P-834

CSP REPORT GENERATING TOOL

PROJECT WORK DONE AT
POLARIS SOFTWARE LAB. LTD.,
ANNA SALAI,
CHENNAI - 600 002.

PROJECT REPORT

SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF
M.Sc [APPLIED SCIENCE] SOFTWARE ENGINEERING
OF BHARATHIAR UNIVERSITY, COIMBATORE.

SUBMITTED BY

P.NITHYANANDAN
REG NO. **9937S0080**

UNDER THE GUIDANCE OF

External Guide	Internal Guide
Mr.V.K.Subbiah **POLARIS Software Lab Ltd.,** **Chennai - 2**	**Ms.N.Rajathi** **Dept. Of CSE.** **Coimbatore – 6**

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
KUMARAGURU COLLEGE OF TECHNOLOGY
COIMBATORE – 641 006
MAY 2002 – AUG 2002

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

KUMARAGURU COLLEGE OF TECHNOLOGY

(Affiliated to Bharathiar University)
COIMBATORE – 641 002
SEPTEMBER – 2002

CERTIFICATE

This is to certify that the project entitled

CSP REPORT GENERATING TOOL

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P.NITHYANANDAN
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Professor and HOD 26/9/02 Internal Guide

Submitted to University Examination held on 26/9

Internal Examiner 26/9 External Examiner

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POLARIS
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Sep 03, 2002.

To Whomsoever It May Concern

This is to certify that **Mr. Nithyanandan P, M.Sc** (Software Engineering); Student of **Kumaraguru College of Technology** was involved in a project in our organization for a period of two months from **01-Jul-2002** To **31-Aug-2002**. He was assigned to the project **"C S P Report Generating Tool"** under our guidance. His performance in the above mentioned project was good.

Yours truly,

For **Polaris Software Lab Ltd.**

Subbiah V K
Project Guide.

Dedicated

to

My Ever Loving Parents

&

Lord Almighty

Acknowledgement

ACKNOWLEDGEMENT

To add meaning to the perception, it is my indebtedness to honor a few who had helped me in this endeavor, by placing them on record.

With profound gratitude, I am extremely thankful to **Dr.K.K.Padmanaban B.Sc. (Eng), M.tech, Ph.D.**, Principal, Kumaraguru Collage of Technology, Coimbatore for providing me an opportunity to undergo the MSc [APPLIED SCIENCE SOFTWARE ENGINEERING] course and thereby this project work also.

I extend my heartfelt thanks to my CSE department head **Prof.Dr.S.Thangasamy B.E (Hons), Ph.D.**, for his kind advice and encouragement to complete this project successfully.

It's my privilege to express my deep sense of gratitude and profound thanks to **Mr.V.K.Subbiah, CSP Project Manager**, POLARIS Software lab ltd, Chennai for having allowed me to do my project work in his esteemed team and for helping me in all means in successful completion of this project work.

Gratitude will find least meaning without thanking my course coordinator **Mrs. S.Devaki B.E, M.S.** and guide **Ms. N.Rajathi B.E.** for the valuable guidance and support throughout my project.

Words are boundless for me to express my deep sense of gratitude and profound thanks to **Mr.K.Jaggannathan, Mr.Sreeram** and all my associates at Polaris, for all their kind guidance and encouragement towards my project work.

My gratitude is due to all staff members of CSE department, my parents and all my friends for their moral support and encouragement for successful completion of my project.

Project Abstract

Project Abstract

This project is done at Polaris Software Lab Ltd, Chennai; the main purpose of this project is to develop software for the Librarian of the CSP (Client Server Platform Service) Project to tracking the exact source location of the developed Software Projects in the system by the SCF (Software Change Control Form) Number. This Project entitled "CSP Report Generating Tool" is developed using Pro*C. Oracle is used for data storing, retrieval and manipulation purposes.

The CSP Report Generating Tool is a browser based intranet application. The system facilitates the Librarian to Generate Reports as per the CSP Project Team member's request.

There are two modules in the application, namely Maintenance and Reports. First option is meant for Check-in, Checkout and View the data related to the source location. The second generates the four main reports that are frequently asked by the CSP team members.

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Introduction

1 Introduction

1.1 Organization Profile – *POLARIS Software Lab Ltd.*

Polaris Software Lab Ltd is a multinational software development company. Which is incorporated by **Mr.Arun Jain** in the year 1993. ever since the company has delivered high quality software products and services to discerning clients in the Global market place, carving a special niche for itself.

Polaris is one of the fastest growing software companies. It has many branches and strategic alliances located all over the world; their world wide registered Global head office is located at Chennai. Polaris is currently rated as World First CMMi-Level 5 Company. Polaris is ranked Among the Top 25 Best Employers in the country. And it is certified for new standard ISO 9001, 2000... more...

Polaris mainly concentrates on products ranging in Banking, Insurance and Financial Services (BIFS). Their Customer list includes many Fortune 100 Companies, such as Citibank Technologies Ltd, NEC Japan, Saudi American Bank, West pack bank, etc.

Polaris is currently having more than 2500 strong, well qualified team of Software and project management team, with well proven track record in handling large multinational projects and developing products for the global market place, with latest technology & tools, proven on-time delivery records, cost effectiveness and best of quality.

To offer Clients the benefit of a comprehensive service, extending beyond the scope of its current competence, Polaris enters into alliances with global leaders. The Solutions Alliance allows Polaris to expand its solutions delivery into complementary fields. The Technology Alliance adds a further depth to Polaris' technological capabilities for faster execution of projects. Some of the partners of Polaris are IBM, Sybase Inc, BaaN, Oracle Corporation & more...

Polaris went public with an IPO and currently listed in all major stock exchanges in India. Today, Polaris provides quality solutions to Fortune 100 clients across four continents.

