

# **END TERM PROJECT REPORT**

## **(PROJECT SEMESTER JANUARY-MAY 2013)**



## **E-STUCARE**

**(Ask We'll Listen)**

**SUBMITTED BY**  
**(E-STUCARE TEAM)**

**UNDER THE GUIDANCE OF:**

**EXTERNAL FACULTY COORDINATOR**

**MR. LAKHWINDER SINGH GHUMAN**

**PROJECT OFFICER**

**LOVELY INFOTECH**

**DEPARTMENT OF**  
**LOVELY SCHOOL OF COMPUTER APPLICATION (SCA)**  
**LOVELY PROFESSIONAL UNIVERSITY**  
**PHAGWARA**

## DECLARATION

I hereby declare that the project work entitled E-STUCARE is an authentic record of my own work carried out as a team work at lovely InfoTech as requirements of industry internship project for the award of degree of MCA, Lovely Professional University, Phagwara, under the guidance of Mr. Lakhwinder Singh (Industry coordinator) during January to May 2013.

The matter presented in this Project Report has not been submitted by us for the award of any other degree elsewhere.

Signature of Team Members:

Rahul Sharma\_\_\_\_\_

Rishma Vasdev\_\_\_\_\_

Ajay Kumar\_\_\_\_\_

Hitesh Arora\_\_\_\_\_

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We are really grateful to our training coordinator, Respected **Mr. Abhishek Kumar Sharma** for providing us with an opportunity to undertake this project in this university and providing us with all the facilities.

**SUBMITTED TO:** Mr. Lakhwinder Ghuman

**SUBMITTED BY:** Rahul Sharma

**E-StuCare Team**

Rahul Sharma

Rishma Vasdev

Hitesh Arora

Ajay Kumar

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## 1. ORGANIZATION OVERVIEW

LPU is one of the few Indian universities, which can boast of its state-of-the-art computing resources and network across the campus. LPU believes in utilizing technology to the fullest, and to retain its position as one of the best IT-enabled universities.

### **LOVELY INFOTECH:**

Division of Information Technology supports automation of processes and procedures followed under various departments of LPU. IT division is the back bone of the university as it takes care of all the automation processes. All the divisions / departments are centralized under one network. The main focus of the organization is to understand the requirements of the various departments of LPU and develop the software and web portals. Also it focuses on the maintenance of the developed software whose quality is assured by the QA team at LPU.

Some of the features of Lovely Info-tech are as follows:

- Dedicated iMac Lab for I Phone application development.
- Completely Wi-Fi Campus with 1000+ access point, supported on the technology from RUCKUS and CISCO
- 600 Mbps of bandwidth for internet with dedicated leased line
- 6000 + workstations supported by 50 plus Quad Core or Xeon based Rack/Blade and desktop Servers
- 40 servers most powerful servers from HP/IBM for 100% redundancy and efficient data management
- 30 Km fibre backbone for providing seamless connectivity
- Robust Networking solution implemented and maintained by the networking Giant "Nortel"
- Cisco catalyst 6509E core switch to provide the needed scalability and traffic control
- Dedicated and secured Data centre with powerful Blade Servers
- High end firewall security featured network
- 24hrs Power Back Up -1000 KVA of online uninterrupted power supply(UPS)
- 1000+ CCTV cameras for 24 hours surveillance to ensure on campus safety and security
- High end Biometric systems for attendance
- Hi-tech University Management System (UMS)

Lovely InfoTech is involved in the development and implementation of IT projects for LPU. These projects also provide hands on experience to the students in handling technology.

Lovely Info Tech Division has FOUR departments:-

1. Department of Software Development
2. Website Development (PHP,CSS design,etc,)Cell
3. IT Data Centre Cell
4. Student Training IT Cell

Some of the major projects developed by Lovely Info Tech are:-

- Learning Management System(LMS)
- Relationship Management System(RMS)
- HR Management System
- Inventory Management System(IMS)
- Payment Tracking System(PTS)
- E-Governance System(eGov)
- E-Test
- LPU eConnect
- Budget and Expenditure System
- Account S/w
- Online Placement Portal
- Hospital Management System
- Office Management System(OMS)
- Hostel Management System
- Online Feedback & Survey System
- Various Mobile Applications
  - LPUTouch-Windows
  - LPUTouch-iPhone
  - LPUTouch-Android
- iPod application for Online
  - Books Library

## 2. OVERVIEW “E-StuCare”

E-StuCare is a web based application which provides provision of two-way communication between teacher, tutor, or university and learner. It will bridge the physical gap between lecturers and students and also helpful for handling the queries. This project basically considers **“Student Grievance Redressal”**.

Using E-StuCare, students can get quick response of any query regarding any problem that means we will include some such mechanisms or technology those decrease the pressure on the university employee who are handle these large amount of student quires.

**Firstly, Students** will go to student navigation on project and then submit queries. Students can choose option regarding problem like Account related problem, Study related problem examination related

problem, Complaint and many more option that useful for distance learning students. After submit queries, a Token will be generated by the system for student complaint identity like "Ticket Number" and email will be notify regarding submission through "Auto Notify System" that will be manipulate by us. Response of this submission will be generated as early as possible through "Auto Learning System" that are main technology used by us to fix existing project problems.

**Employees** will go to login navigation on project and fill id and key (Password) on it. After successful login, all the queries of students will be display like notification or alert to employee screen, so that employees will get daily queries handle schedule. This alert screen will be set by "Auto Schedule System" that will be manipulated by us.

If queries will be matched with existing queries on Database, queries will not go to Employee screen that means queries will be handling automatically by database that technology called "**Auto Response System with Auto Learning System**".

**Administrator** will go to login navigation on project and fill id and key (Password) on it. After successful login, admin can update/insert/delete Role/Permission of staff employees, Track System Performance, Update/insert/delete Data Sources and Navigation and many more task through admin control panel that will be design by us on project.

## 2.1 PROBLEMS/NEED

- **Server Unavailability:** In current time, whenever online centralized server unavailable on web, it is not display any relevant information or Error Page to user for inform problem that occur on server.
- **Taking Much Time:** Present complaint websites are taking much time to response to students of queries. According to survey, current website takes minimum 4-6 days to response to student. Distance Learner Students are suffering such kind of problems.
- **Notification:** In current websites, there is no feature regarding notifications that means after student query submission, student is not confirmed by system either query is submit successfully or not.
- **Tracking Status:** In current websites, there is no option to track or check status of submits query whether the query is in process, fulfilled or failed.
- **Pressure on staff:** In present websites, there is not a system that decrease pressure on staff means we can say, if an amount of queries are more, staff pressure is increased.

- **Tracking Performance:** In current websites, there is no option to generate reports for tracking performance by admin. So, it is not possible to find which staff member handle more queries, which particular query repeat many time and many more such kind of reports.

## 2.2 SOLUTIONS/APPROACH

- ✓ **Error Page:** Add or design particular error pages for particular error whenever server shows unavailable service, a particular error page is display for student with approximate time to solve such problem and proper timing and full error description is display on Administrator control panel.
- ✓ **Quick Response:** It means a response of query as early as possible. Today, nobody wants to wait. So, implement technology like “Auto Response System”, so that submit query match with “Auto Learner System” and if query string is match, response is auto generated by system without any staff interfere.
- ✓ **Quick Notification:** It means after submit any query, a quick notification is generated by database and mailed to that student to inform status of submitted query through “Database Mailing System” Tool.
- ✓ **Token Number:** After submit query, a particular Token Number are generated by system and any time, student fill that Token Number on account and check whether query is solved or under process.
- ✓ **Auto Learner System:** It means such kind of system that save all solutions of queries and whether student query is submitted, first this “Auto Learner System” check whether this query is matched with existing queries, if yes, Auto response is generated by System to student without going that query to any staff member.  
So, staff pressure decreased, whenever such kinds of system are implemented in real world.
- ✓ **Reports:** It is main feature that show either overall performance of system or any particular module performance. Administrator and staff can make different kind of Report to demonstrate performance. If Administrator wants result, which staff member handle number of queries, Report is best tool to analyze.

## 3. EXISTING SYSTEM

In current complaint system, the complaints/Queries are submitted online but they are handled by employees who are hired to give response but it is time consuming process.

