1.1 Company Profile

Persistent Systems Ltd.

Persistent Systems Limited operates as an outsourced software product Development Company worldwide.

It delivers services across various stages of the product engineering life cycle. The Company's services include research, usability engineering, prototyping, development, testing and quality assurance, performance engineering, porting, documentation, training, sales support, product deployment, technical support, and maintenance.

It also designs, develops tests, deploys, supports, and maintains software systems and solutions for clients in different fields for E.g. Telecom, Life Sciences.

In addition, the company creates new custom applications, enhances the functionality of its customers existing software products, and participate in the release of new product versions.

It develops solutions in the areas of telecommunications, life sciences and healthcare, analytics and data infrastructure, embedded systems, storage, security, cloud computing, virtualization, banking, finance, insurance, Web 2.0 and collaboration, and e-mail and messaging; product engineering, such as user experience design and engineering, performance engineering, and validation and verification; and Microsoft and Java platforms. The company was founded in 1990 and is headquartered in Pune, India.

1.2

EXISTING SYSTEM AND NEED FOR PROPOSED SYSTEM

Existing System:

Before invention of this system all the process is done manually by the people. The people want to insert new set of data for the orders have to insert manually. The data is manually entered in a excel sheet and then the query is generated manually. After the manual generation of the query then the query is executed after that the new data is inserted into the metadata. After storing in the metadata those data are used into different applications of Megapath

- The data need to be stored in the metadata is stored manually.
- This is stored in the excel sheet manually.
- After the storage of the data in the excel sheet, query is created with the required data.
- Then the created query is executed and the data is stored in the metadata.

This procedure has to be perform repeatedly for each table and environment for each new set of data

Need for the System:

The existing system suffers from the following drawbacks:

- The existing system has huge load of manual work.
- There can be error occurs through manual work which leads to wrong data input in the metadata.
- The generated query needs to be executed in each environment.
- The developer only eligible to store the data in the metadata. Where as if the system is developed any one can store the data through the system user interface

1.3

SCOPE OF WORK

The main scope of work is divided into 2 modules-

Module 1:

Whenever a new CPE model is generated the data about the CPE model such as name of the CPE model, which vendor provides that, should it be offered by COVAD or not, number of slots and ports, fixed asset of customer or not etc –such data are taken and processed and stored into the metadata.

Module 2:

In this module the data about the service brand such as servicebrand name, description of the service brand, current maximum upstream and downstream, number of voice lines, access only or not etc –such data are taken into consider. Those are data are processed and stored in the metadata.

The data which are inserted in CPE Model and Service Brand are mapped and simultaneously stored in different tables such as-

- CPE_Model
- Service_Brand
- Service_Brand_Type_Meta
- Dslam_Card_Wiring_Priority
- CPE_Service_Brand_Preference
- CPE_Dslam_Compatibility
- Kit_Sku
- Kit_Sku_CPE_Mapping
- Billing_Profile

1.4

OPERATING ENVOIRNMENT- HARDWARE AND SOFTWARE

Hardware Requirements:

For Server:

- Processor P IV 3.0 Ghz
- RAM : 2 GB
- Hard Disk 80 GB
- Standard Keyboard
- Standard Monitor
- Modem/Network Adapter

For Client

- Processor P III 1.0 Ghz
- RAM 512 MB
- Hard Disk 40 GB

- Standard Monitor
- Standard Keyboard
- Modem/ Network Adapter

Dedicated and secured connection to Internet.

Software Requirements

For Server:

- Front End: JSP
- Business Logic: Servlet
- Back End: Oracle
- Middleware: Apache Tomcat 7.0
- Operating System: Windows 2000

For Client:

- Operating System : Windows XP and above
- Browsers: Internet Explorer 6/ Google Chrome/ Mozilla

1.5

DETAILED DESCRIPTION OF TECHNOLOGY USED

Java:-

Java programming language was originally developed by Sun Microsystems, which was initiated by James Gosling and released in 1995 as core component of Sun Microsystems's Java platform (Java 1.0 [J2SE]).As of December 08 the latest release of the Java Standard Edition is 6 (J2SE). With the advancement of Java and its wide spread popularity, multiple configurations were built to suite various types of platforms. Ex: J2EE for Enterprise Applications, J2ME for Mobile Applications. Sun Microsystems has renamed the new J2 versions as Java SE, Java EE and Java ME respectively. Java is guaranteed to be Write Once, Run Anywhere

What is Java?

Object Oriented : In java everything is an Object. Java can be easily extended since it is based on the Object model.

Platform Independent: Unlike many other programming languages including C and C++ when Java is compiled, it is not compiled into platform specific machine, rather into platform independent byte code. This byte code is distributed over the web and interpreted by virtual Machine (JVM) on whichever platform it is being run.

Simple: Java is designed to be easy to learn. If you understand the basic concept of OOP java would be easy to master.

Secure : With Java's secure feature it enables to develop virus-free, tamper-free systems. Authentication techniques are based on public-key encryption.

Architectural - neutral: Java compiler generates an architecture-neutral object file format which makes the compiled code to be executable on many processors, with the presence Java runtime

system.

Portable: being architectural neutral and having no implementation dependent aspects of the specification makes Java portable. Compiler and Java is written in ANSI C with a clean portability boundary which is a POSIX subset.

Robust: Java makes an effort to eliminate error prone situations by emphasizing mainly on compile time error checking and runtime checking.

Multi-threaded: With Java's multi-threaded feature it is possible to write programs that can do many tasks simultaneously. This design feature allows developers to construct smoothly running interactive applications.

Interpreted: Java byte code is translated on the fly to native machine instructions and is not stored anywhere. The development process is more rapid and analytical since the linking is an

incremental and light weight process.

High Performance: With the use of Just-In-Time compilers Java enables high performance.

Distributed: Java is designed for the distributed environment of the internet.

Dynamic: Java is considered to be more dynamic than C or C++ since it is designed to adapt to an evolving environment. Java programs can carry extensive amount of run-time information that can be used to verify and resolve accesses to objects on run-time.

J2EE

The Java 2 Platform, Enterprise Edition (J2EE) defines the standard for developing multitier enterprise applications. The J2EE platform

simplifies enterprise applications by basing them on standardize, modular components, by providing a complete set of services to those components, and by handling many details of application behaviour automatically, without complex programming.

The J2EE platform takes advantage of many features of the Java 2 Platform, standard edition (J2EE), such as "Write Once Run Anywhere" portability, JDBC API for database access, CORBA technology for interaction with exiting enterprise resources, and a security model that protects data even in internet applications. Building on this base, Java 2 Platform, Enterprise Edition adds full support for enterprise JavaBeans components, java Servlets API, Java Server Pages and XML technology.

The J2EE standard includes complete specifications and compliance tests to ensure probability of applications across the wide range of existing enterprise system capable of supporting the J2EE platform.

JSP

Java Server Pages (JSP) is a java technology that helps software developers serve dynamically generated web pages based on HTML, XML, or other document types. Released in 1999 as Sun's answer to ASP and PHP, JSP was designed to address the perception that the Java programming equivalent didn't provide developers with enough support for the web's syntax is a fluid mix of two basic content forms: Script let elements and mark-up. Mark-up is typically standard HTML or XML, While Script let elements are delimited blocks of java code. This may be intermixed with the mark-up. When the page is requested the java code is executed and its output is added, in situ, with the surrounding mark-up to create the final page .JSP pages must be compiled to Java byte code classes before they can be executed, but such compilation is needed only when a change to the source JSP file has occurred.

The JSP syntax adds additional XML-like tags called JSP actions, to invoke built in functionality.

TOMCAT 7.0 (SERVER)

Apache Tomcat (or Jakarta Tomcat or simply Tomcat) is an open source servlet container developed by Apache Software Foundation (ASF). Tomcat implements the Java Servlet and the Java Server Pages (JSP) specifications from Sun Microsystems, and provides a "pure java" HTTP web server environment for java code to run.

Tomcat should not be confused with the Apache web server, which is a C implementation of HTTP web server; these two web servers are not bundled together. Apache Tomcat includes tools for configuration and management, but can also be configured by editing XML configuration files.

Advanced Tomcat Features

- The following subjects are discussed
- Accept Logs
- Single Sign-on

- Request Filtering
- Persistent Session Manager
- Tomcat and JDBC, JNDI
- JAVA Mail Session
- Configuring Lifecycle Listeners

ORACLE

The **Oracle Database** (commonly referred to as **Oracle RDBMS** or simply as **Oracle**) is an object-relational database Management system produced and marketed by Oracle Corporation.

The Oracle RDBMS stores data logically in the form of table spaces and physically in the form of data files. Table spaces can contain various types of memory segments, such as Data Segments, Index Segments, etc. Segments in turn comprise one or more extents. Extents comprise groups of contiguous data blocks. Data blocks form the basic units of data storage.

Newer versions of the database can also include a partitioning feature. This allows the partitioning of tables based on different set of keys. Specific partitions can then be easily added or dropped to help manage large data sets. Partitioning is useful for very large tables. By splitting a large table's rows across multiple smaller partitions, you accomplish several important goals:

- Backup and recovery operations may perform better. Because the partitions are smaller than the partitioned table, you may have more options for backing up and recovering the

partitions than you would have for a single large table.

- The table may be easier to manage. Because the partitioned table's data is stored in multiple parts, it may be easier to load and delete data in the partitions than in the large table.
- The performance of queries against the tables may improve because Oracle may have to search only one partition (one part of the table) instead of the entire table to resolve a query.[7]

Oracle database management tracks its computer data storage with the help of information stored in the SYSTEM table space. The SYSTEM table space contains the data dictionary and often (by default) indexes and clusters. A data dictionary consists of a special collection of tables that contains information about all user-objects in the database. Since version 8*i*, the Oracle RDBMS also supports "locally managed" table spaces which can store space management information in bitmaps in their own headers rather than in the SYSTEM table space (as happens with the default "dictionary-managed" table spaces). Version 10*g* and later introduced the SYSAUX table space which contains some of the tables formerly in the SYSTEM table space.

2.1

PROPOSED SYSTEM

- **MEGAPATH-METADATA UTILITY TOOL** is proposed to perform operation for metadata storage.
- Application facilitates user to select the data from the user interface and store in the required metadata.
- Application facilitates user to select the required databases where the data is to be stored as a repository.
- Application should provide Configuration settings for users. Such as-COVAD Configuration, Proxy Configuration. These Configuration Settings are stored in separate properties files for different settings
- Application stores information in the log files for future use for detecting errors in data.
- Application is supposed to provide verification of the metadata after each insertion request so that the mapping of data can be easily retrieved.
- Application is supposed to provide proper message for the items which are wrongly typed .

- Application is supposed to provide a good User Interface which can be easily handled by the user.

2.2

OBJECTIVES OF THE SYSTEM

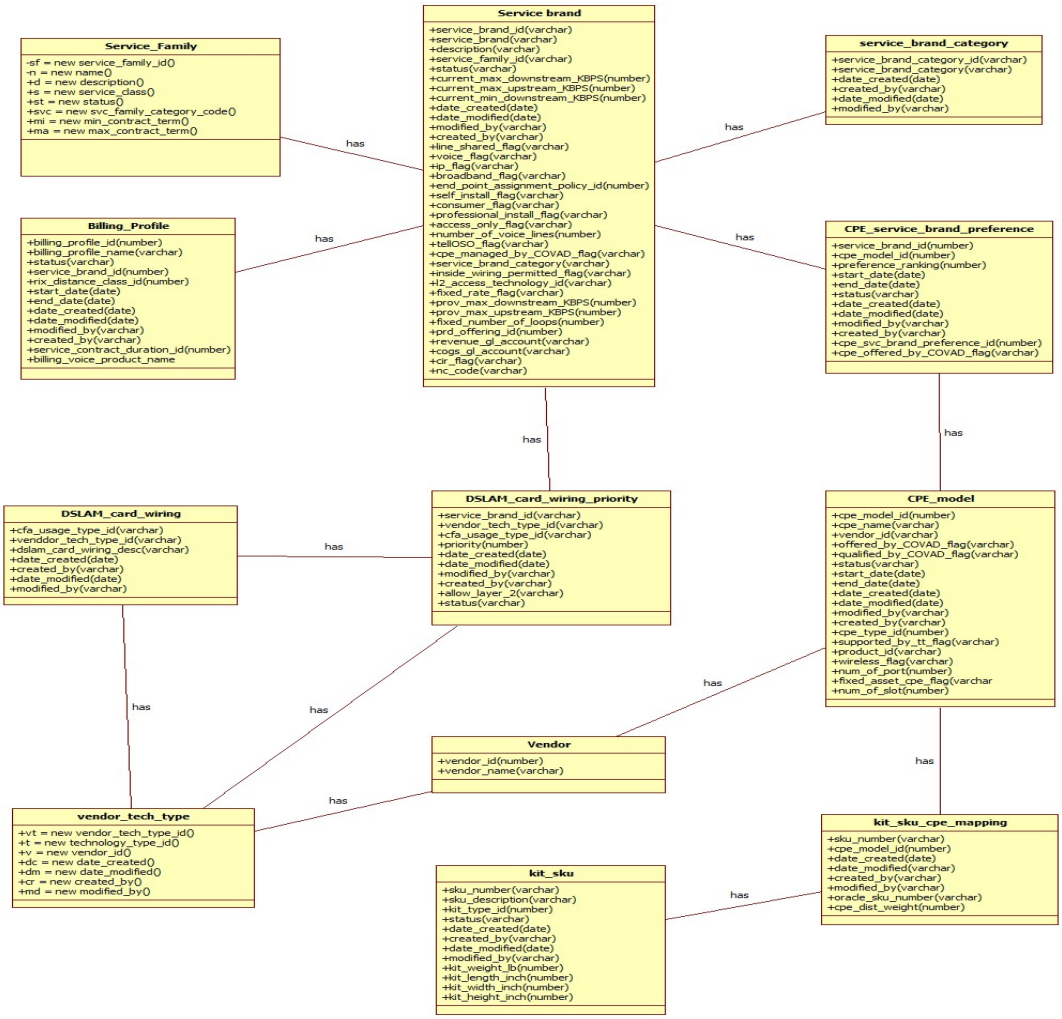
- The main objective of the system is to reduce the workload of inserting data in different metadata repository.
- Provide store the items in single click in all the databases which are used by COVAD.
- Provide facility to store a particular data in a selected database also.
- Helps user to maintain consistency in all the data which are to be stored in the different databases..

