal Review and Individual Performance Feedback. Among which, I was assigned to design pages for Individual Performance Feedback.

IPF Module consists of a component which contains 5 different forms that are supposed to be appear in step by step manner, where user can fill one form and then slide past to the next one. It should also be possible to fill the form in no specified sequence.

- First form will take general feedback of employee as well as his/her manager on the past experience.
- Second form will take feedback on accountabilities, here employee will be asked about any specific obstacles they faced, also how manager can help.

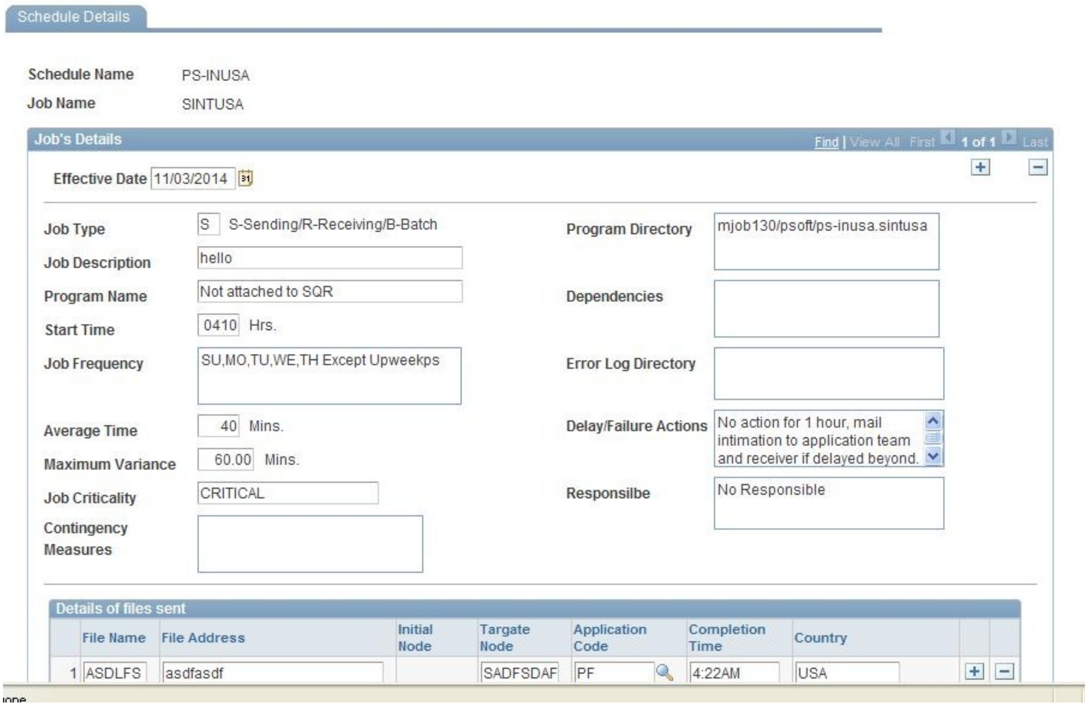


Figure 3.6: Main Page, loaded after search page [12]

- Third form will take feedback on professional behavior and competencies, it will ask them about behavior/competency strength andbehavior/competency development areas. Here also user will be asked about obstacles and how possibly manager can help.
- Fourth form will ask questions related to Development and career. It will ask user regarding effectiveness of their last years development plan.
- Fifth form assesses Overall performance.

Functionality is such that, some fields are editable for employee and some are editable to that employee's direct manager and then some for N+1 manager.

3.8.1 PDF/XLS Download Upload

On Final page of IPF module there was required one button which will allow user to download their response in pdf format. On pressing that button, response of all the 5 pages should be printed on the pdf file and should be downloaded to employee's local system.