**For example** Punjab Technical University has a lot of distance learners but when students have any problem, they submit problem through PTU website. Distance Students get response after 5-8 days. So, it

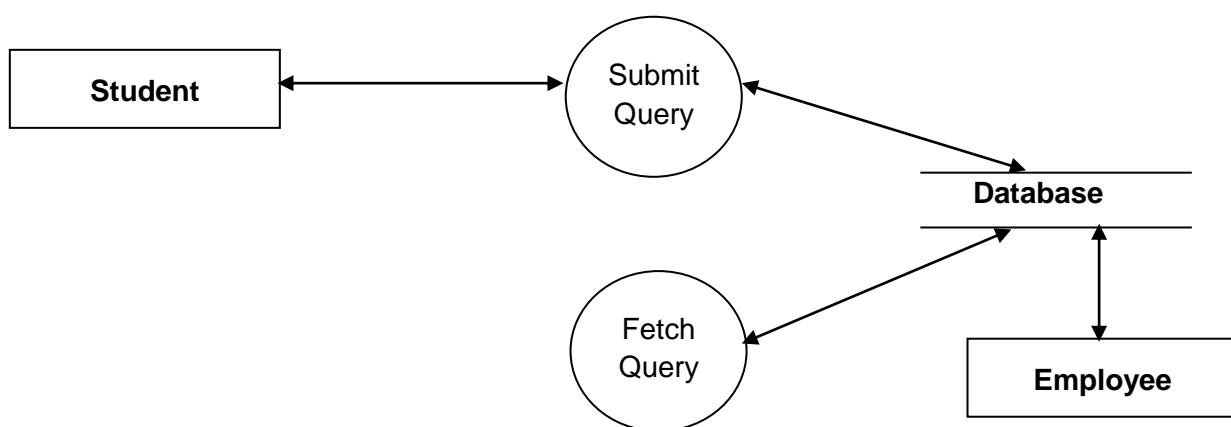
is big problem for distance learners. Our Lovely Professional University also suffers from such kind of things.

So, we have planned to fix these issues of existing system by our proposed system that will be implement latest technology and young ideas.

The main features against existing system are:

- ✓ Notification System (For Student Query Tracking)
- ✓ Alert/Reminder Query Schedule (For Employee Query Handling Environment)
- ✓ Auto Response System (Auto response by System, if query match with existing query)

### 3.1 DATA FLOW DIAGRAM FOR EXISTING SYSTEM:



**Fig: 3.1**

### 3.2 PROBLEMS

- Whenever online centralized server is unavailable on web, it does display any relevant information or Error Page to user for inform problem that occur on server.
- Websites takes so much time to respond to students of queries. Distance Learner Students are suffering such kind of problems.
- No feature regarding notifications that means after student query submission, student is not confirmed by system either query is submitted successfully or not.
- No option to track or check status of submits query whether the query is in process, fulfilled or failed.
- There is no system that decrease pressure on staff means we can say, if an amount of queries are more, staff pressure is increased.

- No option to generate reports for tracking performance by admin. So, it is not possible to find which staff member handle more queries, which particular query repeat many time and many more such kind of reports.

### 3.3 FEATURES OF THE NEW PROPOSED SYSTEM:

Various features which make our web application different from these websites are listed below:

- ✓ **Quick Response:** Implementing technology like “Auto Response System”, so that submit query match with “Auto Learner System” and if query string is match, response is auto generated by system without any staff interfere.
- ✓ **Quick Notification:** It means after submit any query; a quick notification is generated by database and mailed to that student to inform status of submitted query through “Database Mailing System” Tool.
- ✓ **Error Page:** Add or design error pages for error such as whenever server shows unavailable service, a particular error page is display for student with approximate time to solve such problem and proper timing and full error description is display on Administrator control panel.
- ✓ **Token Number:** After submit query, a particular Token Number are generated by system.
- ✓ **Auto Learner System:** It means such kind of system that save all solutions of queries and whether student query is submitted, first this “Auto Learner System” check whether this query is matched with existing queries, if yes, Auto response is generated by System to student without going that query to any staff member.
- ✓ **Reports:** It is main feature that show either overall performance of system or any particular module performance. Administrator and staff can make different kind of Report to demonstrate performance.

## 4. PROBLEM ANALYSIS

### 4.1 BUSINESS RULES AND REQUIREMENTS:

BRID	MODULE	IMPORTANCE	DESCRIPTION
1.	ADMINISTRATOR	1	<ul style="list-style-type: none"> <li>• WEBSITE ADMINISTRATOR           <ul style="list-style-type: none"> <li>✓ Role/Permission allocation</li> <li>✓ Report generation</li> <li>✓ Up-gradation of Navigation</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>✓ Group management</li> <li>✓ Menu's Control</li> <li>• DATABASE ADMINISTRATOR           <ul style="list-style-type: none"> <li>✓ Design the database</li> <li>✓ Secure the database</li> </ul> </li> </ul>
2.	REQUEST LOGIN & TRACKING	1	<ul style="list-style-type: none"> <li>• Request Log / Edit / Update</li> <li>• Check Status</li> <li>• Alert / Reminder / Notifications</li> <li>• History</li> <li>• Interaction / Communication</li> </ul>
3.	GRIEVANCE HANDLING	1	<ul style="list-style-type: none"> <li>• Request Check &amp; Updation</li> <li>• Action Perform</li> <li>• Categorization</li> <li>• Authorization</li> <li>• Notification Submission</li> </ul>
4.	PERFORMANCE ACTIVITY TRACKING	1	<ul style="list-style-type: none"> <li>• Request Analysis</li> <li>• History</li> <li>• Performance Tracking</li> <li>• Request Tracking</li> <li>• Feedback Analysis</li> </ul>
5.	SEARCHING (Simple + Advance)	1	<ul style="list-style-type: none"> <li>• Student-Wise</li> <li>• Category-Wise</li> <li>• Study Centre-Wise</li> <li>• Date/Time-Wise</li> <li>• Nature-Wise</li> <li>• Status-Wise</li> </ul>
6.	REPORTING	1	<ul style="list-style-type: none"> <li>• Performance Report (Depends upon Requirements &amp; Format)</li> </ul>
7.	FEEDBACK	1	<ul style="list-style-type: none"> <li>• Given by the student for the enhancement of the website.</li> </ul>
8.	NAVIGATION		<ul style="list-style-type: none"> <li>• "Sitemap" for students that listing of all URLs within a merchant's store as well as the time the pages were last published. This module is used to inform and direct search</li> </ul>

			engine crawlers so that web pages can be discovered and indexed quicker.
9.	HELP AND SUPPORT	1	<ul style="list-style-type: none"> <li>• Provide the help related to user query</li> <li>• Demos are available regarding the use of the tools</li> <li>• Terms and conditions and copyright of the website</li> </ul>

BRID=Business Requirement Identifier

1=Essential (Included in this Release)[Important & Urgent]

2=Beneficial (But not Essential)-Optionally Included in this Release

#### **4.2 EXCLUSIONS COST:**

The Cost Management and Budgeting is excluded in the current release. If the project will be extended on large scale then the cost factor on the resources will be included.

##### **4.2.1 FEASIBILITY**

- If this project will move to IT level means in real world then it can be extended to add these modules.
- We can add high leveled encryption algorithms to keep data secure from unauthorized users like hackers are such kind of unauthorized users.

#### **4.3 FOUNDATIONS AND IMPACT /PROBLEM ANALYSIS**

##### **4.3.1 ASSUMPTIONS**

- It is assumed that system will provide a user friendly interface which is easy to understand and manage.
- User need to have basic knowledge of computers and Internet.
- It is needed to remember “Token Id” generated by System for Tracking Query Status that will be under processing.