2.3

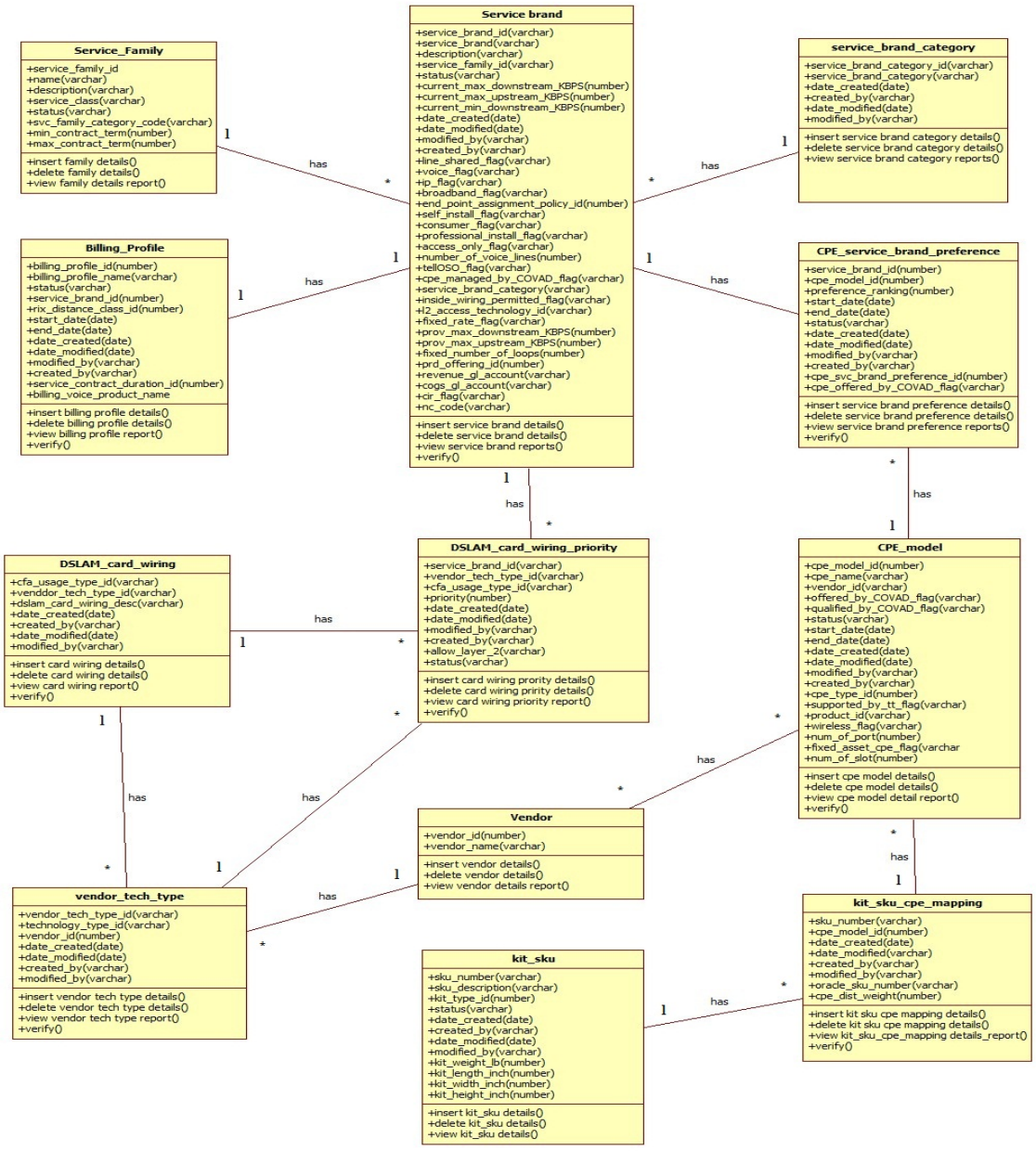
USER REQUIREMENTS

- The main requirement of the user is to automate the manual system.
- The user required a utility tool which stores data into the metadata.
- The user required minimal input and to process those inputs internally and map those inputs into different tables through proper transaction.
- The tool should display few reports so that it can be
- verified that the data store perfectly in the database.
- The tool must provide certain verification of data before it is stored into the metadata as because to avoid storing redundant and duplicate data.