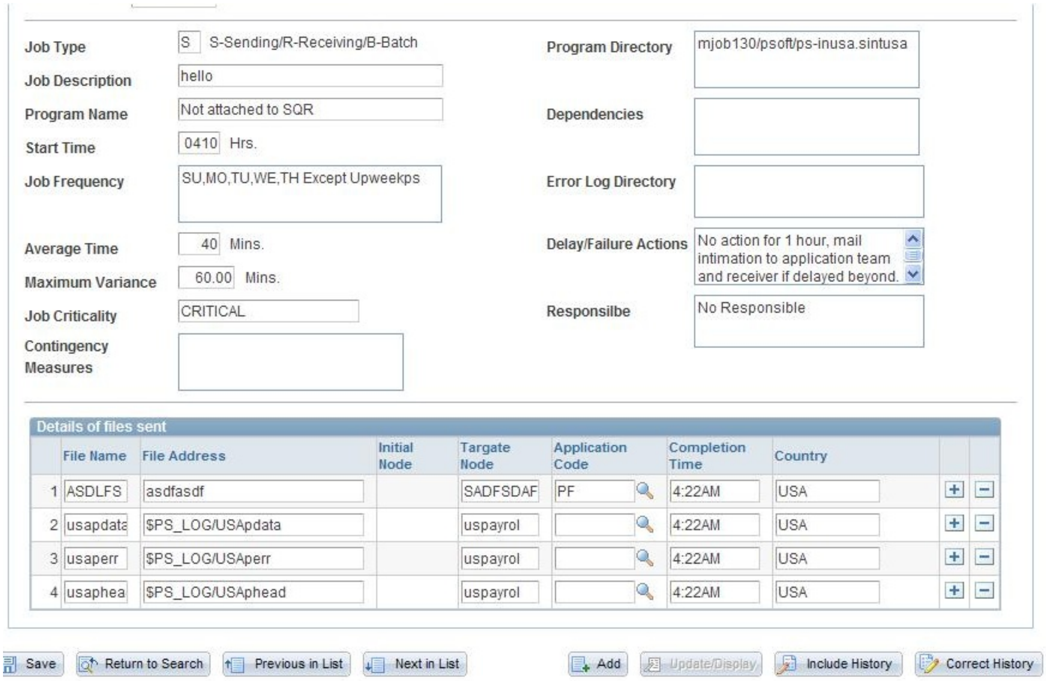


Figure 3.7: Action Buttons(bottom) [12]

Another requirement was to place 2 buttons one for excel download and another for excel upload, using which user can download the form in an excel sheet format and can fill it offline and later upload it back using excel upload button.

On downloading, only those fields which employee is eligible to fill while filling online, should be unlocked and ready to be filled, all other fields should be locked, and structure of the xls file should be unalterable. On uploading the excel file, all the data entered offline by the employee should be uploaded in PeopleSoft records at their respective place.

It was implemented using java program. When that button was pressed, java class file was called, which in turn will pull data from buffers of the PeopleSoft application and then print it in a report like format as a pdf. And for excel format, it will download data in xls format and will keep all those fields locked, which are not supposed to be touched by the user.

3.9 My Agreement Page

Before: There was an Agreement form, which was required to be signed every year, it consisted of a list of language links and while viewing the language only, the acceptance and submit button was activated. Once Viewed the language, user was required to click on declaration checkbox, and then he/she was able to sign the document.

Requirement was to put another row of links which will enable user to view video on safety measures, and then proceed to view the language, another constraint required was that user should compulsorily click on video and watch it for four minutes before he/she can proceed to view the language.