##### **4.3.2 ISSUES AND CONSTRAINTS**

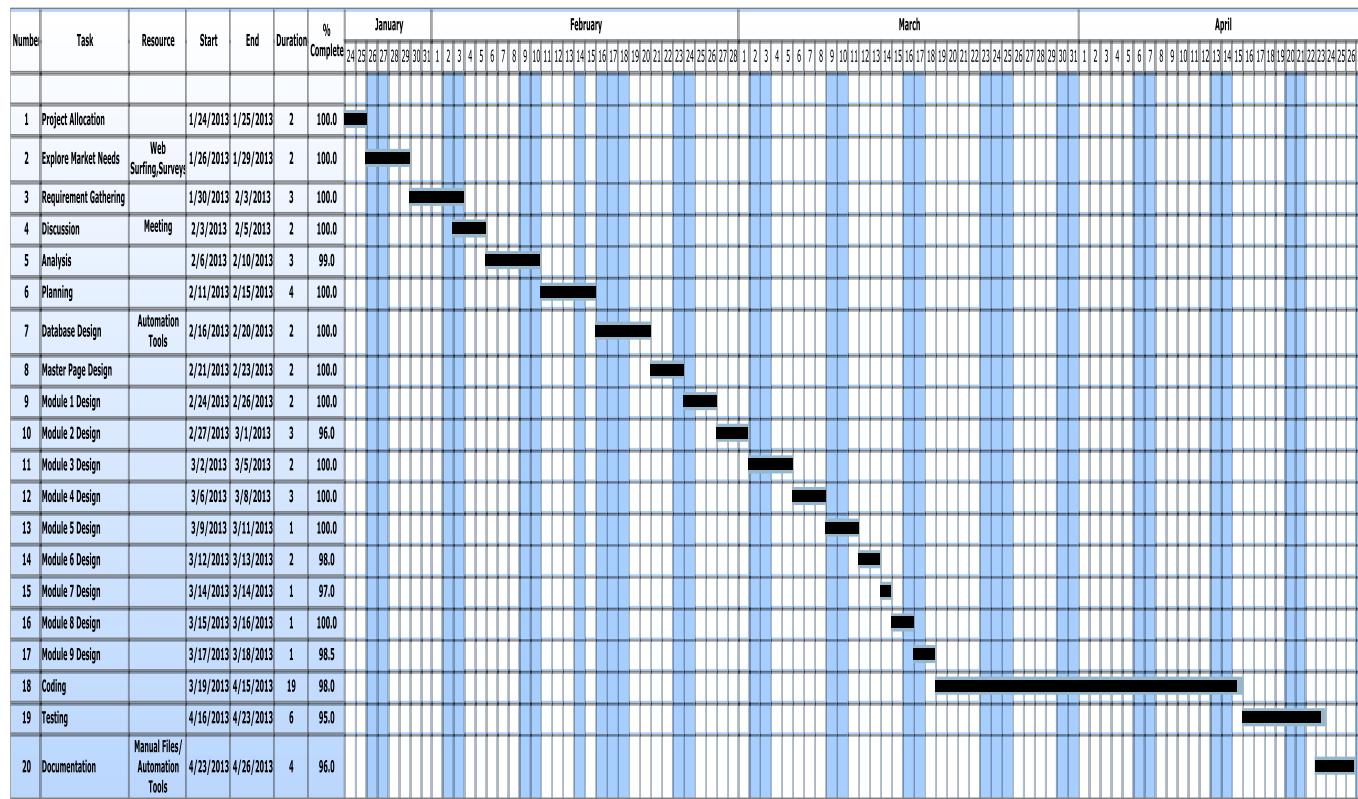
- Each Employee will respond to queries as per permission set by the Admin. Example Employee can have permission to handle only query while other Employee handle query as well as Generate/View particular Report on any particular module.
- Query submitted by student remains hidden from other students.

- Employee cannot access other's Employee profiles.
  - Group creation and deletion is fully managed by administrator.
  - Feedback will be available only to students who have particular “Token Key” .
  - Employee who is not able to solve query can forward it to other employee, this activity is recorded by the system, so that this recorded activity is helpful when Admin generate Employee Performance Report.
  - Only admin have the right of tool up-gradation, creating reports, Navigation up-gradation, Users addition/Updation/deletion with particular permission and control panel.

### **4.3.3 RISK ASSESSMENTS**

- The Unavailability of Server that means if server will down for any problem on web, it will not possible to submit queries by student.
  - Notification after submit query may will take more time to notify status of query on mail by system problem.
  - Network failure can interrupt the communication among students and E-StuCare.

## 4.4 PROJECT PLAN



## 5. SRS (SOFTWARE REQUIREMENTS AND ANALYSIS)

### Overview SRS Document for Project

**Name of Project:** E-StuCare **Date:** 23 Feb. 2013  
**Project Duration:** 4-5 Month

**Project Language Platform:** Front- End = Microsoft Visual Studio 2008(C# Language)  
 Back-End = Microsoft SQL Server 2008

**Project Description:** It provides provision of two-way communication between teacher, tutor, or university and learner. It will bridge the physical gap between lecturers and students and also helpful for handling the queries. It also helps us to enhance the searching mechanism and an analysis of various methods which are useful in decision making. A project used **Auto Response System** from database for Quick Response. This Project is also helping us to analyze in various ways for a student or staff. This project basically considers “**Student Grievance Redressal**”.

**User Interfaces:** Graphical User Interfaces on Screen

**Functional Requirements:** **For Input** = Window Forms, Menu Items, Textboxes, Labels, Buttons, Scrollbar, Image Boxes, Combo Boxes, Panels, Timer, Mouse (Cursor)  
**For Functioning** = Debugger, VC# Compiler  
**For Output** = DataGridView, Panels, Buttons, Progress bar, Marquee, Textboxes

**Non-Functional Requirements:** **Performance:** High (Because Microsoft SQL Server 2008 used as a Backend)  
**Reliability:** High (Program reliable for use)  
**Availability:** 24 x 7  
**Security:** High (Security Set in front-end as well as Back-end)  
**Usability:** Good (Provide More User Friendly Environment for Client & Help Menu Option for Client)  
**Interfaces:** User friendly interface, Browser compatible, Reports exportable in PDF, XLS, DOC formats.

**Exception Handling:** Good for Exception Handling in Source Code(Provides Warning ,Message, Errors List For Fixed Problems in Source Code with Page number, Line number), Catch Manual Design Error Page

**Problem Analysis:** Data Flow Diagram & ER Diagram **(Given Above)**

#### **Scope of Project:**

- E-StuCare can be used for dealing with the complaints of regular students in universities/B-schools/coaching centers etc
- In an IT sector, it can be a platform for the employees in organizations/companies to submit their complaints to the higher authorities for timely actions
- The defense department can implement such systems so that the common man can ask for the advice and their other queries including complaints.
- It can be used by the passengers for their inquiries related to their airlines and roadways.

## 5.1 INTRODUCTION:

The purpose of this SRS is to specify the requirements of the web based application E-StuCare, which is “Partially Auto Response System”. This Software Requirements Specification provides a complete description of all the functions and general description of E-StuCare.

### 5.1.1 PRODUCT PERSPECTIVE (DESCRIPTION):

This is proposed to be an enhanced model of the present day existing Web Based Complaint/Queries. Many flaws in the present sites haven't been able to give quick response after submission. The Software Requirements Specifications intends to identify the flaws in the current existing system and propose an alternative or a solution to them.

### PRODUCT FUNCTIONS:

- It consists of three users:
  - ✓ Student
  - ✓ Administrator
  - ✓ Staff / Study Centre
- Students will get “Token Key” for tracking its own query status.
- Feedback will be available only those students who have “Token Key”.
- The Staff has to login to handle no. of queries, submitted by students with particular control panel with daily queries target schedule reminder.
- Project Navigator Option will inform and direct search engine crawlers so that web pages can be discovered and indexed quicker.

### 5.1.2 USER CLASSES AND CHARACTERISTICS

There are 3 kinds of users for the proposed system:

#### Administrators:

- Report generation is responsibility of website administrator.
- Any Up-gradation of Navigation Option will be done by administrator.
- The groups/Users will be created and deleted by administrator.
- Designing, monitoring performance and securing the database is responsibility of database administrator.
- They must take care of the security issues involved during giving Roles with permissions.
- They must receive feedbacks from their students about their system and act upon the relevant ones.

- Any failures in the system have to be detected and repaired.

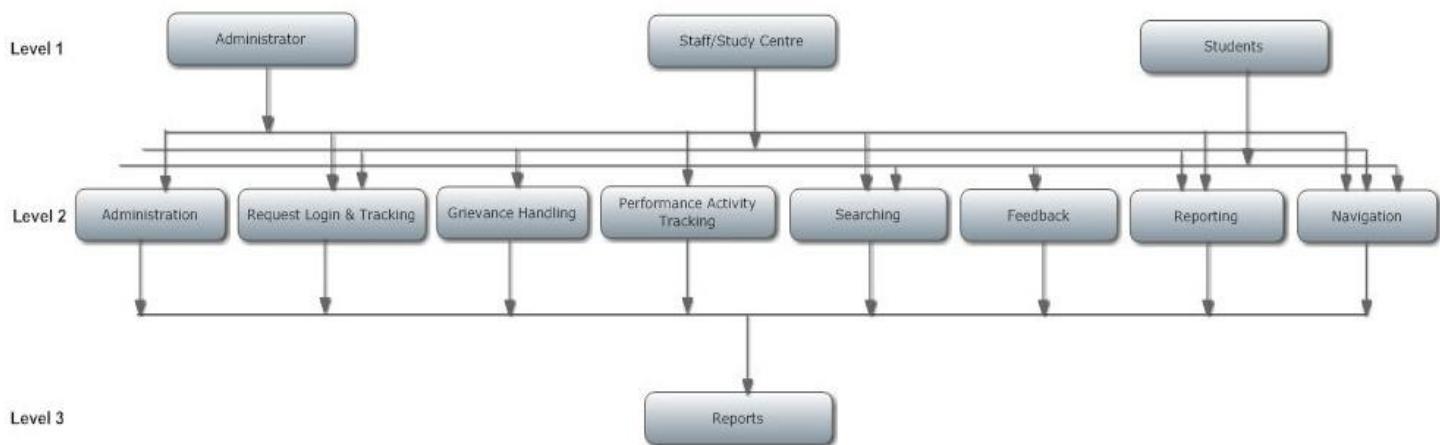
### **Students:**

- They can submit any query any time.
- They can check the status of submit query any time with "Token Key" through Tracking System.