Polaris has entered into a Strategic Alliance with M&I EastPoint Technology Inc., (a division of the $24.4 billion Marshall & Iisley Corporation). By virtue of this, it holds the licensing rights and the IPR for the International version of their banking product, EastPoint, that is successfully running in 60 banks in the US and 10 banks in other countries.

Polaris has the mandate to develop, customize, maintain, implement and market the software across the globe, except USA. The product, now called BankNow, has been made state-of-the-art by adding features and functionalities. It is currently supported from the Banking Product Development Center in Noida, near New Delhi, India

1.2 Project Overview – *CSP Report Generating Tool*

The CSP Report Generating Tool is an intranet application. The system facilitates the CSP (Client Server Platform Service) Project Librarian to track the exact location of the developed Software Projects in the system by the SCF (Software Change Control Form) Number. And to generate reports for each teem members to ensure that they are working on the correct version and correct document. The identified users of this tool are the CSP Project Librarian, Project Leader, Module Leader and Developers.

There are two modules in the application, namely Maintenance and Reports. First option is meant for Check-in, Checkout and View the data related to the source location. The second generates the four main reports that are frequently asked by the CSP team members.

The Maintenance module is divided into three sub modules they are Check-in Checkout and View. These three sub modules are farther divided into sub modules as per the master or client record. The four main reports that are generated are Reports for the given date, for the given from and to date, for the given filename with the from and to date and for the given folder with the date.

System Analysis

2 System Analyses

2.1 Existing System

Currently the tracking of the source record from VSS is done manual with the help of the Excel sheet. The total team of CSP project was dependent on the Librarian. We propose the new system in order to decrees the Librarian burden.

2.2 Need for The System

The Private Bank in Citigroup is a multi-location, multi-product and multi-service organization catering to the needs of chosen high wealth clients. To enhance the quality of service and increase the effectiveness of the product delivery, CSP (Client Service Platform) was initiated in the Private Bank. In order to catering to certain new requirements to the existing system every six months they release a new version as per the clients request.

As they work on the enhancement of the older versions in order to know that they are working on the correct version of source they have to contact the librarian for those details. This is because as each version is released or developed the duty of the team member is to give a document that specifies the changes in the new version and both the document and the source as to be checked in to the VSS (Visual Source Safe) with the help of the librarian.

When ever the clients make an complain or an request the duty of the CCB (Change Control Board) is to identify the Configuration item and they have to find out the SCF (Software Change Control Form). As soon as they find the SCF no they have to find the developer of the form this could be done with the help of the Librarian by following the above mentioned method.

After the submitting the source and document by the developers the duty of the module leader and project manager is to review the source and they have to submit an separate document this also must be checked into the VSS or if they specify an changes as to be done the Librarian as to check out the older version and also the new version which they submitted currently again to the developers to make the changes.

So each time the work of the Librarian is to track the location of the source records for the SCF no that is been specified and as to Check in or Check out as per the team member's request. This is quite typical process when this is done with the Excel Sheet to track the location.

2.3 Proposed System – Pro*C Version

The main system process starts with the crucial authentication process in which the CSP Project Librarian and the Team member's identification are validated. Hence the unauthorized users are filtered before entering in to the system.

The user will have an initial screen before him. If the Team member's of CSP Project other than the Librarian logs in they can only generate reports as per the need. If the Librarian is the user then he can work on both the modules that is maintenance and the reports. That is he is the only person who can check in as well as check-out source record details.

The Team members are divided into three they are the Module Leader, Project Manager and the developers. Each of them is identified with a separate user id they can only generate reports as per there need. The Librarian can check-in checkout the data related to the records i.e. the details of the source documents. He can generate reports also for verification and also for the CCB's as per their request.

DETAIL DESCRIPTION

The CSP Report Generating Tool is a browser based intranet application. The system facilitates the Librarian to Generate Reports as per the CSP Project Team member's request.

Maintenance

This module can only accessed by the CSP Project Librarian. This is divided into three sub modules they are.

I. Check-in

There are three types of Check-ins which occur when

- New Versions are released; the same SCF may have a different document from different departments. (Analysts, Designers, programmers etc...).

- Client reports a Change in a module, there will be a change in the parent table.(Both date & SCP suggested by CCB).

- A new module is inserted with a new SCF generated by the system.

II. Check-out

The librarian uses this module when there is updating of

- New module to a project with its filename, versions, path, etc...
- Data in the Parent table when the second complaint reaches from the CCB.
- Data in child table when there is need of change requested by the Module leader
- Data when there are files with same documents.

III. View

This module is just to view the data as a hole i.e. it displays the hole details of the records that is the filename, version, SCFno, date of submission, size ext. This is of three types that is view of Master records, Client record and view data of a particular SCF no.

Reports

The various reports that are generated by the users are:

1) Report for given date.

2) Report for the given from and to date.

3) Report for the given file name with from and to date.

4) Report for the given date for given folder.

System Environment

3.1 Computing Environment

Server:

Web Server Software	Iplanet 4.1.
Application Server Software	Weblogic 5.1.
Server Operating System	Sun Solaris 2.8.
Database Software	Oracle 8i RDBMS.
Hardware	Sun SPARC Server ES 3000.
Web Security Software	Web Security Management System.

Client (Intranet):

Hardware	IBM PC Compatible Pentium III or later.
Client Operating System	Windows 9x, Windows 2000, Windows NT Workstations.
Web Browser	Internet Explorer 5.0, Netscape Communicator 4.6 or later.

Development:

Hardware	IBM PC Compatible Pentium III or later.
Client Operating System	Windows 9x, Windows 2000, Windows NT Workstations.
Web Browser	Internet Explorer 5.0, Netscape Communicator 4.6 or later.
Development Language/Tools	Pro*C, NAPT Utilities.