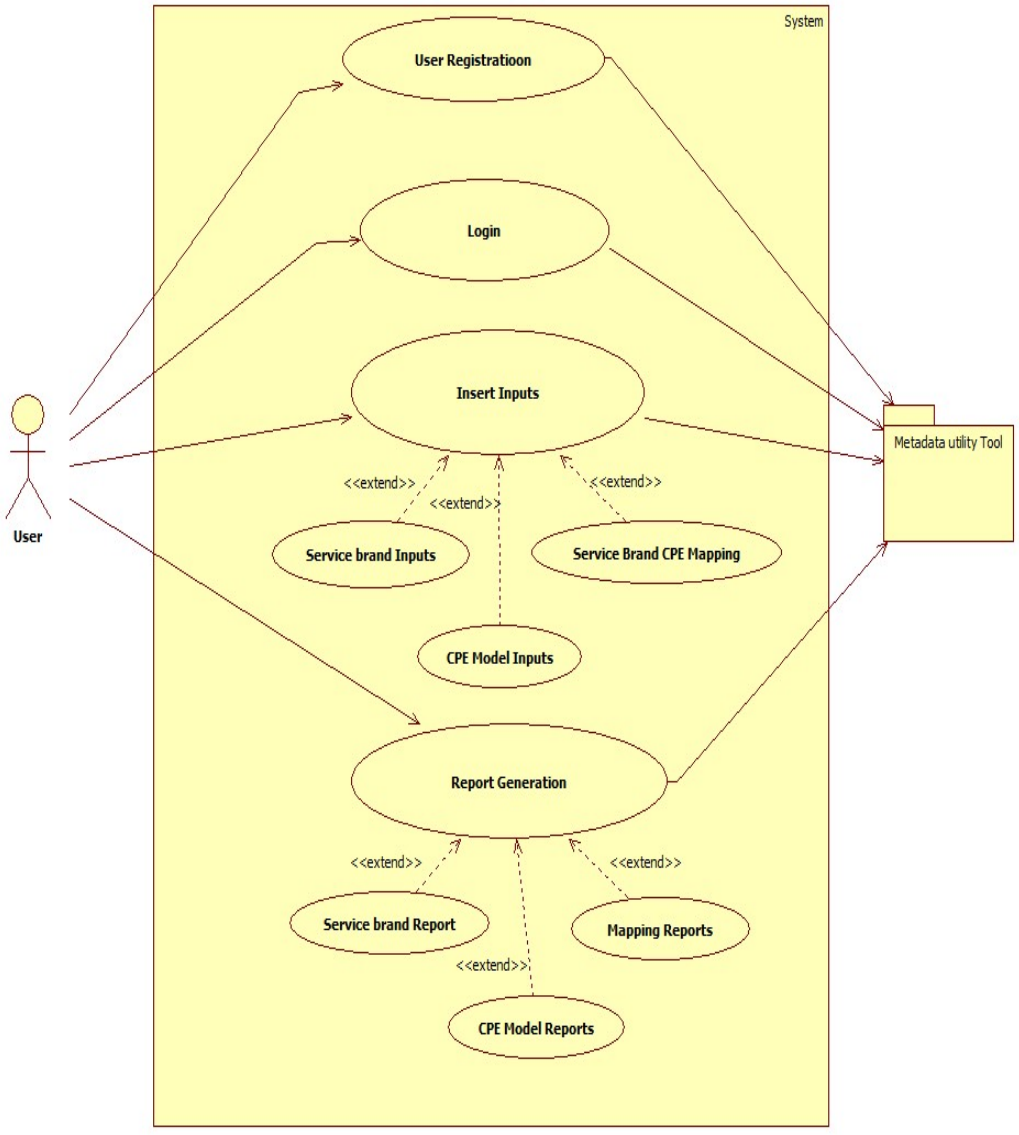
3.1 OBJECT DIAGRAM



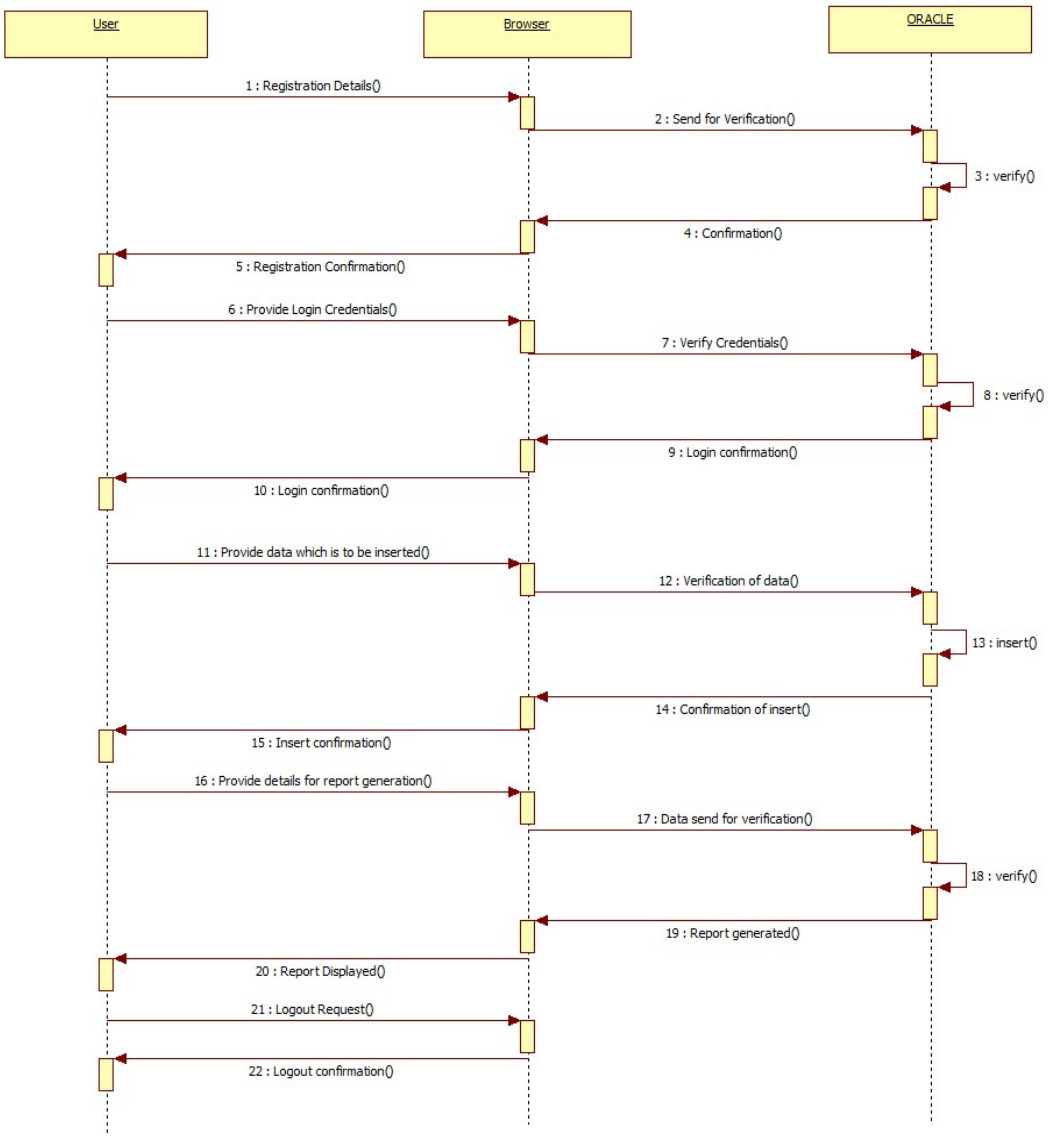
3.2 CLASS DIAGRAM



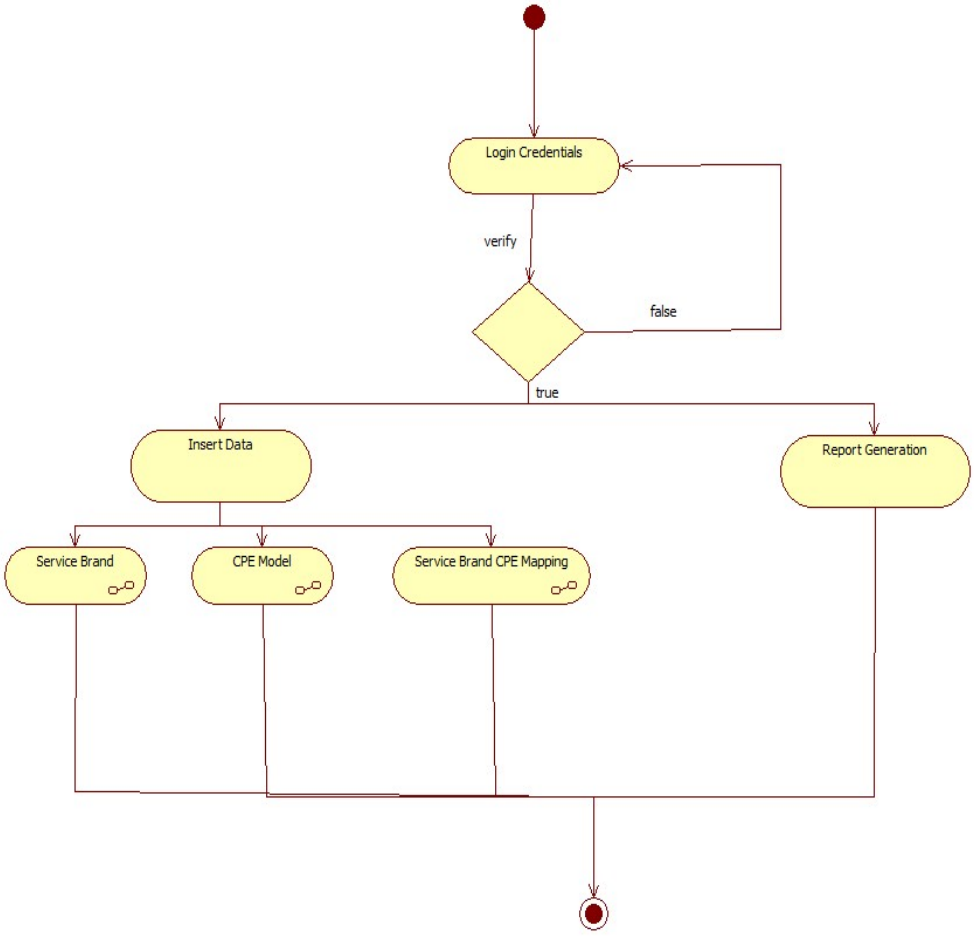
3.3 USE CASE DIAGRAM



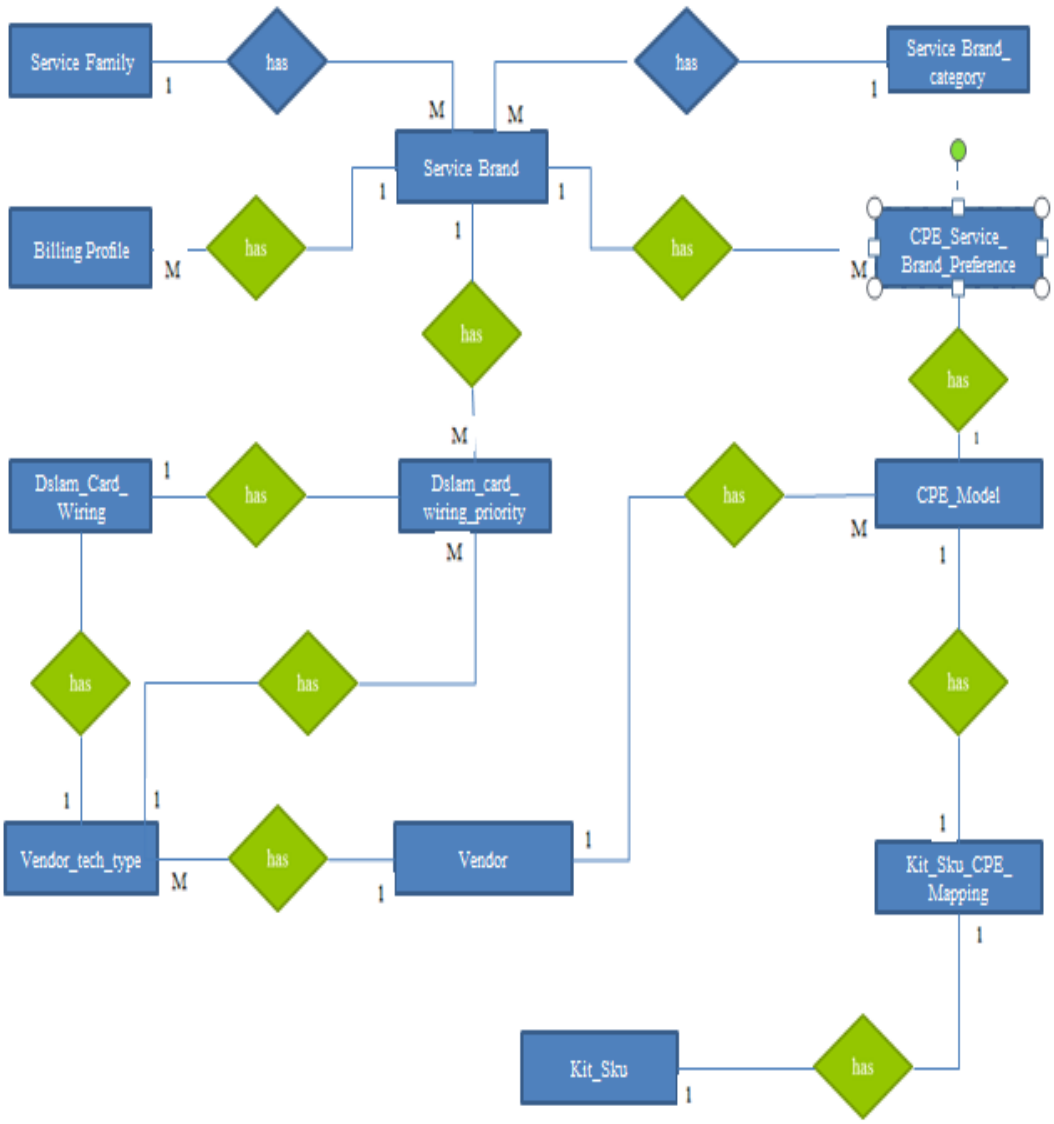
3.4 SEQUENCE DIAGRAM



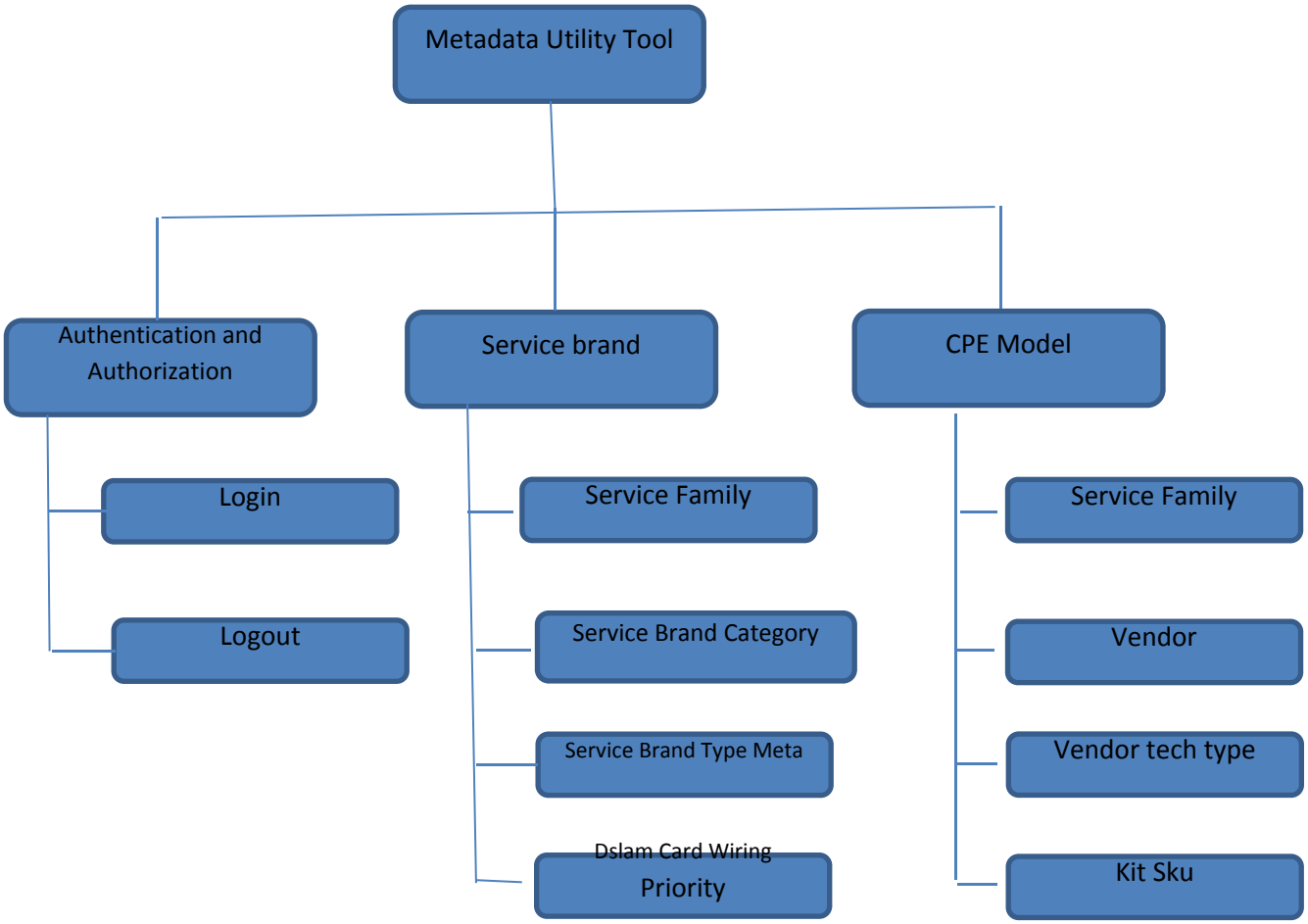
3.5 ACTIVITY DIAGRAM



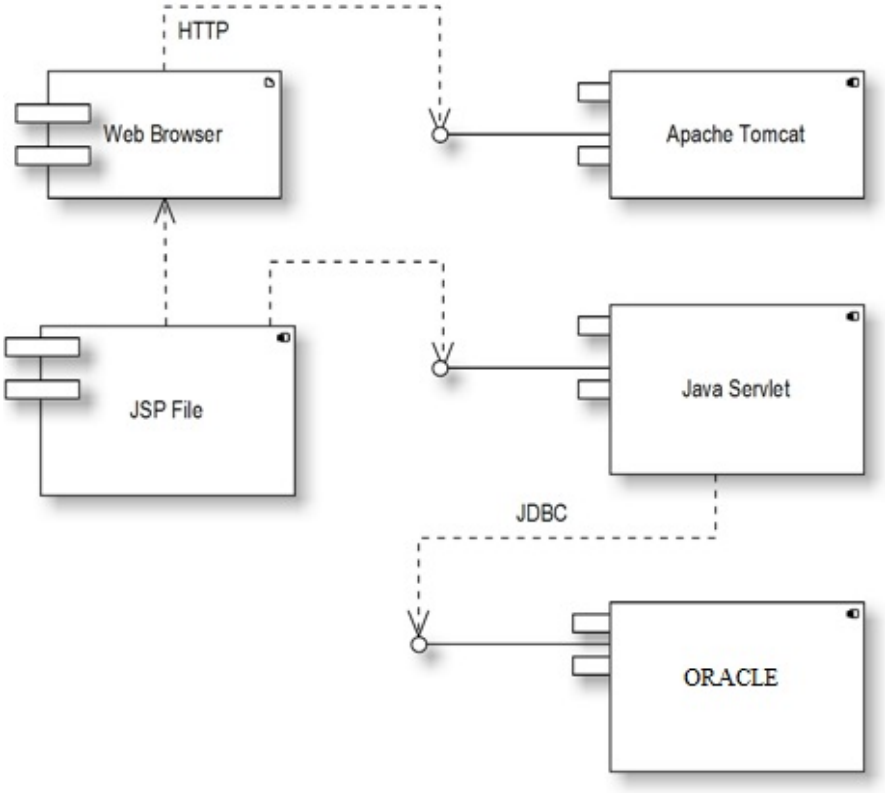
3.6 E-R Diagram



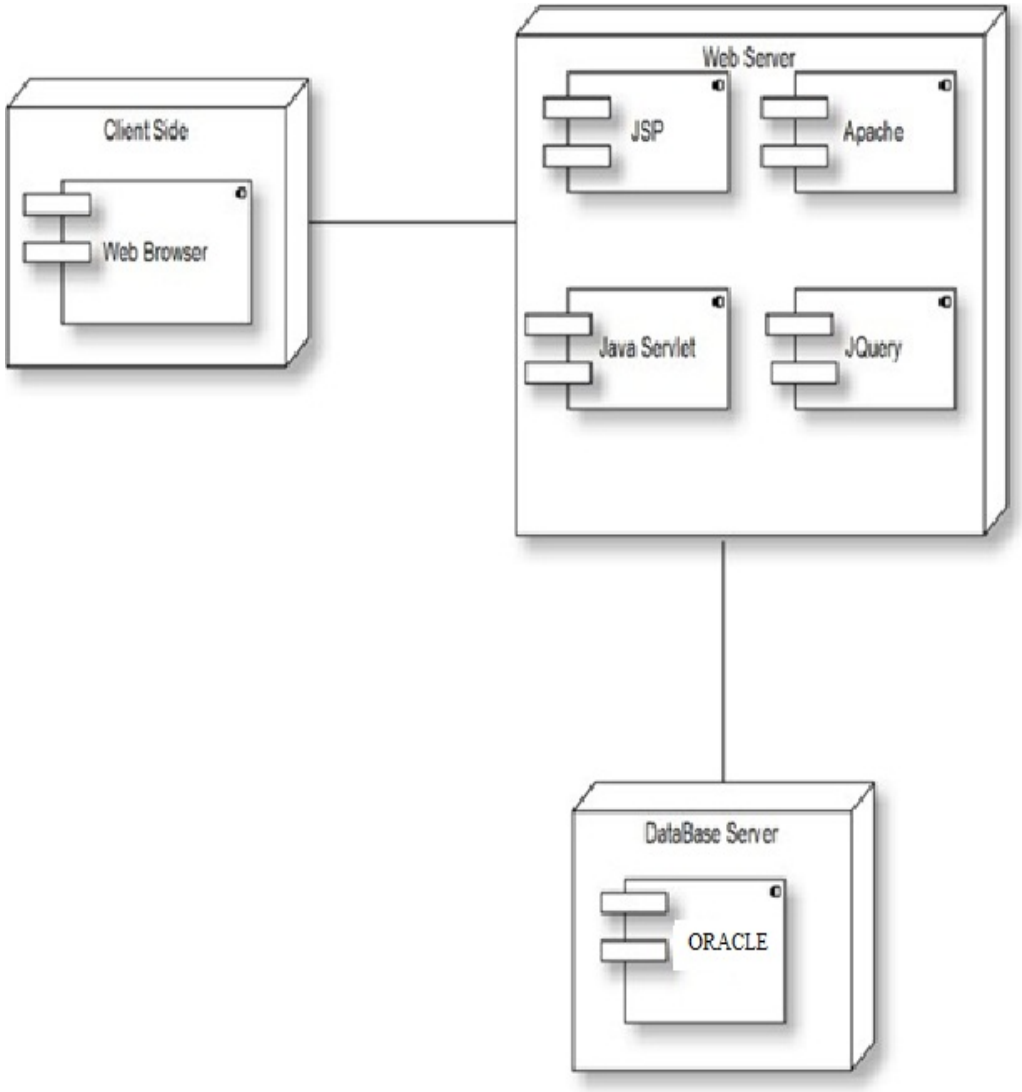
3.7 Module Hierarchy



3.8 Component Diagram



3.9 Deployment Diagram



3.10 Module Specification

This project contains following Modules:-

- Authentication and authorization
- Service Brand Module
- CPE Module

Authentication and Authorization

1. This module deals with Authentication and authorization of the user of

   Metadata Utility Portal.