### **Staff/Study Centre:**

- ✓ Staff can handle or fixed queries submitted by students with particular control panel generated by System.
- ✓ When Staff login the system, daily schedule for handling amount of queries will display as control panel. Staff can also forward student query to other staff member, when member will not able to solve any query.

## **5.2 FUNCTIONALITY AND GENERAL DESCRIPTION:**



**Fig: 5.2**

**LEVEL 1:** It determines difference between administrator and other user including Staff/Study Centre and Students. It will lead different users to level 2 modules according to their rights.

**LEVEL 2:** It includes various modules with different functionality and each user can access these modules according to his/her rights.

**LEVEL 3:** This is the last module which refers to the reporting session after the event is completed i.e. it includes the activities like taking print outs of any reports. It is accessible to administrator.

## 5.2.1 ADMINISTRATOR

The administrator plays an important role during the development of any application or project. The whole development and maintenance of project depends onto the administrator. The administrator's module has various roles. In this project we categorized administrator module into two parts:

### 5.2.1.1 WEBSITE ADMINISTRATOR

The various task performed by website administrator are given below:

- Continuously update the website.
- Add and Remove the feature of the website.
- Give the access right to different level of user.
- Main function of website administrator handles the queries related to following modules:
  - ✓ Navigation module
  - ✓ Help and support module.
  - ✓ Feedback module
- Role assignment with Permissions.

### 5.2.1.2 DATABASE ADMINISTRATOR

The database administrator work on the back-end of the project. Our project is dependent on database, so manage the database efficiently is an important task.

- Design the whole database.
- Secure the database from various security issues such SQL injection.
- Monitoring the database performance.

## 5.1.3 REQUEST LOGIN AND TRACKING

The various tasks performed on request login and tracking module are given below:

- ✓ Request Log / Edit / Update
- ✓ Check Status
- ✓ Alert / Reminder / Notifications
- ✓ History
- ✓ Interaction / Communication

## 5.1.2 GRIEVANCE HANDLING

Task performed by user management are given below:

- ✓ Request Check & Updation
- ✓ Action Perform
- ✓ Categorization

- ✓ Authorization
- ✓ Notification Submission

#### **5.2.4 PERFORMANCE ACTIVITY TRACKING**

- ✓ Request Analysis
- ✓ History
- ✓ Performance Tracking
- ✓ Request Tracking
- ✓ Feedback Analysis

#### **5.2.5 SEARCHING:**

- ✓ Student-Wise
- ✓ Category-Wise
- ✓ Study Centre-Wise
- ✓ Date/Time-Wise
- ✓ Nature-Wise
- ✓ Status-Wise

#### **5.2.6 FEEDBACK**

User can use this module to give us their feedback or report any problems that they have experienced while using the website. So, it helps to improve the structure and content of our Website to make it more users friendly.

#### **5.2.7 HELP AND SUPPORT**

Help and Support is an important part for any website, it generally provides the guidelines, and other information related to users problem. This module is also control such type of task. This module contains following information.

- Provide the help topic related to User Query.
- The term and condition of the website are containing in this module.
- Copyright, contacts provided to user by this module.

#### **5.2.8 NAVIGATION**

“Sitemap” for students that listing of all URLs within a merchant’s store as well as the time the pages were last published. This module is used to inform and direct search engine crawlers so that web pages can be discovered and indexed quicker.

**Administrator Point of View:** Create/Update listing page on Navigation.

**Staff Point of View:** Search any module by indexer.

**Student Point of View:** Search information regarding all queries submit by student.

### 5.3.1 REPORTS

Number of Reports generate for performance either by Staff with special permission or Administrator. Reports are depends upon our project requirement or runtime requirement for staff or Administrator.

## 5. DESIGN

### SYSTEM DESIGN:

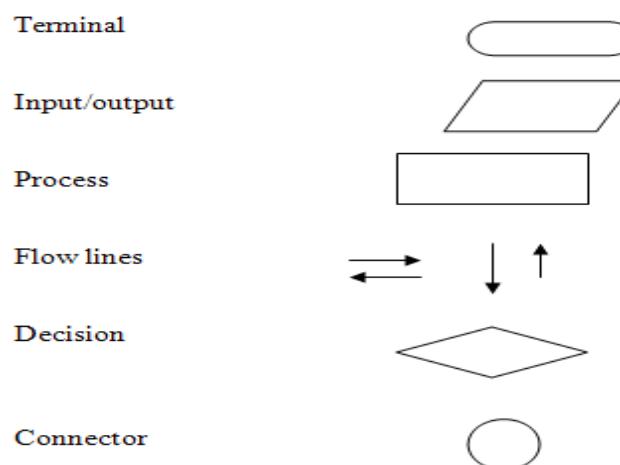
#### 6.1. LOGICAL DESIGN

##### 6.1.1 FLOWCHARTS

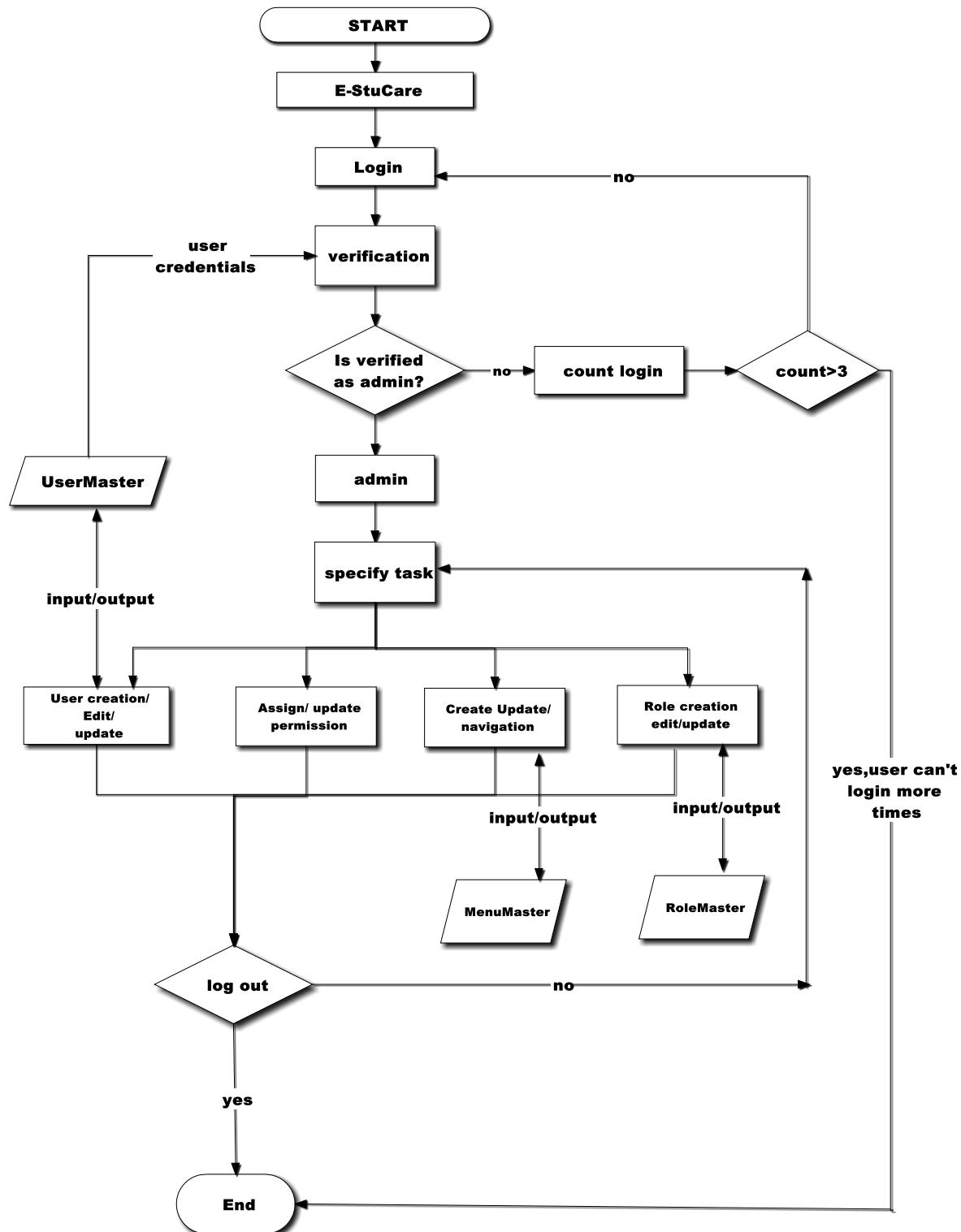
A flow chart is a graphical or symbolic representation of a process. Each step in the process is represented by a different symbol and contains a short description of the process step. The flow chart symbols are linked together with arrows showing the process flow direction.