3.2 Technologies-Quick Reference

The following are the important as well as main factors in choosing the specific technologies and environments for developing the software.

SUN SOLARIS

An Operating System's primary goal is to use the system's resources and hardware in an efficient manner and its secondary goal is to make the system convenient to use. Solaris satisfies the both factors and hence its preferred in all over the world and in this project also. Its main salient features include the following: (a) Multitasking (b) Multi User and (c) System Portability. 'Multitasking' means multiple tasks can be carried out by placing other tasks in the background, while the user work on one task at a time. A multi user operating system permits

several users to use the same computer to carry out their computing jobs. One of the outstanding features that Solaris posses are the ability to port itself to another installation without the need to incorporate any major changes.

Pro*C

Oracle's embedded SQL environment is called Pro*C. Embedded SQL is a method of combining the computing power of a high level language like C/C++ and the database manipulation capabilities of SQL. It allows you to execute any SQL statement from an application program. A Pro*C program is compiled in two steps. First, the Pro*C *precompiler* recognizes the SQL statements embedded in the program, and replaces them with appropriate calls to the functions in the SQL runtime library. The output is pure C/C++ code with all the pure C/C++ portions intact. Then, a regular C/C++ compiler is used to compile the code and produces the executable.

What Is an Oracle Precompiler?

An Oracle Precompiler is a programming tool that allows you to embed SQL statements in a high-level source program. The Precompiler accepts the source program as input, translates the embedded SQL statements into standard Oracle runtime library calls, and generates a modified source program that you can compile, link, and execute in the usual way.

Why Use the Oracle Pro*C/C++ Precompiler?

The Oracle Pro*C/C++ Precompiler lets you use the power and flexibility of SQL in your application programs. A convenient, easy to use interface lets your application access Oracle directly.

Unlike many application development tools, the Pro*C/C++ Precompiler lets you create highly customized applications. For example, you can create user interfaces that incorporate the latest windowing and mouse technology. You can also create applications that run in the background without the need for user interaction.

Furthermore, Pro*C/C++ helps you fine-tune your applications. It allows close monitoring of resource use, SQL statement execution, and various runtime indicators. With this information, you can tweak program parameters for maximum performance.

Although precompiling adds a step to the application development process, it saves time because the Precompiler, not you, translates each embedded SQL statement into several calls to the Oracle runtime library (SQLLIB).

What Does the Pro*C/C++ Precompiler Offer?

Pro*C/C++ offers many features and benefits, which help you to develop effective, reliable applications.

For example, Pro*C/C++ allows you to

- Write your application in C or C++
- Follow the ANSI/ISO standards for embedding SQL statements in a high-level language

- Take advantage of dynamic SQL, an advanced programming technique that lets your program accept or build any valid SQL statement at runtime
- Design and develop highly customized applications
- Write multi-threaded applications
- Automatically convert between Oracle internal data types and high-level language data types
- Improve performance by embedding PL/SQL transaction processing blocks in your application program
- Specify useful Precompiler options inline and on the command line and change their values during precompilation
- Use data type equivalencing to control the way Oracle interprets input data and formats output data
- Separately precompile several program modules, then link them into one executable program
- Completely check the syntax and semantics of embedded SQL data manipulation statements and PL/SQL blocks
- Concurrently access Oracle databases on multiple nodes using SQL*Net
- Use arrays as input and output program variables
- Conditionally precompile sections of code in your host program so that it can run in different environments
- Directly interface with SQL*Forms via user exits written in a high-level language

- Handle errors and warnings with the SQL Communications Area (SQLCA) and the WHENEVER or DO statement
- Use an enhanced set of diagnostics provided by the Oracle Communications Area (ORACA)

To sum it up, the Pro*C/C++ Precompiler is a full-featured tool that supports a professional approach to embedded SQL programming.

Does the Oracle Pro*C/C++ Precompiler Meet Industry Standards?

SQL has become the standard language for relational database management systems. This section describes how the Pro*C/C++ Precompiler conforms to SQL standards established by the following organizations:

- American National Standards Institute (ANSI)
- International Standards Organization (ISO)
- U.S. National Institute of Standards and Technology (NIST)

These organizations have adopted SQL as defined in the following publications:

- ANSI standard X3.135-1992, *Database Language SQL*
- ISO/IEC standard 9075:1992, *Database Language SQL*
- ANSI standard X3.135-1989, *Database Language SQL with Integrity Enhancement*
- ANSI standard X3.168-1989, *Database Language Embedded SQL*
- ISO standard 9075-1989, *Database Language SQL with Integrity Enhancement*

- NIST standard FIPS PUB 127-1, *Database Language SQL* (FIPS is an acronym for Federal Information Processing Standards)

Requirements

ANSI standard X3.135-1992 (known informally as SQL92) provides three levels of compliance:

- Full SQL
- Intermediate SQL (a subset of Full SQL)
- Entry SQL (a subset of Intermediate SQL)

ANSI standard X3.168-1992 specifies the syntax and semantics for embedding SQL statements in application programs written in a standard programming language such as Ada, C, COBOL, FORTRAN, Pascal, or PL/I.

A conforming SQL implementation must support at least Entry SQL. The Oracle Pro*C/C++ Precompiler does conform to Entry SQL92.

NIST standard FIPS PUB 127-1, which applies to RDBMS software acquired for federal use, also adopts the ANSI standards. In addition, it specifies minimum-sizing parameters for database constructs and requires a "FIPS Flagger" to identify ANSI extensions.