   Authentication: the user is valid or not.

Service Brand Module

In this module the data about the service brand such as Service brand name, description of the service brand, current maximum upstream and downstream, number of voice lines, access only or not etc –such data are taken into consider. Those are data are processed and stored in the metadata.

The data which are inserted in CPE Model and Service Brand are mapped and simultaneously stored in different tables such as-

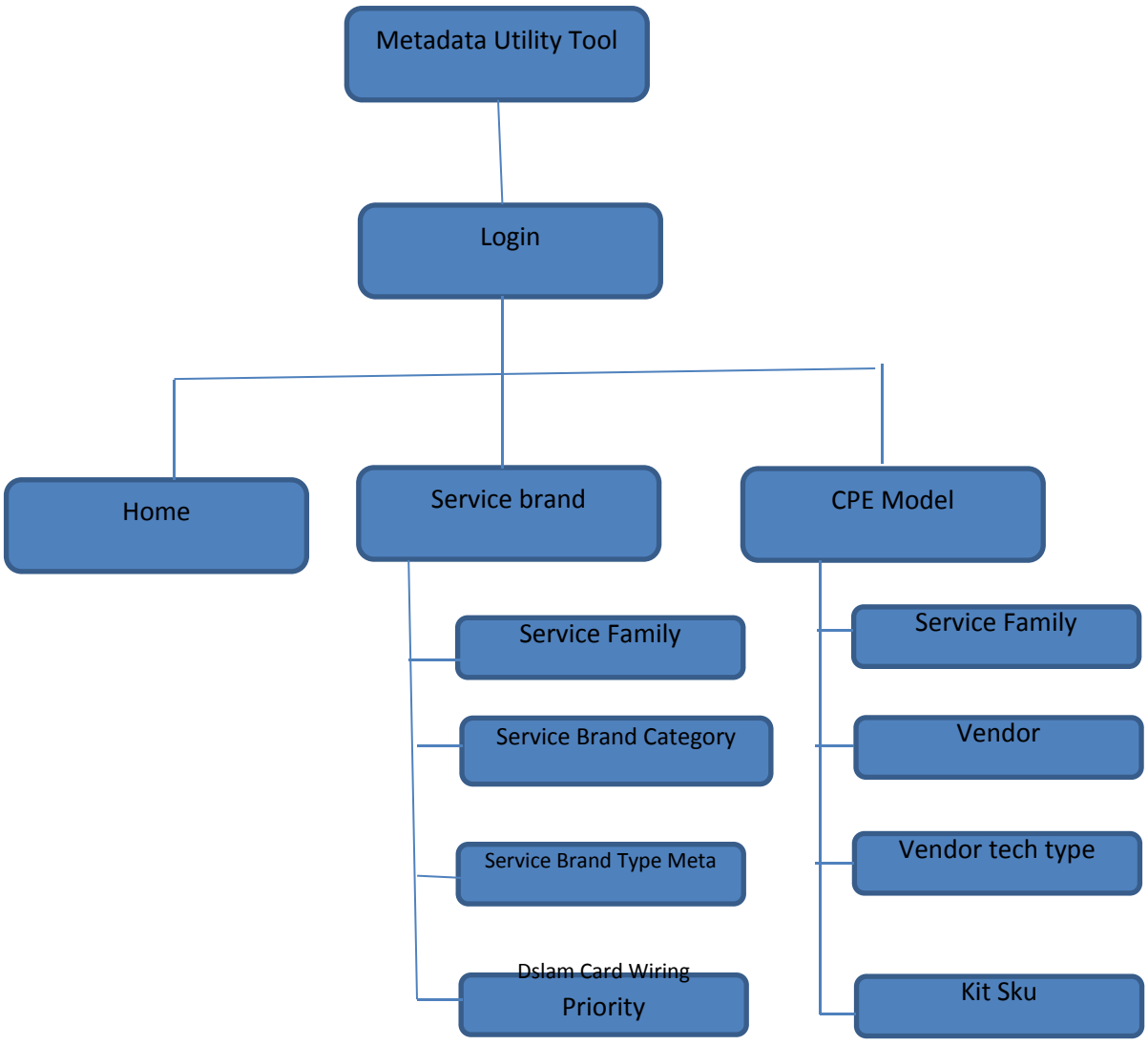
- CPE_Model
- Service_Brand
- Service_Brand_Type_Meta
- Dslam_Card_Wiring_Priority
- CPE_Service_Brand_Preference
- CPE_Dslam_Compatibility
- Kit_Sku
- Kit_Sku_CPE_Mapping
- Billing_Profile

CPE Module

Whenever a new CPE model is generated the data about the CPE model such as name of the CPE model, which

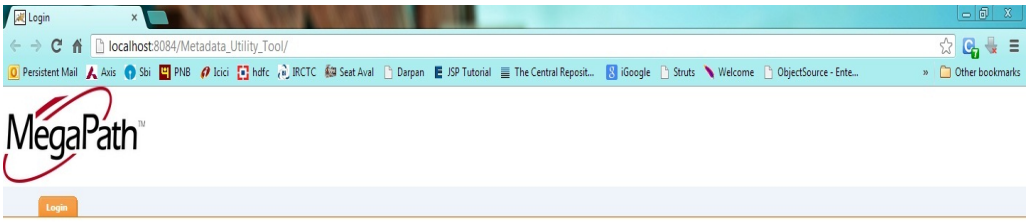
vendor provides that, should it be offered by COVAD or not, number of slots and ports, fixed asset of customer or not etc – such data are taken and processed and stored into the metadata.

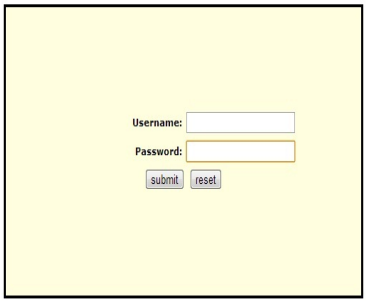
3.11 Website Map



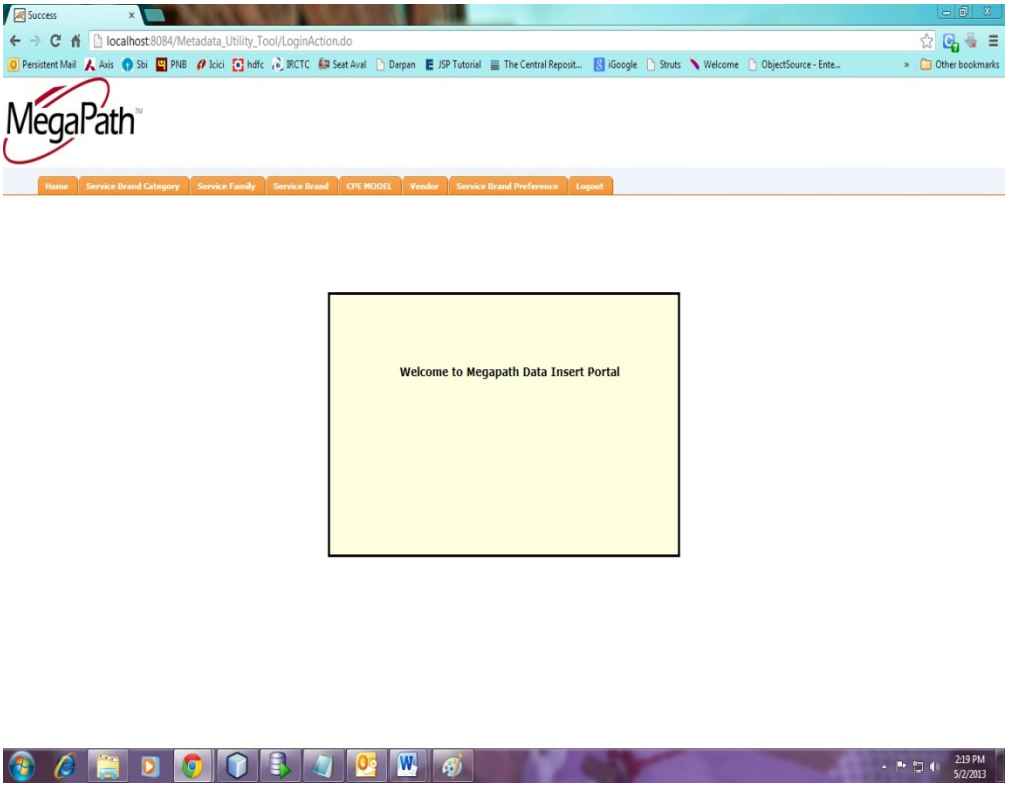
3.12 User Interface Design

Login Page:





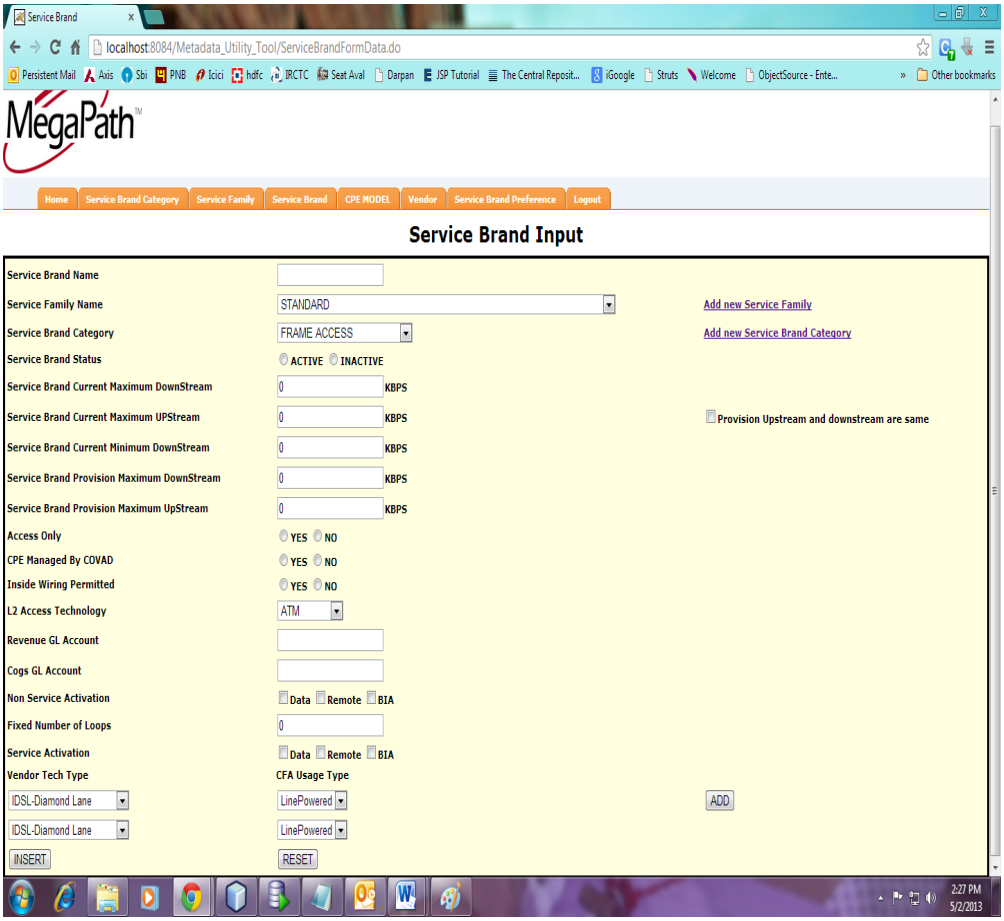
Home Page:


Success
localhost:8084/Metadata_Utility_Tool/LoginAction.do
MegaPath
Home
Service Brand Category
Service Family
Service Brand
CPE MODEL
Vendor
Service Brand Preference
Logout
Welcome to Megapath Data Insert Portal