#### Flowchart Symbols

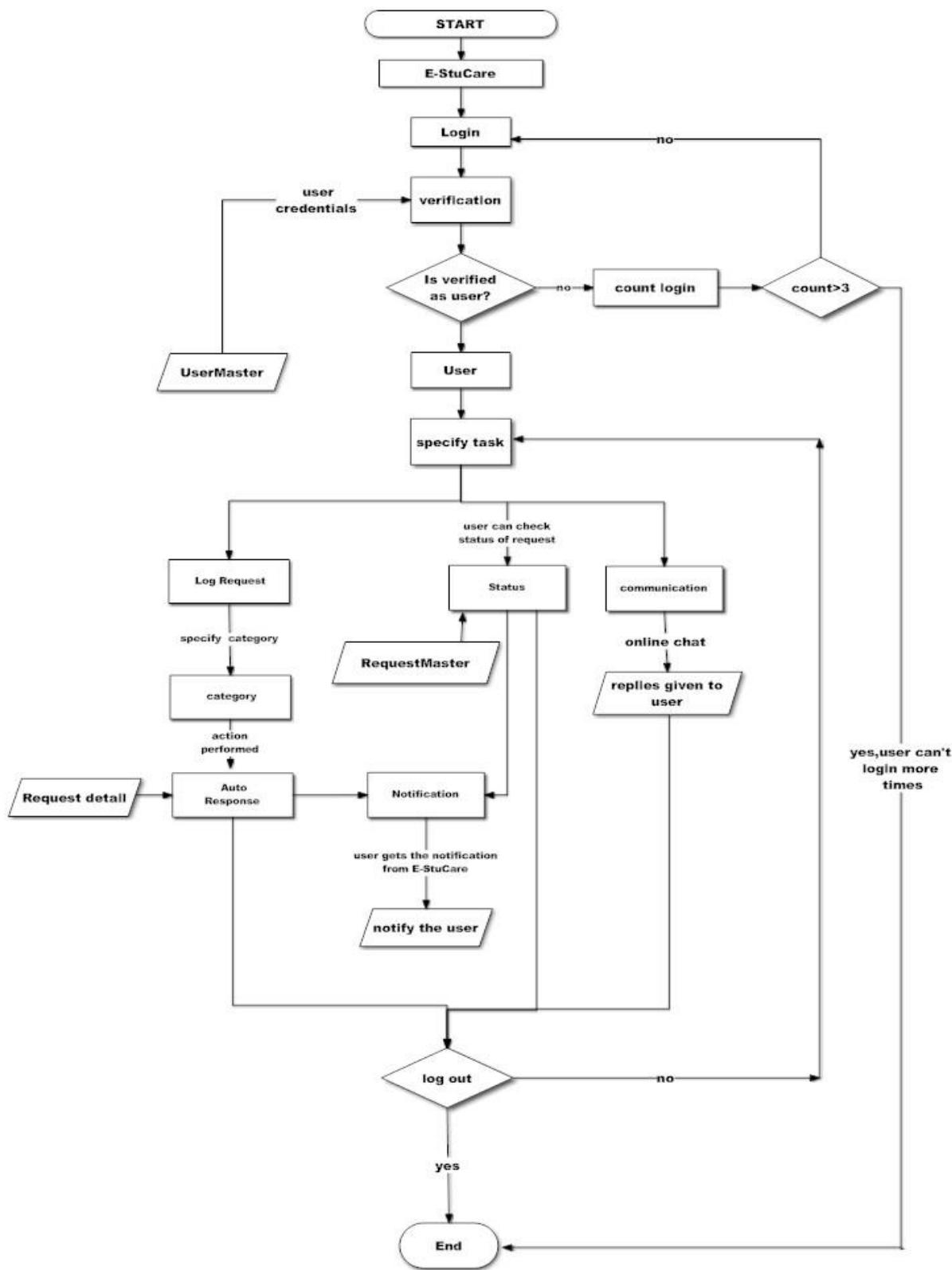
- Terminator: An oval flow chart shape indicating the start or end of the process.
- Process: A rectangular flow chart shape indicating a normal process flow step.
- Decision: A diamond flow chart shape indication a branch in the process flow.
- Connector: A labeled, circular flow chart shape used to indicate a jump in the process flow.
- Data: A parallelogram that indicates data input or output (I/O) for a process.



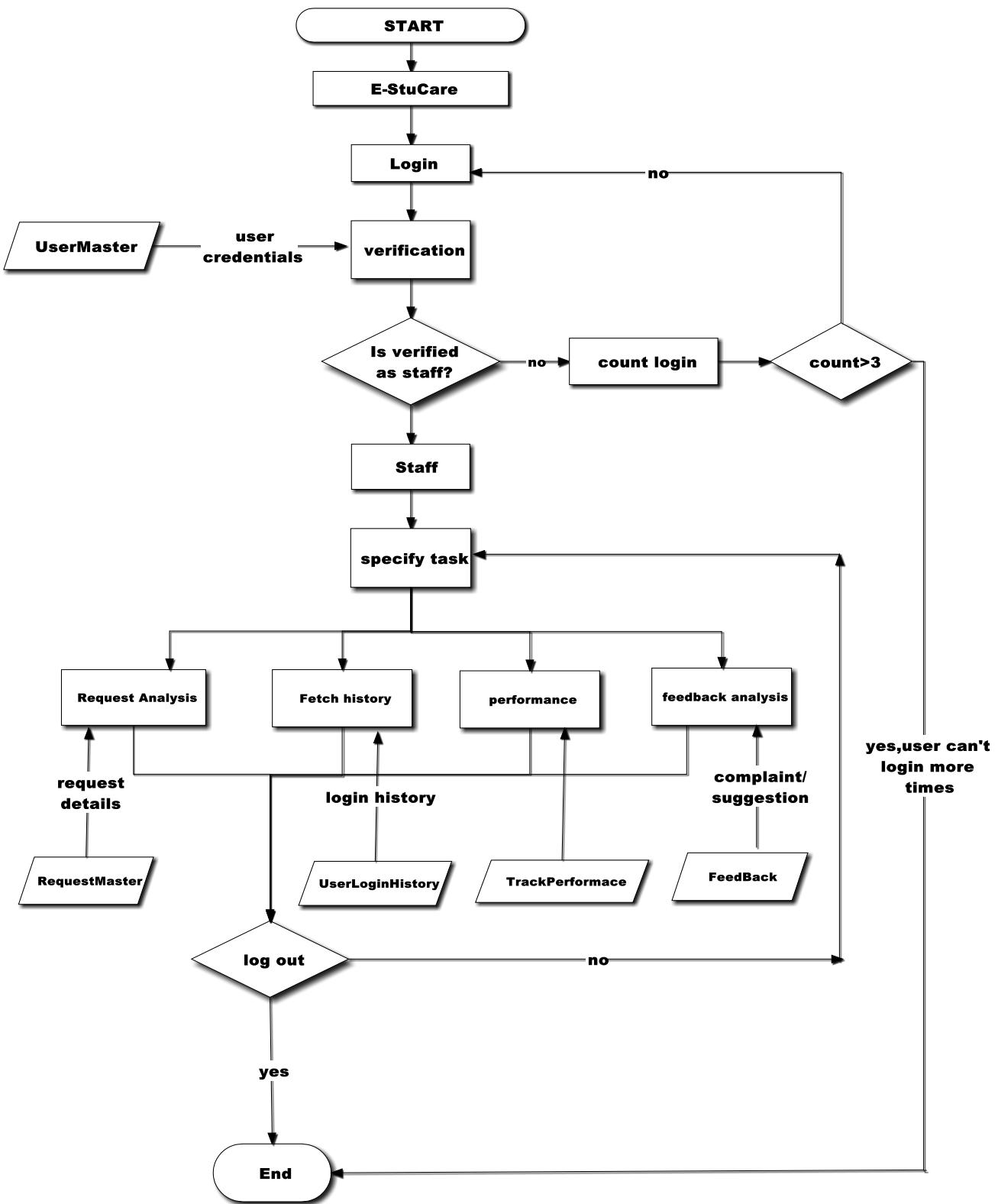
### 6.1.1.1 FLOW CHART FOR ADMINISTARTION