NAPT Utilities

Network Access Protocol Technique (NAPT) provides full support for applications that allow switching between foreground and background operation (for example, terminate-and-stay-resident applications), including fully preemptive scheduling of a background thread. To avoid possible interaction problems, it is important that client applications that will support background operation make use of the

facilities provided by the NAPT (such as the scheduler and semaphores), rather than implementing separate scheduling mechanisms. The scheduler provided by the NAPT component takes complete control of scheduling all applications running in the system. It is fully preemptive, and allows several processes to run concurrently. Only the current foreground process is permitted to write to the screen.

RDBMS :Oracle 8i

A database server is the key to solving the problems of information management. In general, a server must reliably manage a large amount of data in a multi-user environment so that many users can concurrently access the same data. All this must be accomplished while delivering high level of performance. A database server must also prevent unauthorized access and provide efficient solutions for failure recovery.

The oracle server is an object-relational database management system that provides an open, comprehensive, and integrated approach to information management. An Oracle Server provides efficient and effective solutions with the following main features:

1. *Client/ Server (distributed processing) environments.*

   To take full advantage of a given computer system or network, Oracle allows processing to be split between the database server and the client application programs. The computer running the database management system handles

all of the database server responsibilities while the workstations running the database application concentrate on the interpretation and display of data.

2. Large database and space management

Oracle supports the largest of databases, potentially terabytes in size. To make efficient use of expensive hardware devices, it allows full control of space usage.

3. Many concurrent database users

Oracle supports large number of concurrent users executing a variety of database applications operating on the same data. It minimizes data contention and guarantees data concurrency.

4. High transaction processing performance

Oracle maintains the preceding features with a high degree of overall system performance. Database users do not suffer from slow processing performance.

5. Portability and Compatibility

Oracle software is ported to work under different operating systems. Applications developed for Oracle can be ported to any operating system with little or no modification.

System Design

4.1 Screen Design

User Identification

Introduction.

The user will access the CSP Report Generating Tool Through the Intranet. The users will be able to login using a browser running on their PC's. The browsers to be supported for this application are Netscape 4.6 or above. He is welcomed by a Home Page, which is the welcome page of the CSP Report Generating Tool.

Without proper user authentication the CSP Report Generating Tool will deny all attempts of unauthorized access.

The user identification and entry to the tool is maintained by Security Shell

Security Shell Features

The security shell focuses on achieving maximum control and security to the computer operation while providing maximum flexibility to users. The major features are:-

- Providing a software layer to oversee and control the clusters so that the entire system looks like a virtual machine to the user.
- Centralized administration of user profile, access rights, activities and control measures.
- Providing a single sign on facility to users, so that by entering one user id and password, a user can perform all operations for which he is authorized, on any machine/database.

- Maintain audit trail of all sensitive activities
- Centralized maintenance of parameters, by which addition/deletion of machines, database and user is seamless
- Monitor activities of all users so that security can be maintained.

User Home Page

Introduction

The user is welcomed by a home page containing static text

The user can perform the following operations

- Check-in new or updated records
- Check-out updated unwanted records
- View records
- Reports

Other then the Librarian the first three option is restricted.

Check-in Screen

Introduction

The Check-in screen is the screen to select the type of check-in as to be carried out i.e. it displays an option of asking whether the adding is of Bulk or Mono.

Bulk Entry Screen

Introduction

This screen will be displayed on selecting from Check-in screen. This Read data from a flat file and identify each data and then inserted into the Master and Client Table if a new SCF no is identified then the SCF no is inserted into the Master record or else it is inserted into the client record alone.

Mono Entry Screen

Introduction

This Screen will be displayed on selecting from Check-in Screen. This asks for the Record to be entered i.e. ask for Master entry or Client entry Depending on the type of entry the data are entered.

Check-out Screen

Introduction

The check-out Screen is the screen to select the type of Deletion that as to carried out. I.e. whether the deletion is on Master record or Client record according to the SCF no given or deletion of record for the given file name and SCF no.

View Screen

Introduction

View Screen displays only the total records that are present in the Master or Client record or the records for the given file name & SCF no.

Report Screen

Introduction

Report screen is the screen to select the following four reports

- Report for the given Date.
- Report for the given From and To Date.
- Report for the given File name with From and To Date.
- Report for the given Folder with Date.

Report Display Screen

Introduction

This screen will display all the details of the source records for the selected report with neat intervals.

4.2 Design Constraints

The fields that are entered for storing in the data base follows certain constraints some of them are

- The date format would be mm-dd-yy. The date to be displayed in the forms could be converted in the above format. Default date format provided by client must be changed.

- Date should not be greater than today's date.

- SCF should not be an existing one. (No Duplicates)

- Ck Sum is a unique alphanumeric value generated for each file.

* The CSP Report Generating Tool will follow the same running serial numbering scheme as followed by the CSP project, which is :

PBG -Group name

2000 -Year

$$ -Phase of Project (Say PS/DS...)

CSP3A -Project Name

-Release Type

SCF No - It should be Unique.

For E.g.: For CSP SECONDARY RELEASE 3A2 Usability, it will be like

PBG-2002-PS-CSP3A2-IST-001

* All Filenames that are checked in should follow the naming convention mentioned below :Naming Convention

Hungarian Notation is a naming convention for identifiers in application related documents. Each identifier would have two parts to it, a type and a qualifier.

Type: the first parts of the identifier specify as to what the project the object is associated. This is achieved by adopting part of the name of the type as a prefix on the identifier.

Qualifier: the remainder of the name of the identifier describes what the document is used for. The qualifier portion can be one word or a run-on word.

Eg : **CSP PM PLAN <ver. No.>.doc** refers to a Project Management Document

4.3 Detailed Design

Detailed design of a system includes developing prototypes, user interfaces and Backend databases. For this phase, Data Flow diagram (DFD), Entity Relationship diagrams (ERD) and System Flow Chart (SFC) are used.