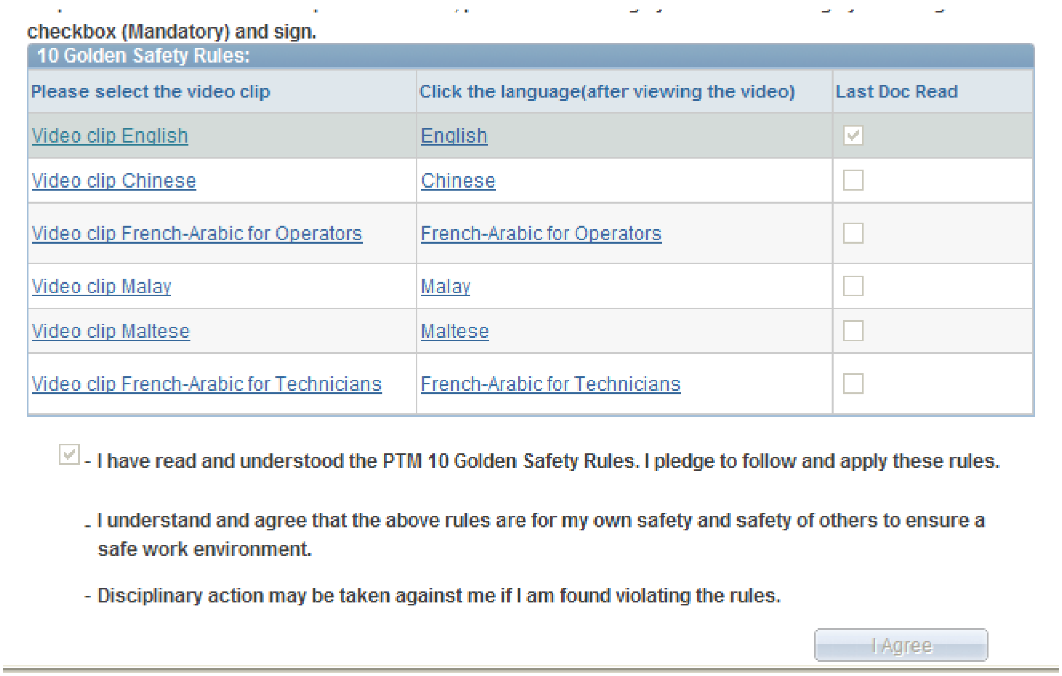


Figure 3.8: My Agreement Page [12]

I extended the grid and placed one control which will play the video on click, and then placed a check on the language control, which will allow language to be displayed only after first four minutes of watching the video has been passed. Later user will watch the language and accept the agreement and sign the document. And once signed, on the next visit, if in the current year (in which document was signed) user will be able to watch video and language without any time or order restrictions, but once the current year is over, those restrictions will again get activated.

Also, an additional field on Setup area was provided, which along with the language link, will allow backoffice to edit the video link as well.

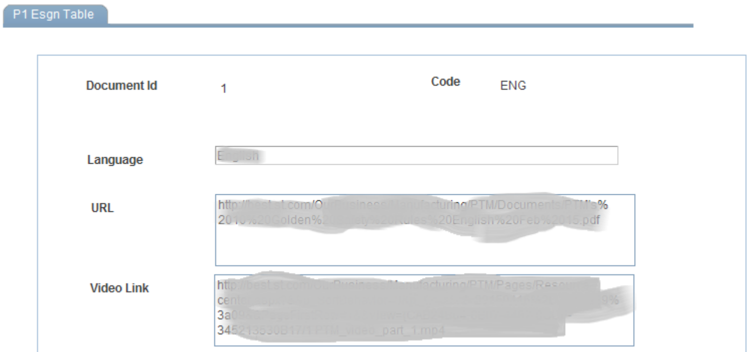


Figure 3.9: Setup [12]

3.10 Employee Incentive Enroll Page

Requirement: A page for HR back Office users was required to check/view current incentive plan enrollment of employee. Because due to security reasons they can not give access to page "Employee Incentive enroll" as it has other confidential informations also.

Designed a page which will fetch Employee IDs and Names of employees and managers from job data. One row will be displayed which will fetch the first active row from employee incentive enroll page.

3.11 Job Data Changes

There were many issues which were brought up in this requirement, for example while managing job actions, a user with status active was able to be returned from leave, and while a user is on leave, his/her eHR access was turned off.

Problem was fixed by writing peoplecode in on Job Data record, which will check whether the employee is on leave or not before taking action as return from leave. In case user is active, this action will be blocked by PeopleSoft.

Chapter 4

Conclusion and Future Work

This semester included study of Enterprise PeopleTools, Application Designer, Application Engine and SQR, it also included some modifications on existing applications as well as designing a new module.

Major change is that ePA module is becoming obsolete and three separate applications are going to take its place, i.e. Goal Settings, Goal Review and Individual Performance Feedback. During this semester I was majorally working on IPF(Individual Performance Feedback) and pdf download functionality of IPF. Apart from this, I also developed several scripts which are like small tweaks in already existing systems, and not mentioned here in my report.

In this project I was striving to make the HRMS system more efficient by constantly customizing based on user's requests and feedbacks. This is beneficial because,

- It enables better performance of the system and more user friendliness.
- It makes users more productive and hence will add some value to the company.

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