Add Service Brand Category

Add Service Family

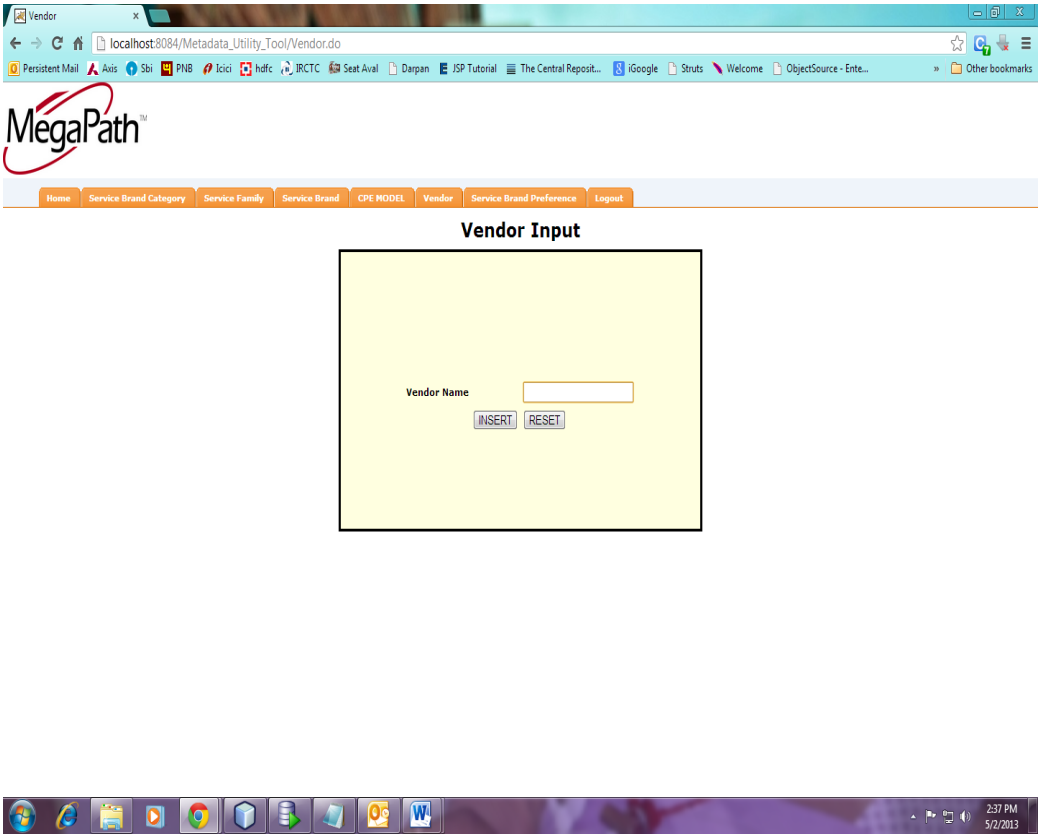
Add Service Brand



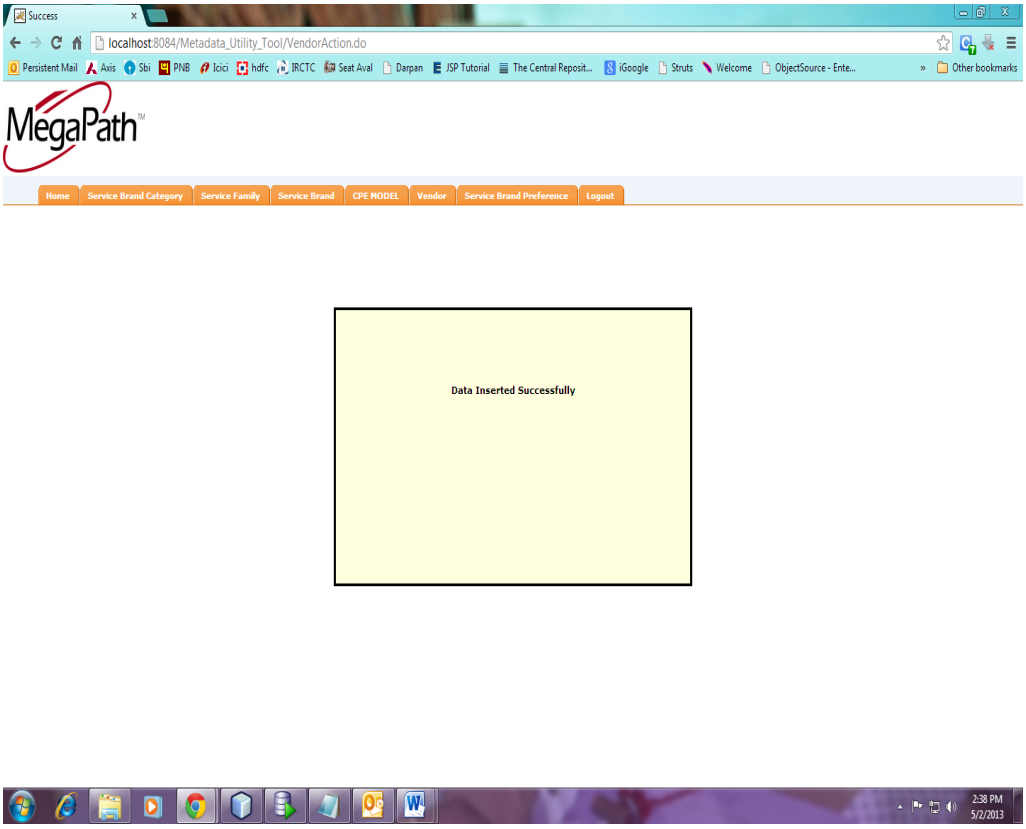
Add New CPE


CPE Model
localhost:8084/Metadata_Utility_Tool/CPEModel.do
MegaPath
Home
Service Brand Category
Service Family
Service Brand
CPE MODEL
Vendor
Service Brand Preference
Logout
CPE Model Input
CPE Model Name
Vendor Name
Add new Vendor
CPE Status
ACTIVE
INACTIVE
Number of ports
Number of slots
Management IP Support
YES
NO
Vendor Tech Type
ADD
REMOVE
Preference Ranking
INSERT
RESET
2:34 PM
5/2/2013

Add Vendor


Vendor
localhost:8084/Metadata_Utility_Tool/Vendor.do
MegaPath
Home
Service Brand Category
Service Family
Service Brand
CPE MODEL
Vendor
Service Brand Preference
Logout
Vendor Input
Vendor Name
INSERT
RESET

Success Page



3.13 Table Specification

Table 1: Service_Family

Data Element	Data Type	Width	contraints
Service_family_id	Number	15	Primary key
Name	Varchar	15	Not null
Description	Varchar	20	Not null
Service_class	Varchar	15	Not null
Status	Varchar	10	Not null
Svc_family_category_code	Number	5	
Min_contract_term	Number	2	
Max_contract_term	Number	2	

Table 2:Service_Brand_category

Data Element	Data Type	Width	Constraints
Service_brand_category_id	Number	15	Primary key
Service_brand_category	Varchar	15	Not null
Date_created	Date		Not null
Created By	Varchar		Not null
Date_modified	Date		
Modified_by	Varchar		

Table 3:Service_brand

Data Element	Data Type	Width	Constraints
Service_brand_id	Number	15	Primary key
Service_brand	Varchar	15	Not null
Description	Varchar	20	Not null
Service_family_id	Varchar	15	Foreign key
Status	Varchar	10	Not null
Current_max_downstrem_kbps	Number	5	
Current_min_downstrem_kbps	Number	5	
Current_max_upstream_kbps	Number	5	
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Line_shared_flag	Varchar	2	Not null
Voice_flag	Varchar	2	Not null

Data Element	Data Type	Width	Constraints
IP_flag	Varchar	2	Not null
Broadband_flag	Varchar	2	Not null
End_point_assignment_policy_id	Number	5	Not null
Self_install_flag	Varchar	2	Not null
Consumer_flag	Varchar	2	Not null
Professional_install_flag	Varchar	2	Not null
Access_only_flag	Varchar	2	Not null
Number_of_voice_lines	Number	5	
Tele_oso_flag	Varchar	2	Not null
CPE_managed_by_COVAD_flag	Varchar	2	Not null
Service_brand_category	Varchar	15	Not null
Inside_wiring_permitted_flag	Varchar	2	Not null
L2_access_technology_id	Number	5	Not null
Fixed_rate_flag	Varchar	2	Not null
Prov_max_downstream_kbps	Number	5	Not null

Prov_max_upstream_kbps	**Number**	**5**	**Not null**
Fixed_number_of_loops	**Number**	**5**	
PRD_offering_id	**Number**	**5**	
Revenue_Gl_account	**Varchar**	**15**	
Cogs_gl_account	**Varchar**	**15**	
CIR_flag	**Varchar**	**2**	**Not null**
NC_code	**Varchar**	**5**	

Table 4:Service_brand_type_meta

Data Element	Data Type	Width	Constraints
Service_brand_id	Number	15	Foreign key
Service_type_id	Varchar	15	Not null
Fulfillment_sequence_num	Number	5	Not null
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Service_index	Number		

Table 5:Vendor

Data Element	Data Type	Width	Constraints
Vendor_id	Number	5	Primary key
Vendor_name	Varchar	15	Not null

Table 6:Vendor_tech_type

Data Element	Data Type	Width	Constraints
Vendor_tech_type_id	Number	15	Primary key
Technology_type_id	Varchar	15	Not null
Vendor_id	Number	5	Foreign key
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Status	Varchar	15	Not null
Vendor_tech_type_desc	Varchar	15	
Technology_sub_type_id	Number	5	Not null

Table 7:Dslam_card_wiring

Data Element	Data Type	Width	Constraints
Cfa_usage_type_id	Varchar	15	Primary key
Vendor_tech_type_id	Number	5	Foreign key
Dslam_card_wiring_desc	Varchar	20	
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Service_index	Number	5	Not null

Table 8:Dslam_card_wiring_priority

Data Element	Data Type	Width	Constraints
Service_brand_id	Number	15	Foreign key
Vendor_tech_type_id	Number	15	Foreign key
Cfa_usage_type_id	Varchar	15	Foreign key
Priority	Number	5	Not null
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Status	Varchrar	15	Not null
Allow_layer_2	Varchar	15	Not null

Table 9:CPE_Model

Data Element	Data Type	Width	Constraints
Cpe_model_id	Number	5	Primary key
Cpe_name	Varchar	20	Not null
Cpe_vendor_id	Number	5	Not null
Offered_by_COVAD_flag	Varchar	2	Not null
Qualified_by_COVAD_flag	Varchar	2	Not null
Status	Varchar	15	Not null
Start_date	Date		Not null
End_date	Date		
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
CPE_type_id	Number	5	Not null
Supported_by_TT_flag	Varchar	2	

Data Element	Data Type	Width	Constraints
Product_id	Varchar	15	
Wireless_flag	Varchar	2	
Num_of_port	Number	5	Not null
Fixed_asset_cpe_flag	Varchar	2	
Num_of_slot	Number	5	Not null
MGMT_IP_support	Varchar	5	

Table 10: CPE_service_brand_preference

Data Element	Data Type	Width	Constraints
Cpe_model_id	Number	5	Foreign key
Service_brand_id	Number	5	Foreign key
Preference_ranking	Number	5	Not null
Status	Varchar	5	Not null
Start_date	Date		Not null
End_date	Date		
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
CPE_svc_brand_preference_id	Number	5	Primary key
CPE_offered_by_COVAD_flag	Varchar	2	

Table 11: CPE_dslam_compatibility

Data Element	Data Type	Width	Constraints
Cpe_model_id	Number	5	Foreign key
Vendor_tech_type_id	Number	5	Foreign key
Preference_ranking	Number	5	Not null
Status	Varchar	5	Not null
Start_date	Date		Not null
End_date	Date		
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null

Table 12: Kit_sku

Data Element	Data Type	Width	Constraints
Sku_number	Varchar	15	Primary key
Sku_description	Varchar	20	Not null
Kit_type_id	Number	5	Not null
Status	Varchar	5	Not null
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Kit_weight_lb	Number	5	Not null
Kit_length_inch	Number	5	Not null
Kit_width_inch	Number	5	Not null
Kit_height_inch	Number	5	Not null

Table 13: Kit_sku_cpe_mapping

Data Element	Data Type	Width	constraints
Sku_number	Varchar	15	Foreign key
Cpe_model_id	Number	5	Foreign key
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Oracle_sku_number	Varchar	15	Not null
Cpe_dist_weight	Number	5	Not null

Table 14: Billing Profile

Data Element	Data Type	Width	Constraints
Billing_profile_id	Number	5	Primary key
Billing_profile_name	Varchar	15	Not null
Service_brand_id	Number	5	Foreign key
Status	Varchar	5	Not null
Rix_distance_class_id	Number	5	
Start_date	Date		Not null
End_date	Date		
Date_created	Date		Not null
Date_modified	Date		
Modified_by	Varchar	15	
Created_by	Varchar	15	Not null
Service_contract_duration_id	Number	5	Not null
Billling_voice_product_name	Varchar	15	

3.14 Test Procedures and Implementation

What is software testing?

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and code generation. It is a process of executing a program with a primary objective of finding errors. Testing gives the guarantee that the software does not fail and runs according to its specifications and in the way the end user expects. This can be done by various software testing techniques which provide a systematic guidance for designing tests that exercise the input and output domains of the program to uncover errors in program function, behavior and performance.

The following software testing techniques were used in order to uncover errors in the system:

- Unit testing
- Integration testing
- White box testing
- Black box testing

- Acceptance tests (Alpha and Beta testing)

1: Unit Testing

Unit testing is normally considered as an adjunct to the coding step. It is the test for the small units of code, e.g. programs, modules or procedures, in order to ensure that they perform their intended functions. All possible paths through the control structure are exercised to ensure that all statements in a program are executed at least once. Unit testing is also done to test the data flow across a module interface.

The following errors are uncovered during unit testing:

- Comparison of different data types.
- Incorrect logical operators or precedence.
- Incorrect comparison of variables.
- Improper or nonexistent loop termination.
- Improperly modified loop variable.

2: Integration Testing

Integration testing is a systematic technique for constructing the program structure while at the same time conducting tests to uncover errors associated with interfacing. During this activity, unit tested components are taken and a program structure is built as per the design. Then incremental integration is performed on the system. This means that programs are constructed and tested in small increments instead of testing the entire program as a whole. This is done because correction of errors becomes difficult in case of whole program testing as many errors were detected and it is not easy to correct them at one go. Thus, through incremental integration testing, any error uncovered could be easily noted and corrected and interfaces are tested completely.