Date Flow Diagrams depict how data interact with a system. DFDs are extremely useful in modeling many aspects of business function because they systematically subdivide a task in to its basic parts, helping the Analyst understand the system, which they are trying to model.

A DFD models a system by using external entities from which data flows to a process which transforms the data and creates output data which goes to other processes on external of files. Data in files may also flow to processes as inputs.

The main merit of data flow diagram is that it can provide an overview of what data a system would process, what information of data are done, what files are used and where the results flow. The graphical representation of the system makes it a good communication tool between the user and an analyst, its difficult to represent the business process through verbal description alone. Here data flow diagram helps in illustrating the essential component of a process and the way they interact.

DFD Components

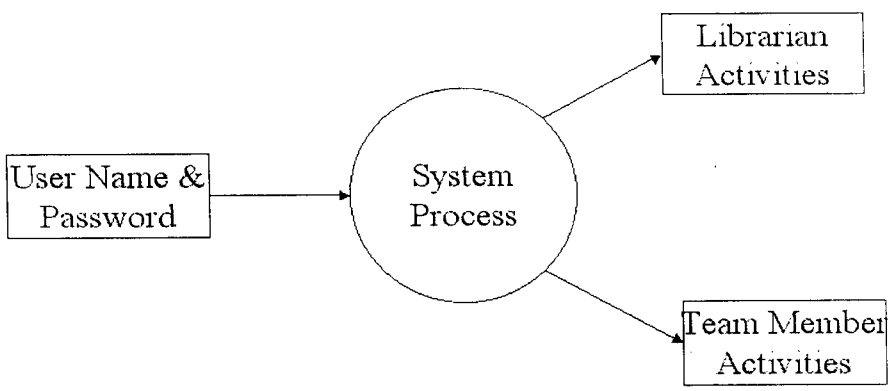
DFDs are constructed using four major components: (a) External entities (b) Data store (c) Processes and (d) Data flows.

External entities represent the sources of data that enter the system or the recipients of Data that leaves the system. Data store represent stores of data within the system. It may be a databases or individual files. Processes represent activities in which data is manipulated by being stored or retrieved or transformed in some way. Data flows represent the movement of data between other components, for example a report produced by a process and sent to an external entity.

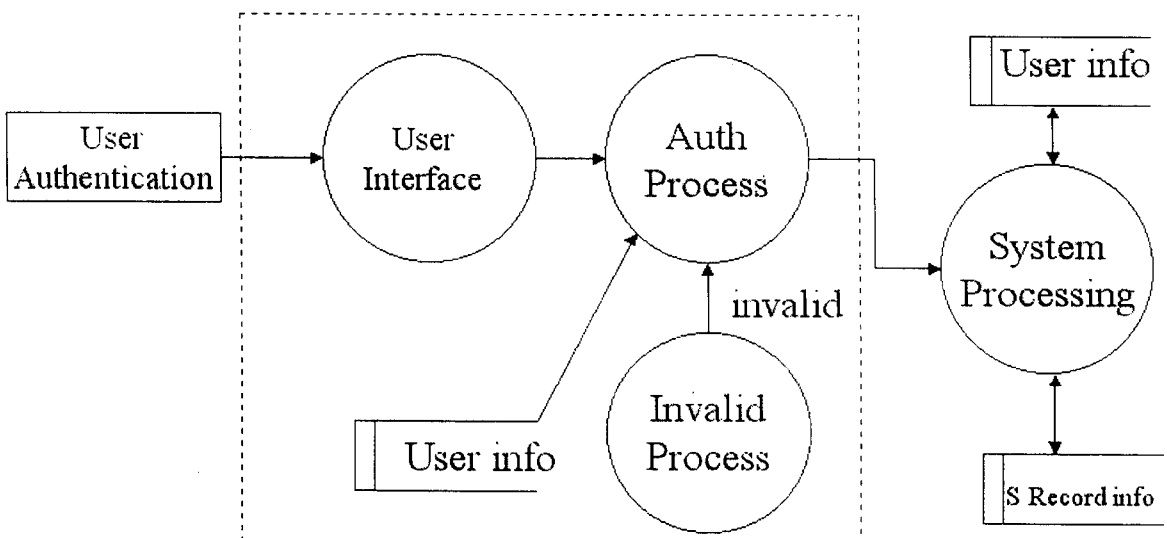
A circle is used to depict a process. Both input and output are data flows. An arrow represents the data flows. External entities are represented by rectangles. Entities supplying data are known as sources and those that consume data are called as sinks.