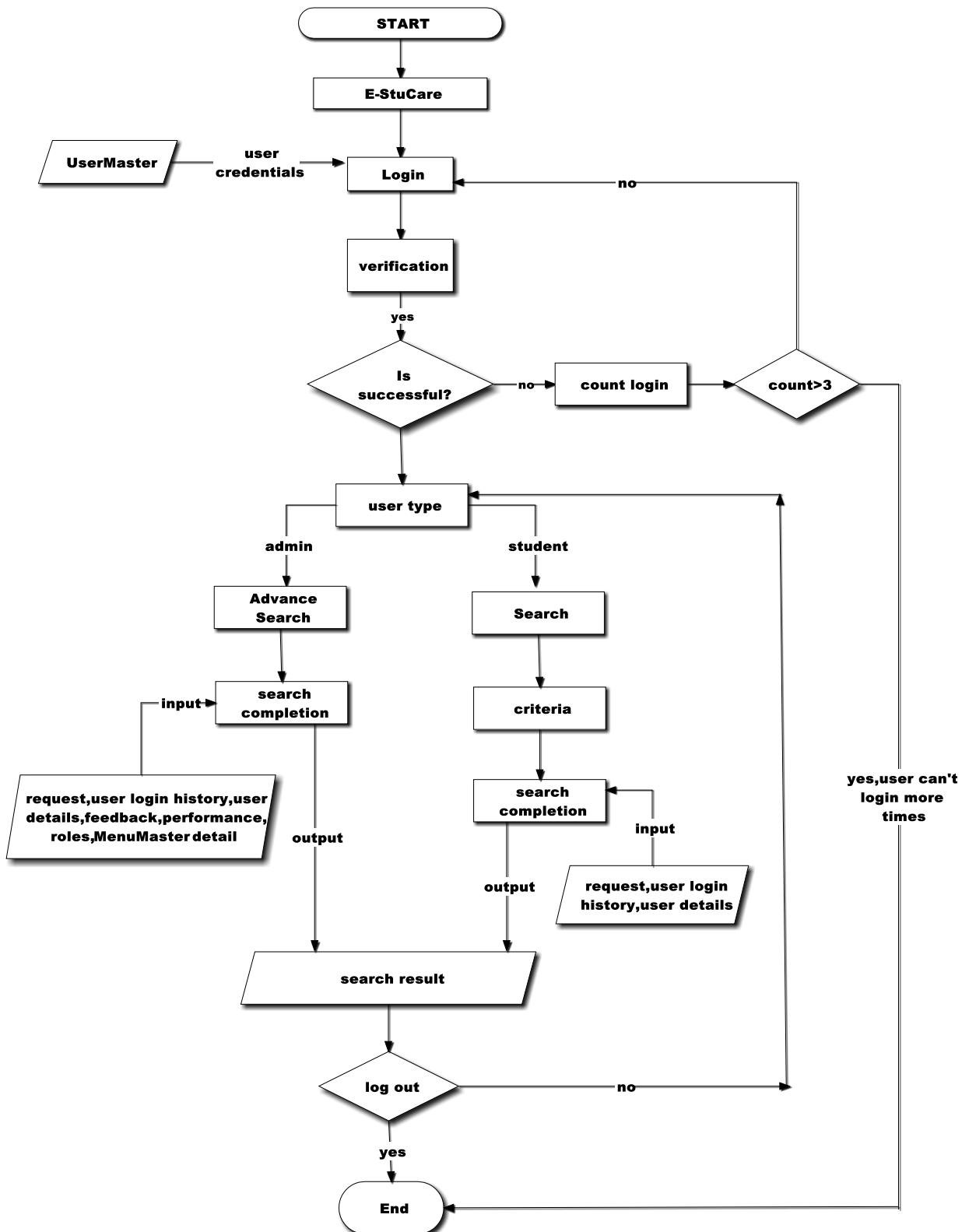
### 6.1.1.2 FLOW CHART FOR GRIEVANCE HANDLING



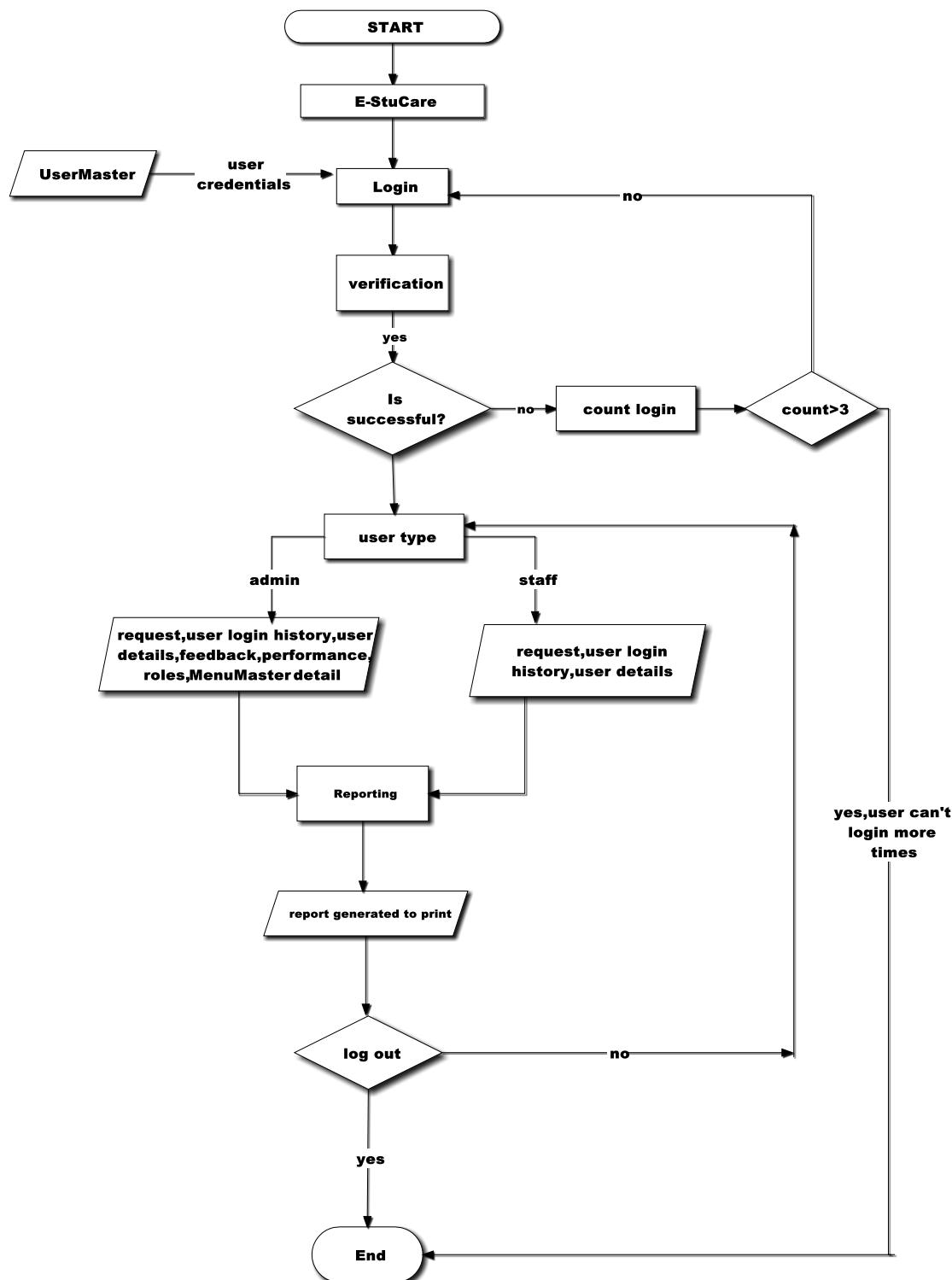
### 6.1.1.3 FLOW CHART FOR PERFORMANCE ACTIVITY TRACK



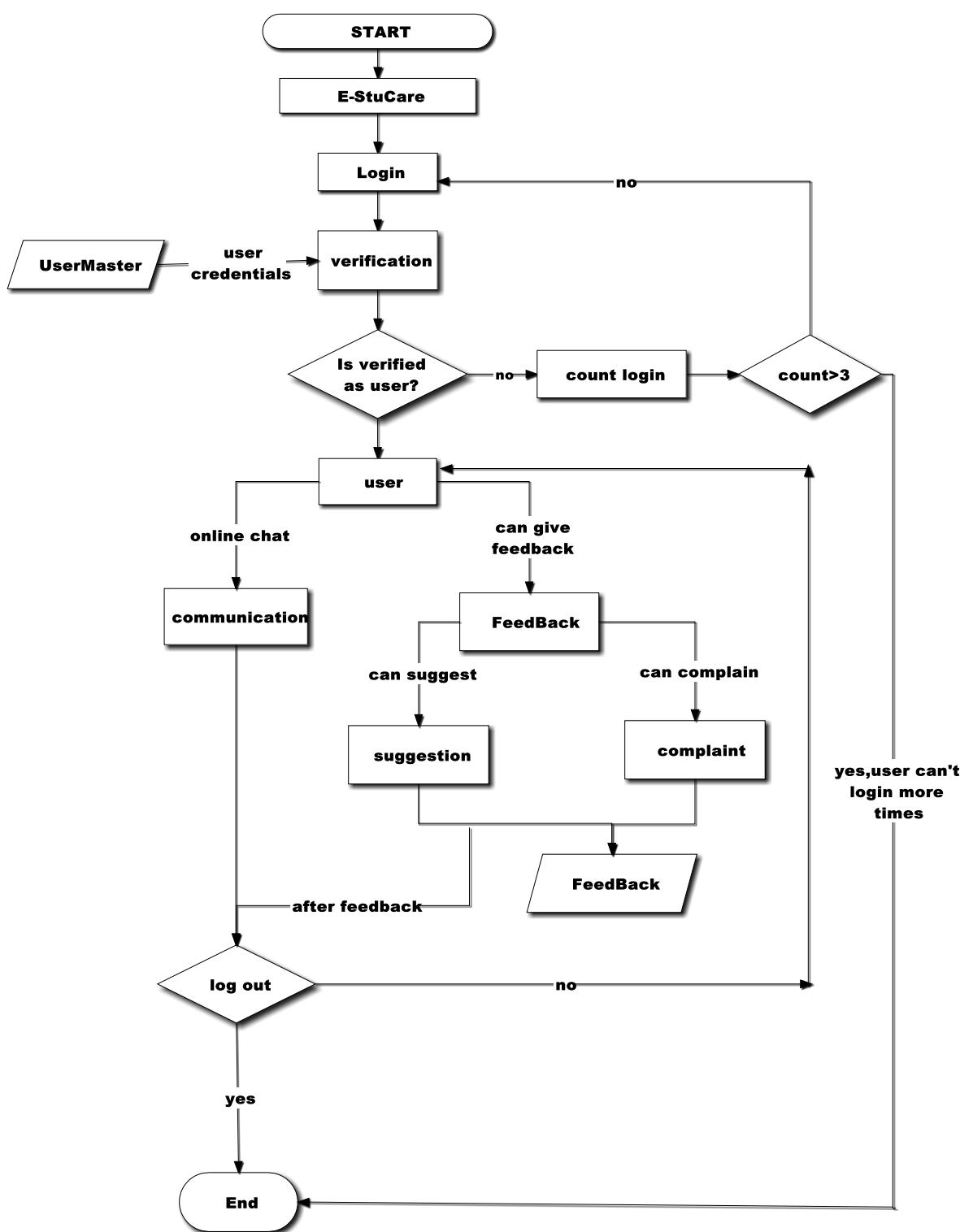
#### **6.1.1.4 FLOW CHART FOR SEARCHING**