3: White Box Testing

White box testing is also called as glass box testing. It is related with the structure (internal logic) of the program. It helps in uncovering many errors that black box testing cannot. During white box testing activity, every statement of programs is executed at least once. All independent paths are also executed.

Every logical decision is executed to check both true and false conditions. All loops are executed at their boundaries and within their operational bounds. Validation checks are also done during this process.

4: Black Box Testing

Black box testing, also known as behavioral testing, focuses on the functional requirements of the software. It is related to input and output only and not related with the internal structure of the program. This testing is also done so as to find errors such as:

- Initialization and termination errors
- Behavior and performance errors
- Incorrect or missing functions
- Interface errors
- Errors in data structures and external database access
- Performance errors

5: Acceptance Testing (Alpha & Beta Testing)

An acceptance test is a test carried out by the customer or end user rather than the developer in order to enable the customer to

validate all requirements. Alpha testing and beta testing are two types of acceptance tests that are conducted.

6: Alpha Testing

Alpha test is conducted in a controlled environment. As a matter of fact, the end user conducts alpha test at the developer's site. During the course of the system development, the end user is operating the software in front of the developer and the errors and other problems are recorded. Rectification is made accordingly.

7: Beta Testing

Beta testing is also conducted by the end user, but in the absence of the developer. Here, the end user himself records all the problems that he encounters during testing the system and then reports them to the developer at regular intervals. As a result of problems reported during beta testing, modifications are made to overcome the problem

Test Cases

Test Case ID #			1	
Test Case Name			To test functionality of login form.	
Prerequisite			Login form should get loaded.	
Objective			To fine out bugs in login form.	
Sr. No	**Steps be to executed**	**Expected Result**	**Actual Result**	**Pass/Fail Criteria**
	Username Textbox Test cases			
1	1.Enter Username With less than 6 Characters. 2. Enter correct password. 3. Click on Submit button.	It should display error message "Enter username with 6 characters."	It display error message "Enter username with 6 characters."	Pass
2.	1.Enter Username With greater than 6 characters. 2. Enter correct password. 3. Click on Submit button.	It should display homepage.	It display homepage.	Pass
3.	1. Enter Username	It should display error	It does not accept	Pass

	with greater than 30 Characters. 2. Enter correct password 3. Click on Submit button.	message “Enter username with maximum 30 characters.”	username with greater than 30 characters.	
4.	1.Enter Username with 10 characters. 2. Enter correct password 3. Click on Submit button.	It should display homepage.	It displays homepage.	Pass
5.	1.Enter Username As blank field. 2. Enter correct password 3. Click on Submit button.	It should display error message “Username cannot be blank”.	It displays error message ” Username cannot be blank”.	Pass
	Password Textbox Test cases			
1.	1. Enter correct username. 2.Enter	It should display error message “Enter password with	It displays error message “Enter	Pass

	password with less than 6 Characters. 3. Click on Submit button.	minimum 6 characters.”	password with minimum 6 characters.”	
2.	1. Enter correct username. 2.Enter password with greater than 10 Characters. 3. Click on Submit button.	It should display error message “Enter password with maximum 10 characters.”	It should display error message “Enter password with maximum 10 characters.”	Pass
3.	1. Enter correct username. 2.Enter password with 10 Characters. 3. Click on Submit button.	It should display Homepage.	It displays homepage.	Pass
4.	1. Enter correct username. 2.Enter password as blank field. 3. Click	It should display Error message” Password should not be blank”.	It displays Error message” Password should not be blank”.	Pass

	on Submit button.			
5.	1. Enter correct username. 2.Enter password with characters , digits and special Characters. 3. Click on Submit button.	It should display error message “Enter password with alphabets and/ or digits only.	It displays error message “Enter password with alphabets and/or digits only.	Pass

Test Case ID#	2
Test Case Name	To test functionality of Service Brand form.
Prerequisite	Service Brand form should get loaded.
Objective	To find out bugs in Service Brand form.

Sr. No	Steps to executed	Expected Result	Actual Result	Pass/Fail
	Service Brand name Textbox Test cases			
1.	1. Enter Service Brand name as blank field. 2. Click on Submit button.	It should display error message "Enter Service Brand name".	It displays error message "Enter Service Brand name".	Pass
2.	1. Enter Service Brand name with digits. 2. Click on Submit button.	It should display error message "Enter alphabets only".	It displays error message "Enter alphabets only".	Pass
3.	1. Enter Service Brand name with greater than 50 characters. 2. Click on Submit button.	It should display error message "Enter Service Brand name with maximum 50 characters."	It displays "Enter Service Brand name with greater than 50 characters".	Pass
4.	1.Enter Service Brand name with	It should display error message	It displays error message "Enter	Pass

	digits And characters. 2. Click on Submit button.	"Enter alphabets only."	alphabets only."	
5.	1.Enter Service Brand name as Characters. 2. Click on Submit button.	It should display success page.	It displays success page.	Pass
	Service Family name Textbox Test cases			
1.	1. Enter Service Family name as blank field . 2. Click on Submit button.	It should display error message "Enter Service Family name".	It displays error message "Enter Service Family name".	Pass
2.	1. Enter Service Family name with digits. 2. Click on Submit	It should display error message "Enter alphabets only".	It displays error message "Enter alphabets only".	Pass

	button.			
3.	1. Enter Service Family name with greater than 50 characters. 2. Click on Submit button.	It should display error message “Enter Service Family name with maximum 50 characters.”	It displays error “Enter message Service Family name with greater than 50 characters”.	Pass
4.	1.Enter Service Family name with digits And characters. 2. Click on Submit button.	It should display error message “Enter alphabets only.”	It displays error message “Enter alphabets only.”	Pass
5.	1.Enter Service Family name as Characters. 2. Click on Submit button.	It should display success page.	It displays home success.	Pass
	Current Maximum Downstream Textbox Test cases			Pass
1.	1.Enter	It should	It displays	Pass

	Current Maximum Downstream as blank field. 2. Click on Submit button.	display error message “Enter Current Maximum Downstream.”	error message “Enter Current Maximum Downstream.”	
2.	1. Enter Current Maximum Downstream with less than 3 digits. 2. Click on Submit button.	It should display error message “Enter Current Maximum Downstream with greater than 3 digits.”	It displays error message “Enter Current Maximum Downstream with greater than 3 digits.”	Pass
3.	1. Enter Current Maximum Downstream with greater than 10 digits. 2. Click on Submit button.	It should display success page.	It displays success page.	Pass
4.	1. Enter Current Maximum Downstream with alphabets. 2. Click on Submit button.	It should display error message “Enter Current Maximum Downstream with digits only.”	It displays error message “Enter Current Maximum Downstream with digits only.”	Pass
	Current Maximum			Pass

	Upstream Textbox Test cases			
1.	1.Enter Current Maximum Upstream as blank field. 2. Click on Submit button.	It should display error message “Enter Current Maximum Upstream.”	It displays error message “Enter Current Maximum Upstream.”	Pass
2.	1. Enter Current Maximum Upstream with less than 3 digits. 2. Click on Submit button.	It should display error message “Enter Current Maximum Upstream with greater than 3 digits.”	It displays error message “Enter Current Maximum Upstream with greater than 3 digits.”	Pass
3.	1. Enter Current Maximum Upstream with greater than 10 digits. 2. Click on Submit button.	It should display success page.	It displays success page.	Pass
4.	1. Enter Current Maximum Upstream with alphabets.	It should display error message “Enter Current Maximum Upstream with digits only.”	It displays error message “Enter Current Maximum Upstream with digits only.”	Pass

	2. Click on Submit button.			
	Provision Maximum Downstream Textbox Test cases			Pass
1.	1.Enter Provision Maximum Downstream as blank field. 2. Click on Submit button.	It should display error message "Enter Provision Maximum Downstream."	It displays error message "Enter Provision Maximum Downstream."	Pass
2.	1. Enter Provision Maximum Downstream with less than 3 digits. 2. Click on Submit button.	It should display error message "Enter Provision Maximum Downstream with greater than 3 digits."	It displays error message "Enter Provision Maximum Downstream with greater than 3 digits."	Pass
3.	1. Enter Provision Maximum Downstream with greater than 10 digits. 2. Click on Submit button.	It should display success page.	It displays success page.	Pass
4.	1. Enter Provision Maximum	It should display error message	It displays error message "Enter	Pass

	Downstream with alphabets. 2. Click on Submit button.	"Enter Provision Maximum Downstream with digits only."	Provision Maximum Downstream with digits only."	
	Provision Maximum Upstream Textbox Test cases			Pass
1.	1.Enter Provision Maximum Upstream as blank field. 2. Click on Submit button.	It should display error message "Enter Provision Maximum Upstream."	It displays error message "Enter Provision Maximum Upstream."	Pass
2.	1. Enter Provision Maximum Upstream with less than 3 digits. 2. Click on Submit button.	It should display error message "Enter Provision Maximum Upstream with greater than 3 digits."	It displays error message "Enter Provision Maximum Upstream with greater than 3 digits."	Pass
3.	1. Enter Provision Maximum Upstream with greater than 10 digits. 2. Click	It should display success page.	It displays success page.	Pass

	on Submit button.			
4.	1. Enter Current Provision Upstream with alphabets. 2. Click on Submit button.	It should display error message “Enter Provision Maximum Upstream with digits only.”	It displays error message “Enter Provision Maximum Upstream with digits only.”	Pass

4.1 User Manual

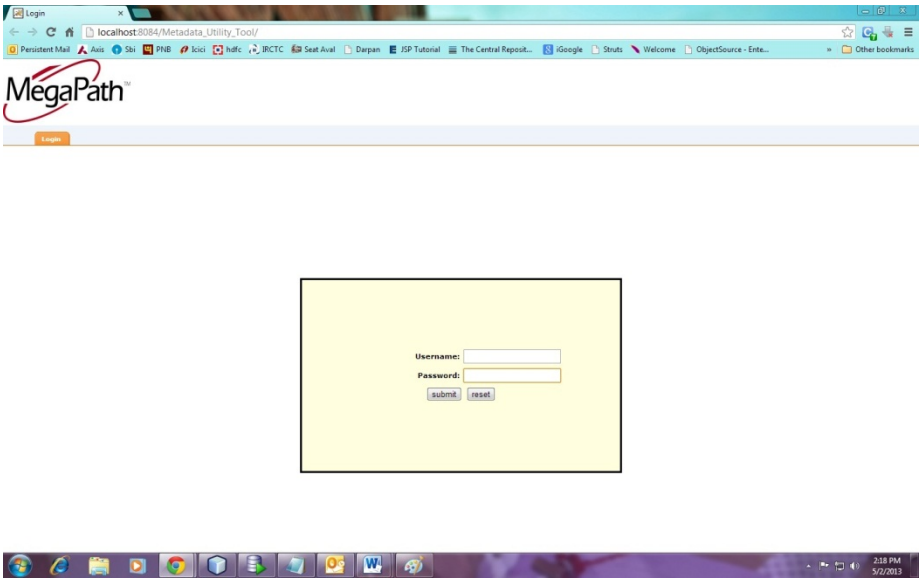
User Manual provides user with the ease of operation the system. If intended user of the system feels any problem in operation the system, the can refer to this manual to clear their doubts. This user manual guides the users of the system and provides them the briefing of the system of the system to how to use the system.

Browsing Website

Starts TOMCAT Server and open an instance of IE and type URL(Uniform Recourse Locator)

http://localhost:8084/Metadata_Utility_Tool/ on the browser and press enter. You will see the login page on the URL type

Login Page:



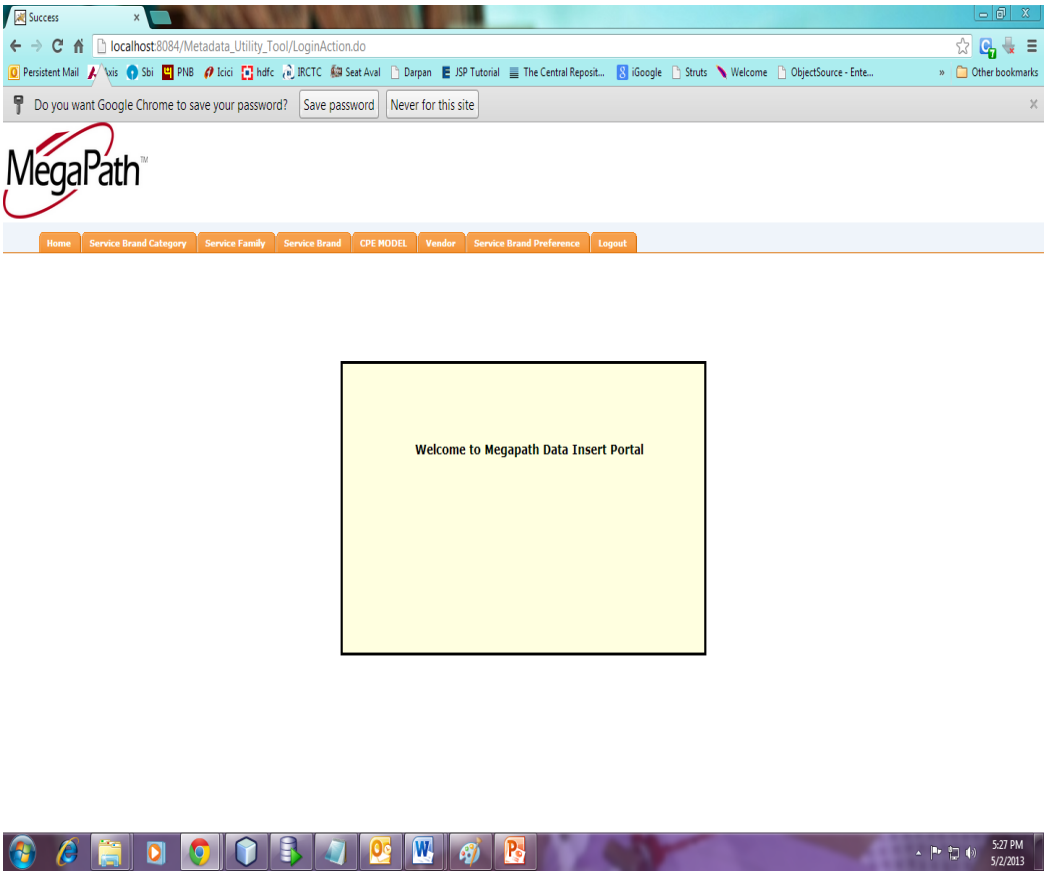
This page contains two buttons

1) Reset
2) Login

Reset button will reset the values in the text fields

We must enter proper username and password

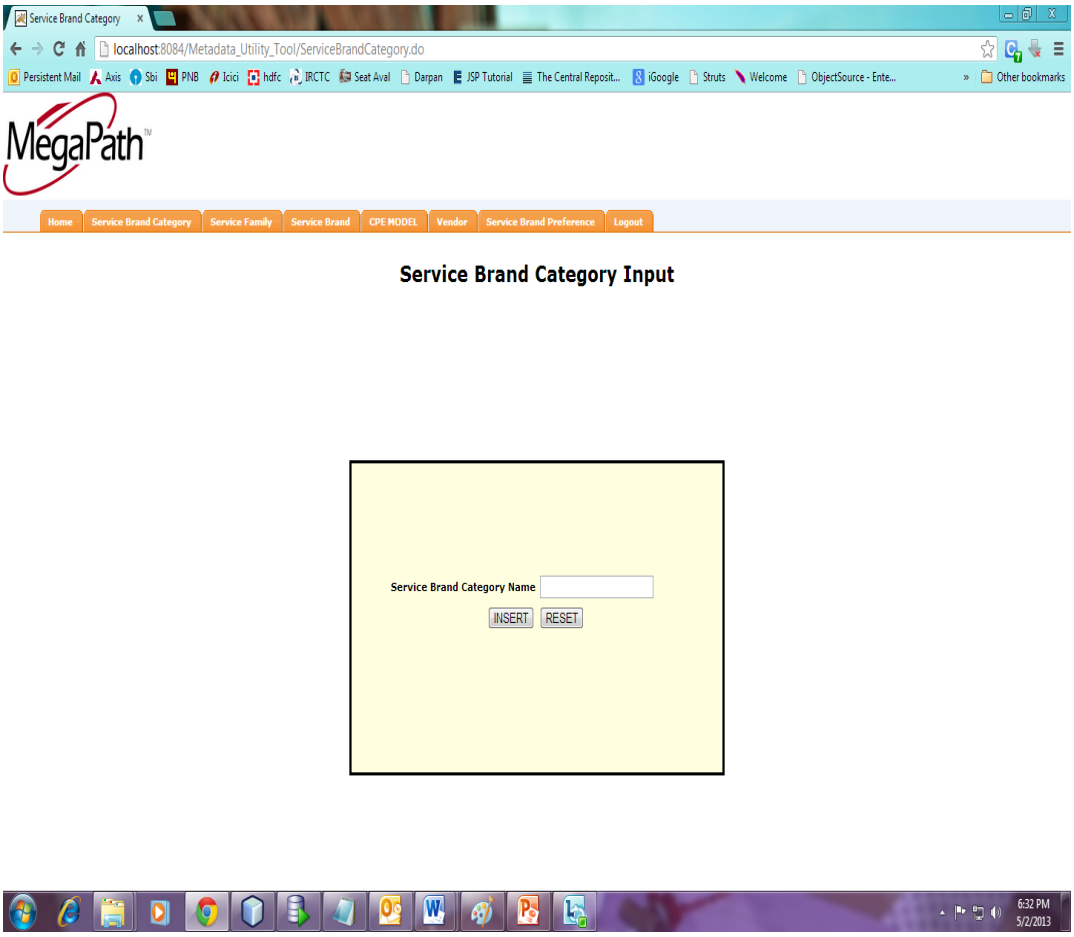
After Validating it will be redirect to the home page


Success
localhost:8084/Metadata_Utility_Tool/LoginAction.do
Persistent Mail
Axis
Sbi
PNB
Icici
hdfc
IRCTC
Seat Aval
Darpan
JSP Tutorial
The Central Reposit...
iGoogle
Struts
Welcome
ObjectSource - Ente...
Other bookmarks
Do you want Google Chrome to save your password?
Save password
Never for this site
MegaPath
Home
Service Brand Category
Service Family
Service Brand
CPE MODEL
Vendor
Service Brand Preference
Logout
Welcome to Megapath Data Insert Portal
5:27 PM
5/2/2013

To Add new service Family:

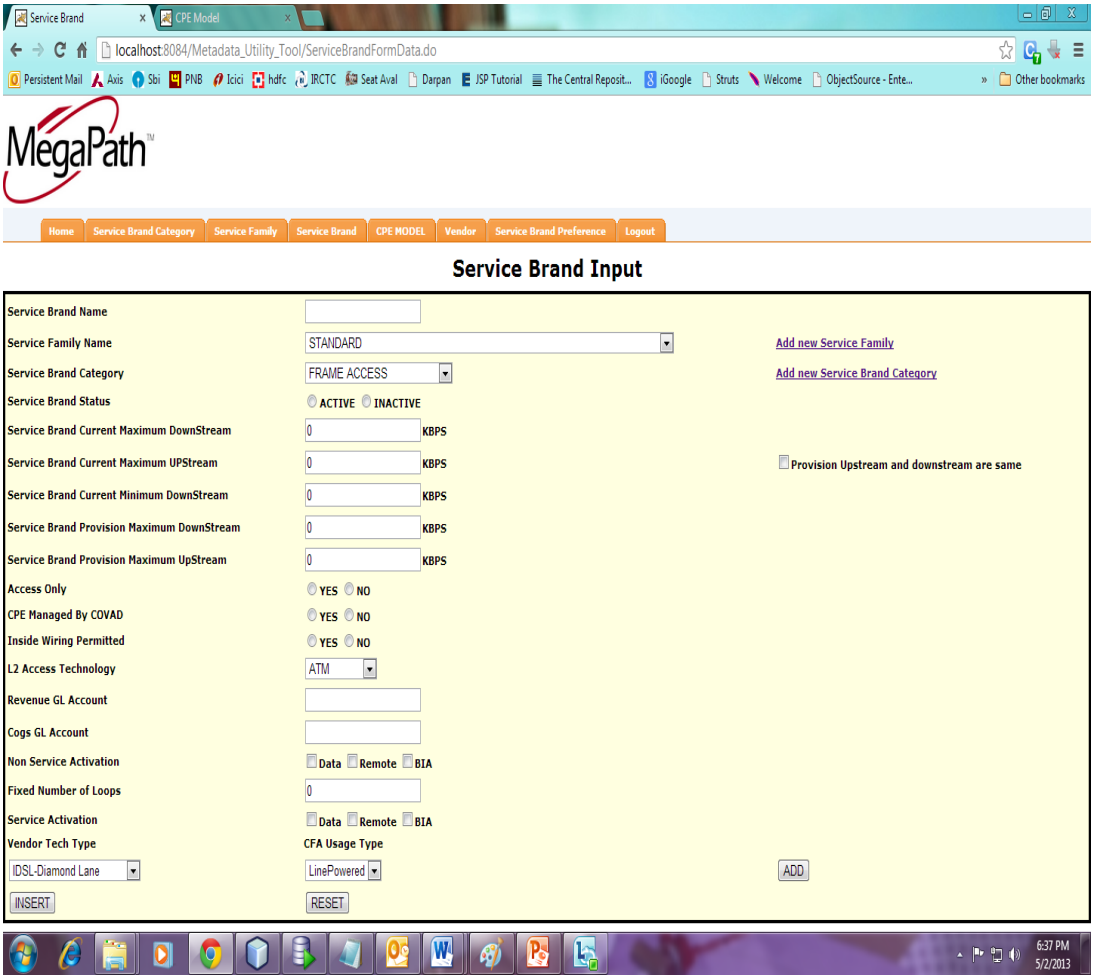
This will add a new service family into the database.

Add Service Brand Category



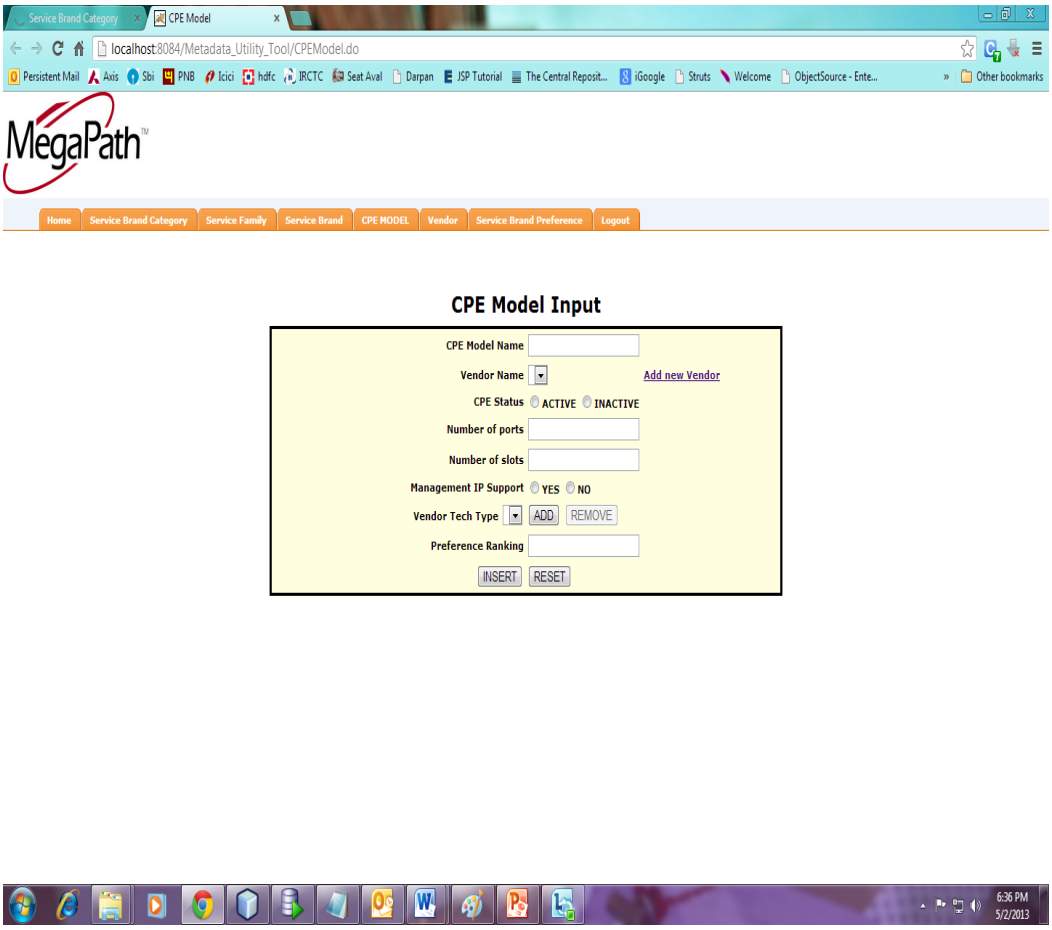
This will add a new service brand category in the required database.

Add Service Brand

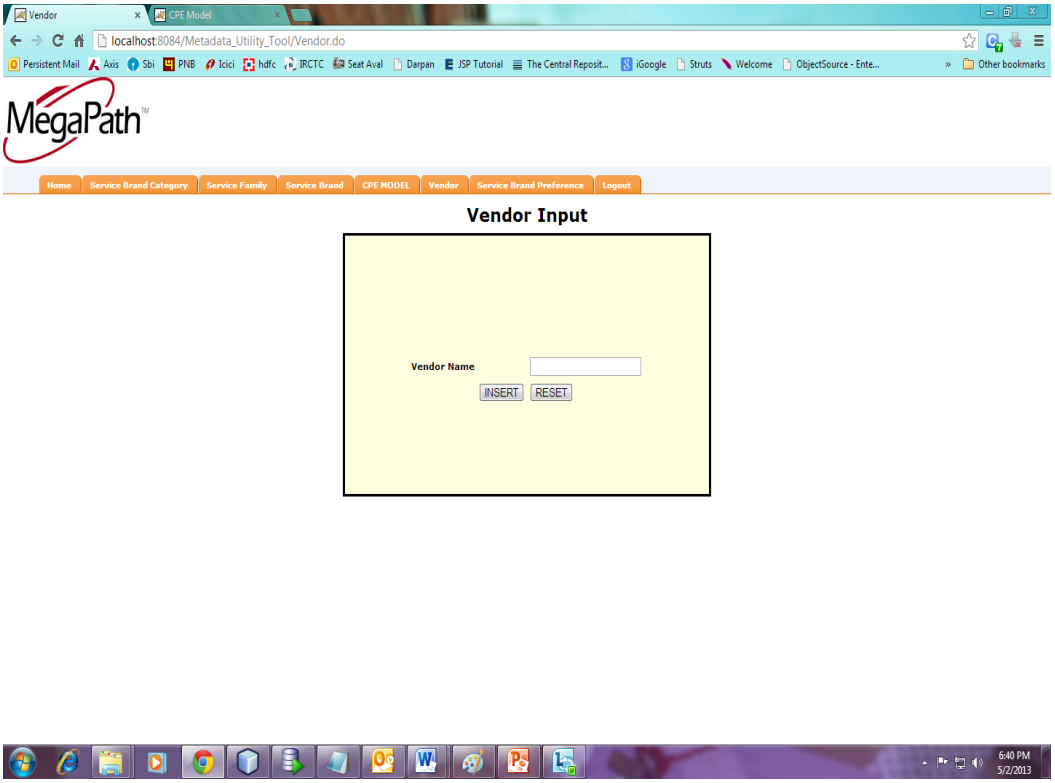


This will add a service brand and mapped this to all other tables where service brand is required.