4.4 Data Flow Diagrams

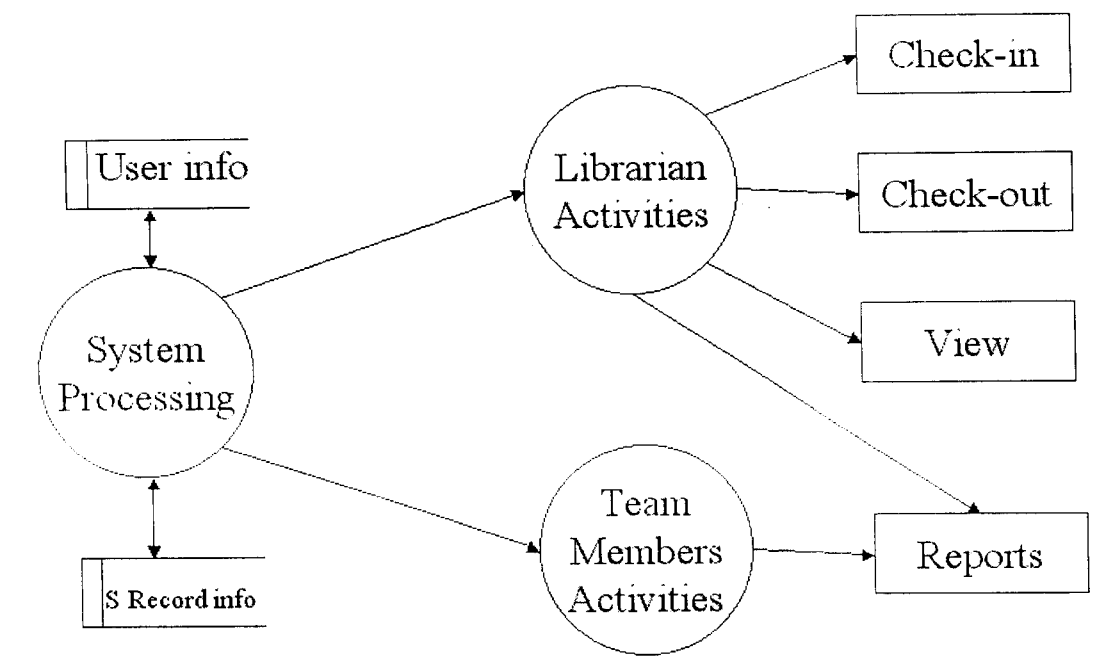
Context Level Flow



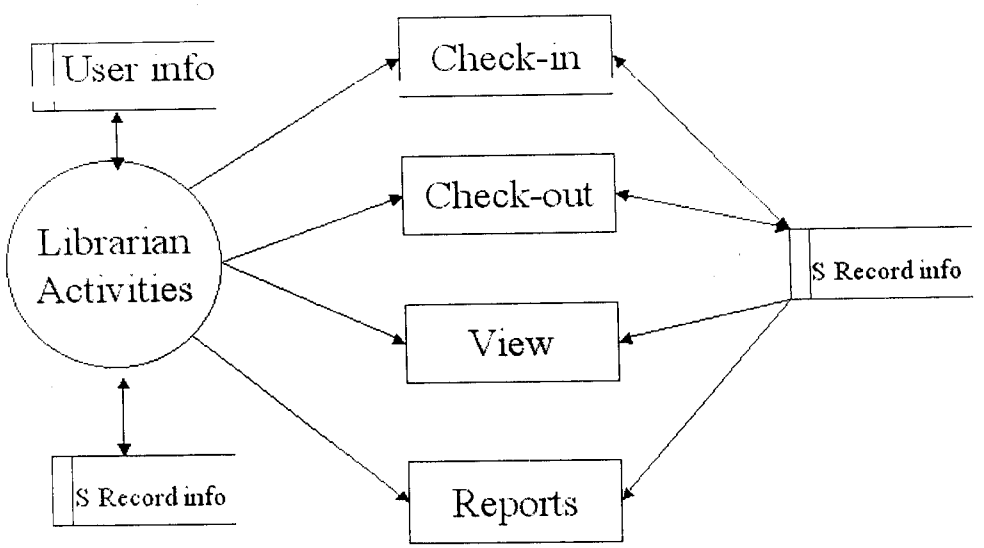
Level1-1.1


User Authentication
User Interface
Auth Process
User info
System Processing
invalid
Invalid Process
User info
S Record info

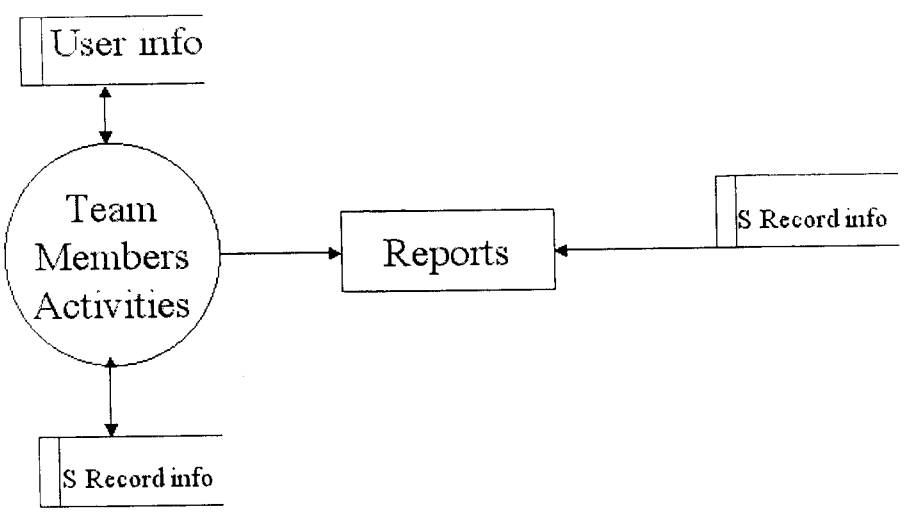
Level 1-1.2


Check-in
User info
Librarian Activities
Check-out
View
System Processing
Team Members Activities
Reports
S Record info