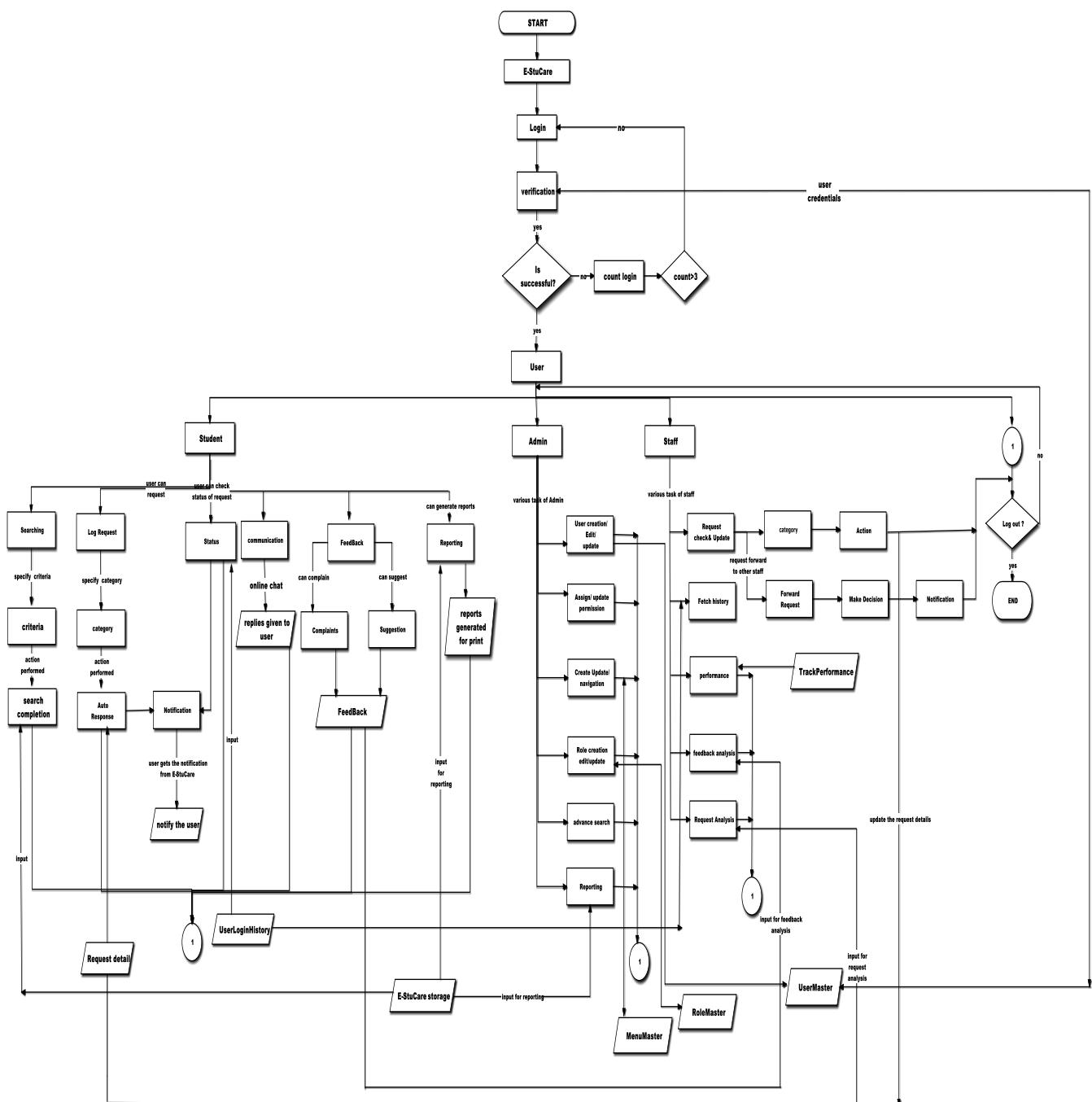
### 6.1.1.5 FLOW CHART FOR REPORTING



### 6.1.1.6 FLOW CHART FOR FEEDBACK



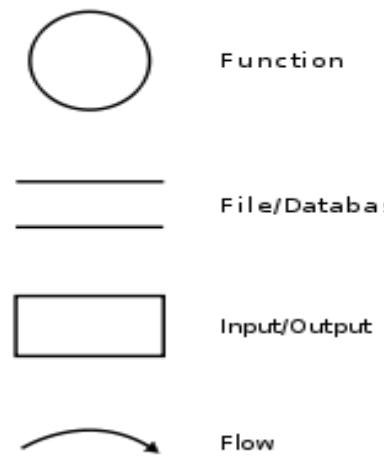
### 6.1.1.7 COMPLETE FLOW CHART



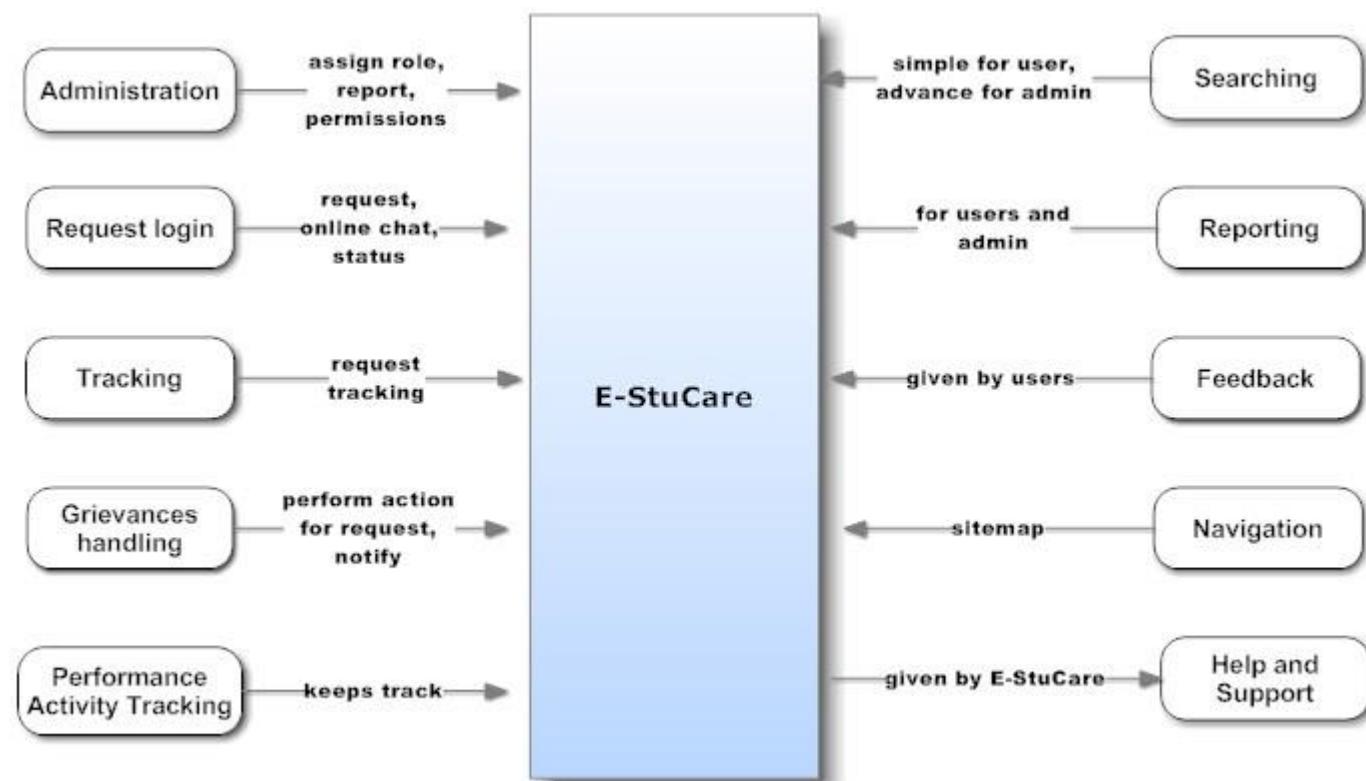
### 6.1.2 DFD (DATA FLOW DIAGRAMS)

The DFD's represents the flow of the data among the different processes, entities and records. There are 0-level (context