Add Cpe Model



Add Vendor

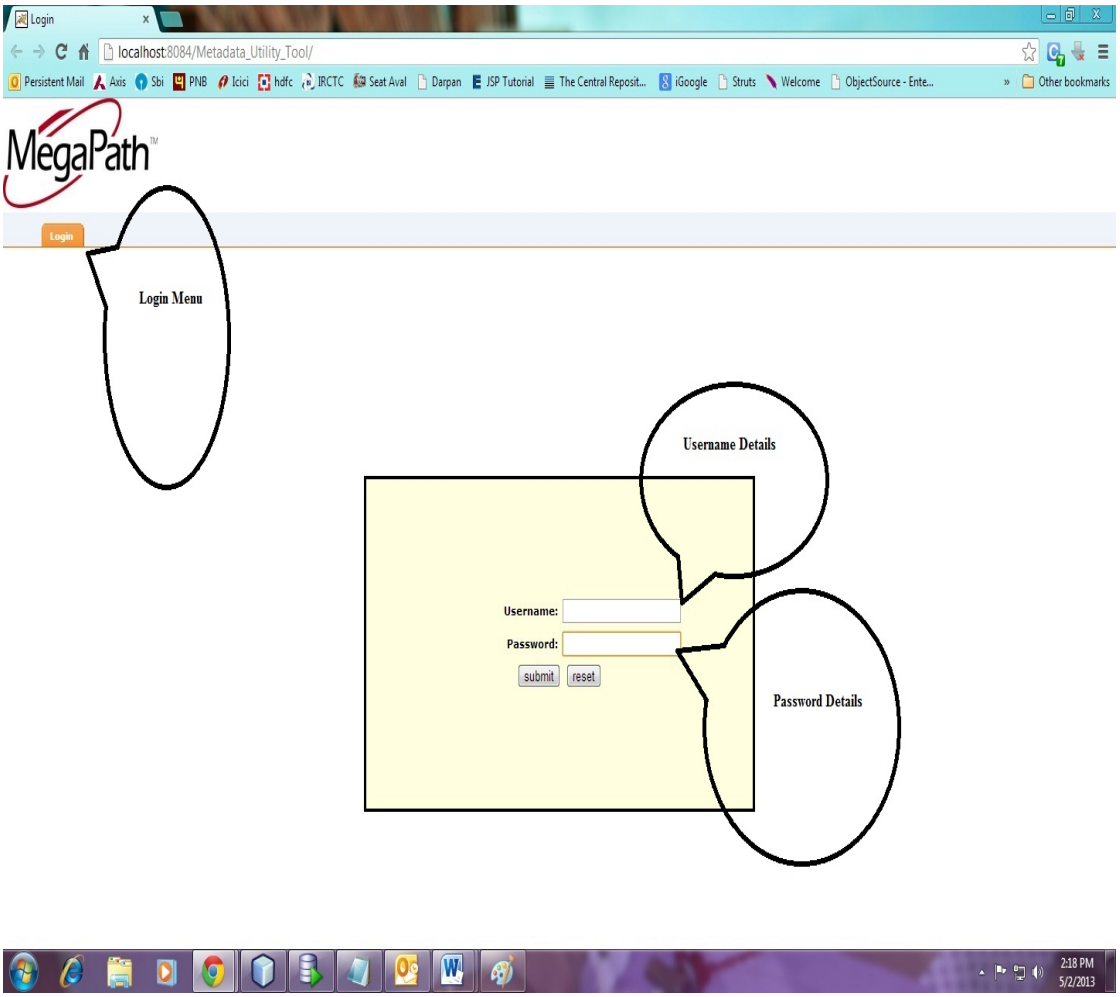


This will add a new vendor into the database for supplying CPE.

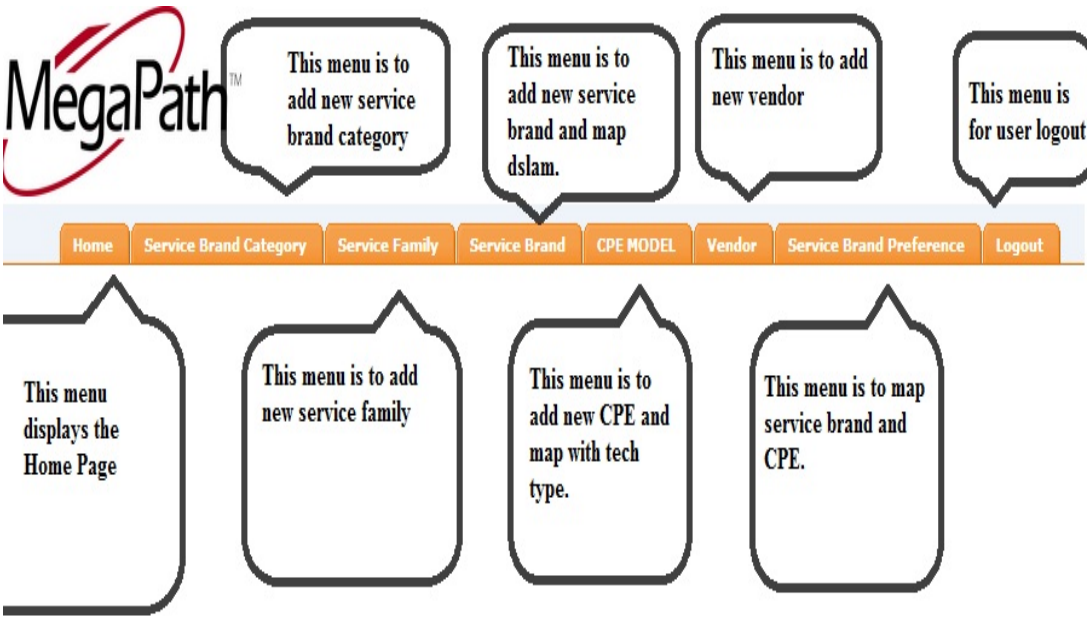
4.2 Operation Manual/Menu Explanation

Menu screen provide user with ease of access to various part of the application.

Menu explanation describes the various menus used in the system. Different menus are as follows.



After successful login following menu will be displayed.



4.3 Program Specification/Flow Chart

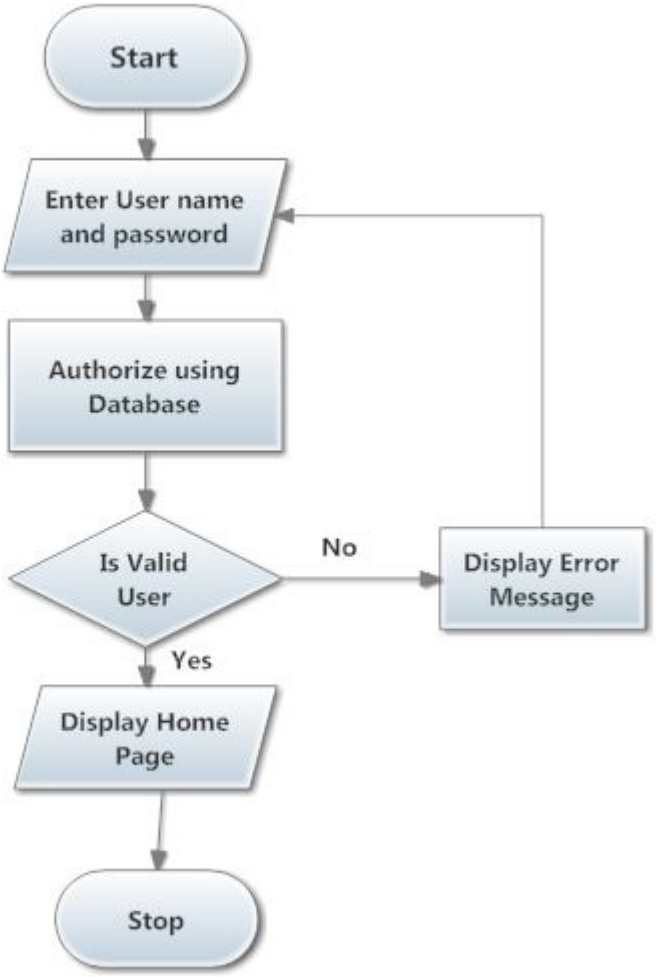
The system is developed in JAVA and use JSP as frontend , Struts Framework and ORACLE as backend.

Following are the program specification used in the development process explained with the help of flowcharts.

User Authentication (Login)

Module Name		Authentication and Authorization
Program Name		Login to the System
Purpose		Check Authentication of User
Event		Click on “Login”Button
Input	**Constraint**	**Description**
Login Details (Username and Password)	The required fields must not be null and input data should be Valid.	Login details gets checked against Database
Output	The Login details gets checked against database To check the authentication of user & user gets Notification message of successfully login	

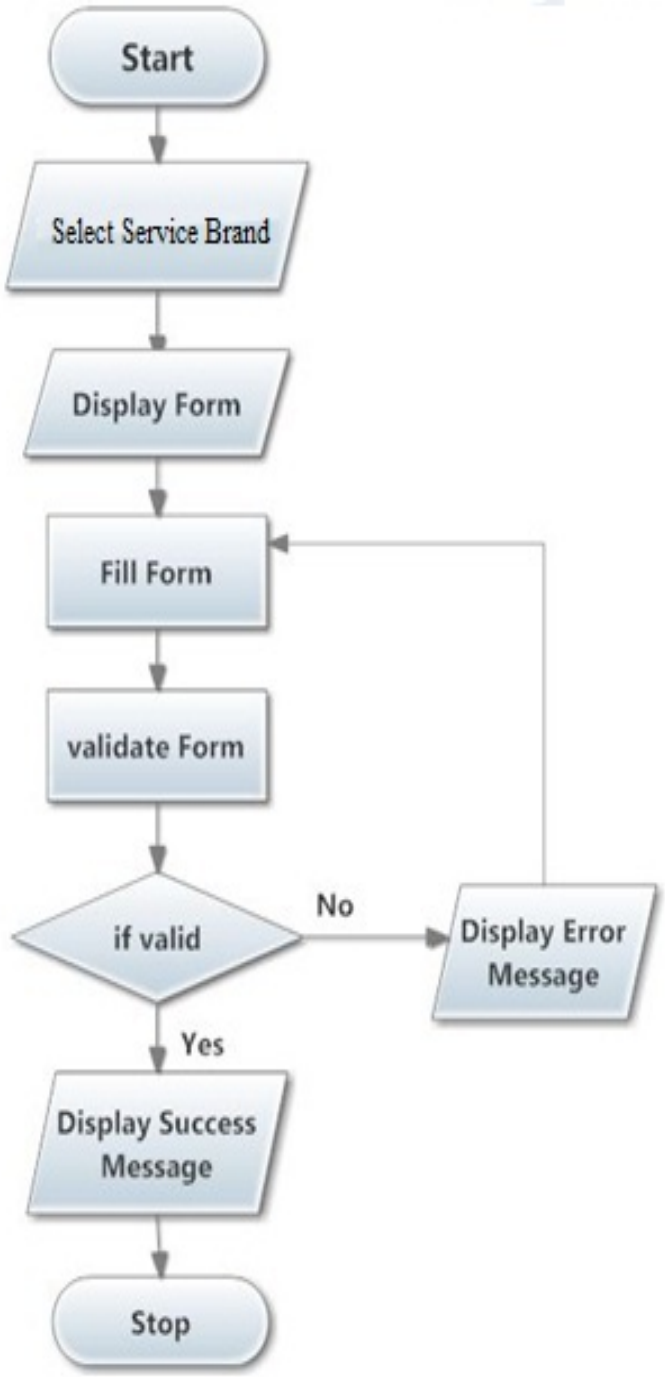
Flow Chart


Start
Enter User name and password
Authorize using Database
Is Valid User
No
Display Error Message
Yes
Display Home Page
Stop

Service brand Input

Module Name		Service Brand Module
Program Name		Add Service Brand
Purpose		Add new service brand and map that data with the existing database
Event		Click on “Submit” Button
Input	**Constraint**	**Description**
Service Brand Details	The required fields must not be null and input data should be Valid.	Service Brand details are stored into the database and it is mapped with the existing data in the Database.

Flow Chart


Start
Select Service Brand
Display Form
Fill Form
validate Form
if valid
No
Display Error Message
Yes
Display Success Message
Stop

Drawbacks & Limitations

- This application is build only for Eagle Dev Team of Persistent which work with Megapath.

- All the databases which are used in the Magapath project are not used as they are not required in the Eagle Team.

- Reports are not generated as they are not required for this application.

For creating a new Vendor Tech Type we have to follow the old procedure as no provision is kept for generating new Vendor Tech Type

Proposed Enhancement

User requirements keep changing as the system is being used.

Some of the future enhancements that can be done to this system are:-

As the technology emerges, it is possible o upgrade the system and can be adaptable to desired environment.-Because it is based on object-oriented design, any further changes can be easily adaptable.-Based on the future security issues, and security can be improved using emerging technologies.

This application is only used for Megapath Eagle Dev Team so the scope of the project is restricted with the databases which are correlated with the Eagle Team. As a further enhanced this application can be enhanced for whole Megapath project for all the Teams.

Conclusions

Towards the ends of the project, I would like to say that the target ,which was initially set up, is achieved to a good extent.

The project made me realize the significance of developing software, where the sole aim is to learn.

During the project, the real important for following all principles of System Analysis and Design dawned on me. I felt the necessity of going through the several stages, because only such a process could make one understand the problem in handling the enormous size of data and their manipulations.

Finally I can conclude that this system will eliminate the existing system's drawbacks and limitations to maximum extent and provide the user with a product of high quality, standards and excellence.