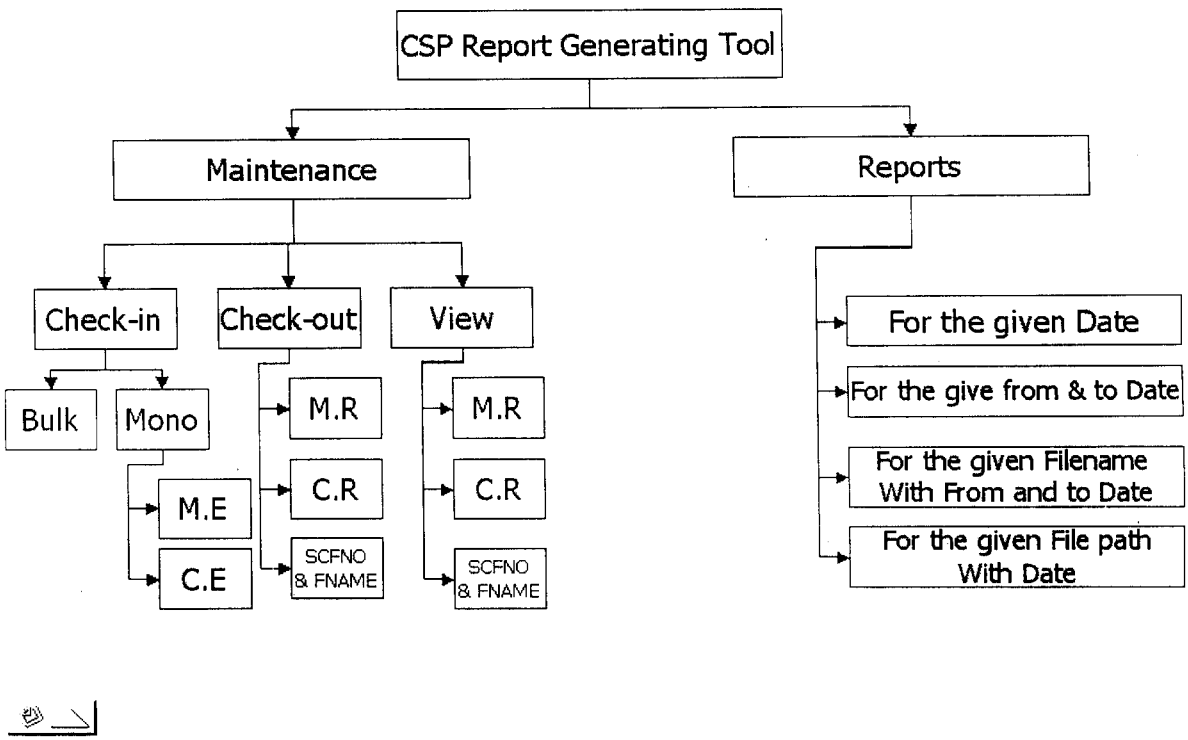
Level 2-2.1


User info
Check-in
Check-out
Librarian Activities
S Record info
View
S Record info
Reports

Level 2-2.2


User info
Team Members Activities
Reports
S Record info
S Record info

HIPO CHART


CSP Report Generating Tool
Maintenance
Reports
Check-in
Check-out
View
Bulk
Mono
M.E
C.E
M.R
C.R
SCFNO & FNAME
M.R
C.R
SCFNO & FNAME
For the given Date
For the give from & to Date
For the given Filename With From and to Date
For the given File path With Date

4.5 Table Design

Table Name : Master_Table

Description : Stores Details of the New form no and the Complain Date received from the customer.

Primary Key : SCFNO

Field Name	Field Type	Description
CDATE	DATE	Complain Date
SCFNO	VARCHAR2 (27)	Software change Control Form Number

Table Name : Client_Table

Description : Stores Details of the Source document.

Foreign Key : SCFNO

Unique Key : CKSUM

Field Name	Field Type	Description
CDATE	DATE	Complain Date
SCFNO	VARCHAR2 (27)	Software change Control Form Number
FILENAME	VARCHAR2 (50)	Name of the File
VERSION	VARCHAR2 (5)	Version number
FILEPATH	VARCHAR2 (100)	Path/Folder in which the Source is saved
COMMENT	VARCHAR2 (100)	Comment Regarding the Reference Documents
CKSUM	NUMBER (25)	Unique Alphanumeric number generated for each record
SIZE	VARCHAR2 (25)	File Size

System Development

5 System Development

So far, in the previous chapters the design of the system was discussed. This chapter gives a brief description of the Functional specification, System features, External interfaces and Coding standards for the whole system development.

5.1 Functional Specifications

The Source documents details should be entered into the database only after the approval of the Module Leader and Project Leader or the Project manager. This will avoid unwanted entry of duplicate records. When an new record is entered it should contain all the three documents that are the Application document, Sources Object document and the Transfer documents.

5.2 System Features

The CSP Report Generating Tool offers the following features:

Audit Trail

Audit trail for the entire user login related details would be available. All audit logs for the invalid id's, failed authorization, etc will also be available.

Error Messages and Error logs

The Application will have proper error messages and user messages. Error log information for all kind of breakdowns and other errors that occurred during service time are stored in the Oracle database.

Data Validations

The CSP Report Generating Tool will support input data validation as per the requirements.

Intuitive Navigation & Screen flow

The CSP Report Generating tool will support intuitive navigation, so that the system is user friendly, as well as efficient in functioning.

5.3 External Interfaces

Security Shell

The users will log-on to Security Shell to access the Tool. The Security Shell will validate the user login. The security shell will allow wrong logins only for 3 times, after that the system will lock the user ID. Then the user has to apply to the administrative users to unlock his login ID.

5.4 Coding Standards

There are two main principal characteristics, which are standards to coding. (a) They force to maintain a methodical and disciplined approach to coding and (b) They constantly remained the internal quality of the code.

The very decision to use standards will affect the coding. By making it clear that the standards are mandatory rules, not mere guidelines, meeting standards is an integral part because standards are not guidelines, they should not be flexible.

Traditionally the coding standards are focused on the following topics: (a) Naming (b) Layout (c) Commenting and (d) Coding: Do's and Don'ts, such as error handling. The emphasis on writing code that's shareable, that's other programmers can also use it easily.

The proposed system is developed using the above-mentioned standards. Variables names are declared meaningful with respect to the information stored as well as the data type of the variable. Comments help the programmer what the module does or the set of statements do. Error handling is well taken care and error messages are meaningful and suggestive.

Testing

6 System Testing

6.1 Testing Concepts

Software is only one element of a large computer based system. Ultimately Software is incorporated with other system elements (ex New hardware) and a series of system integration and validation tests are conducted. System testing is actually a series of different tests whose primary purpose is to fully exercise the computers based system.

Testing presents an interesting anomaly for the software development. The testing phase creates a series of test cases that are intended to 'Demolish' the software that has been built. A good test case is one that has a high probability of finding an as yet undiscovered error. A successful test is one that uncovers an as yet undiscovered error.

Testing process brakes application down in to two main parts:

Unit Testing

In Unit Testing the modules of the system are tested as individual unit. Each unit has definite input and output parameters and often a definite single function.

System Testing

In System testing the system is tested as a whole; that's inter communication among the individual units and functions of the complete system is tested.

Testing for this system was done in 3 steps.

- Testing the function performance of each modular component.
- Testing the interface of software and its function with live data.
- Testing for user acceptance and to see if all user requirements have been met.

System Implementation

7 System Implementation

This chapter gives a brief description of how the system is deployed in the actual environment. Since there is now any existing system for this application a separate care should be given to test that the end users have reached there needs. The system should also save memory by not allowing redundancy and it should help in easily querying.

7.1 System Implementation

Before implementing the system, it's forced in to many server testing phases. After the system clears all the tests, it's released for implementation. After the data has been initially set, the system is ready for use. The implementation type or the change over technique from the existing system is a step by process.

First a module in the part of the system is implemented and checked for suitability and the efficiency. If the end user related to the particular module is satisfied, the next step of implementation is processed with. That's modules related to the previous module are implemented.

7.2 User Training

Training is given to all the particular users from the client side. The training varies from user to user depending upon the information needed pertaining to the user. For example the application users need help only on ad-hoc queries and how to take suggestions based upon the reports, whereas data entry operators need only information's on how to key in suitable data.

Conclusion

8 Conclusion

The goal of the system is to reduce the work burden of the CSP Project librarian. Even for simple verification the CSP Project team member as to depend on the Librarian. This is because the Librarian is the only person who can access the Source documents, which are stored in the VSS. In order to avoid these inconveniences this system is developed.

All the Two modules of the project works perfectly and is all set for implementation. This project has been very useful and educative. It has helped in understanding practical problems in real life situation. The study conducted has been very useful to the organization as well as to me. It has given completeness to the education received by us during the past three years of degree course.

8.1 Future Enhancements

The software has been developed with the present working condition and environments in mind. The current environment is a fast growing area and new features, new technologies and different work styles are expected. Hence this software has been developed with near future needs in mind and it has appropriate slots for any future modifications.

References

9 References

- Oracle
  - Oracle 8i User Manual Oracle Corporation Press, 2000
  - Oracle 8i A Beginners Guide Abbey, Michael Oracle press, year 2002
  - Oracle Development Guide, P.S.Deshpande.
- Unix
  - Learning UNIX Operating System – by Jerry D. Peek, et al.
  - UNIX in a Nutshell: A Desktop Quick Reference for SVR4 and Solaris 7 (3rd Edition) – by Arnold Robbins, Daniel Gilly.
  - Unix for Dummies, Alan Simpson.
  - SCO UNIX, Reference Manual.
- PRO*C & NAPT
  - http://www.otn.oracle.com/
  - http://www-db.stanford.edu/~ullman/fcdb/oracle/or-proc.html
  - http://www.pro-c.com/
  - http://www.oracle.co.jp/proc/
  - http://www.starlingtech.com/books

Appendices

10.1 Sample Inputs

Client Entries

C DATE	SCF NO	FILE NAME	VER SION	FILE PATH	SIZE	COMME NT	CKSU M
10-23-01	PBG-2001-PS-CSP3A2-PRD-006	CSP SCM P 1.3 Review.xls	3	$/PBG-CSP/CSP/3A2 Enhancements/IB-Latest/bin	266,24	refer to scf no : PBG-2001-PS-CSP3A2-PRD-006	10045
12-14-01	PBG-2001-PS-CSP3A2-IST-023	CSP SCMPLAN1.3.doc	3	$/PBG-CSP/CSP/3A2 Enhancements/Non CIs - Docs/BR	234,45	refer to scf no : PBG-2001-PS-CSP3A2-IST-006	10103
01-20-02	PBG-2002-PS-CSP3A2-UTP-023	CSP traceability-3A2 Usability 1.3.doc	3A	$/PBG-CSP/CSP/3A2 Enhancements/Non CIs - Docs/PM	123,23	Refer to CI's of Polaris Scf No : PBG-2002-PS-CSP3A2-PRD-005	10204
02-11-02	PBG-2002-PS-CSP3A2-PRD_012	CSP3A2-003.xls	3A	$/PBG-CSP/CSP/3A2 Enhancements/IB-Latest/bin	245,67	CI's of Scf No : PBG-2002-PS-CSP3A2-PRD_012	10250
03-15-02	PBG-2002-PS-CSP3A2-PRD-023	CSP 3A2 Usability Project Plan v 1.1.mpp	3A2	$/PBG-CSP/CSP/3A2 Enhancements/Non CIs - DocsPMP	123,56	Refer to CI's of Polaris Scf No : PBG-2002-PS-CSP3A2-PRD-005	10300

Master Entries

CDATE	SCF NO
10-23-01	PBG-2001-PS-CSP3A2-PRD-006
12-14-01	PBG-2001-PS-CSP3A2-IST-023
01-20-02	PBG-2002-PS-CSP3A2-UTP-023
02-11-02	PBG-2002-PS-CSP3A2-PRD_012
03-15-02	PBG-2002-PS-CSP3A2-IST-032