diagram) and 1-level DFD's. The 0-level DFD represents the overall entities participating in the system excluding the detailed functionality of the system. Whereas 1-Level DFD represents the module wise detailed functionality of the system.

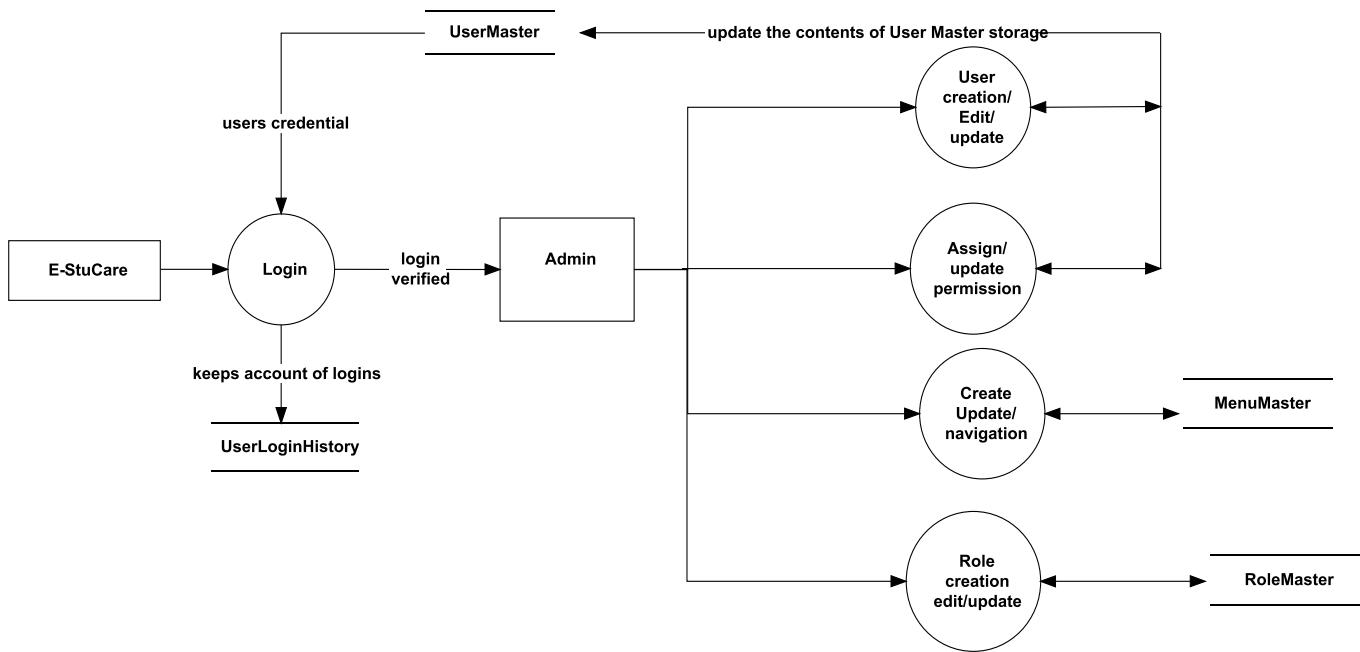
The symbols commonly used in data flow diagram are:



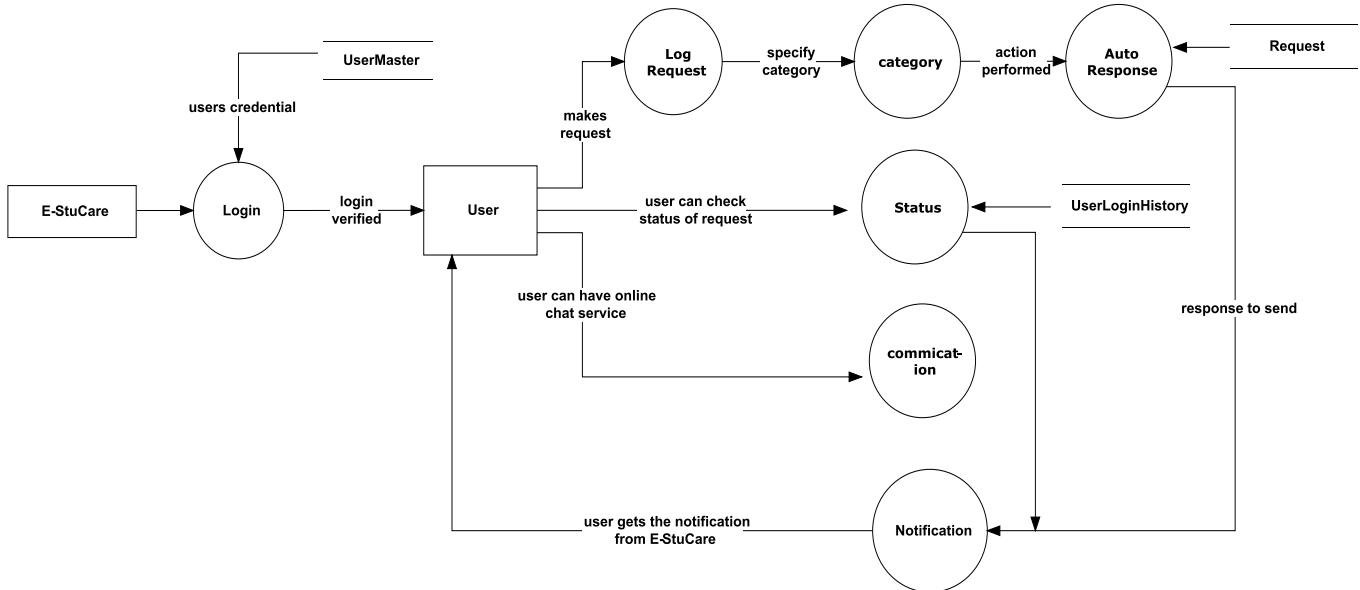
#### 6.1.2.1 LEVEL 0:



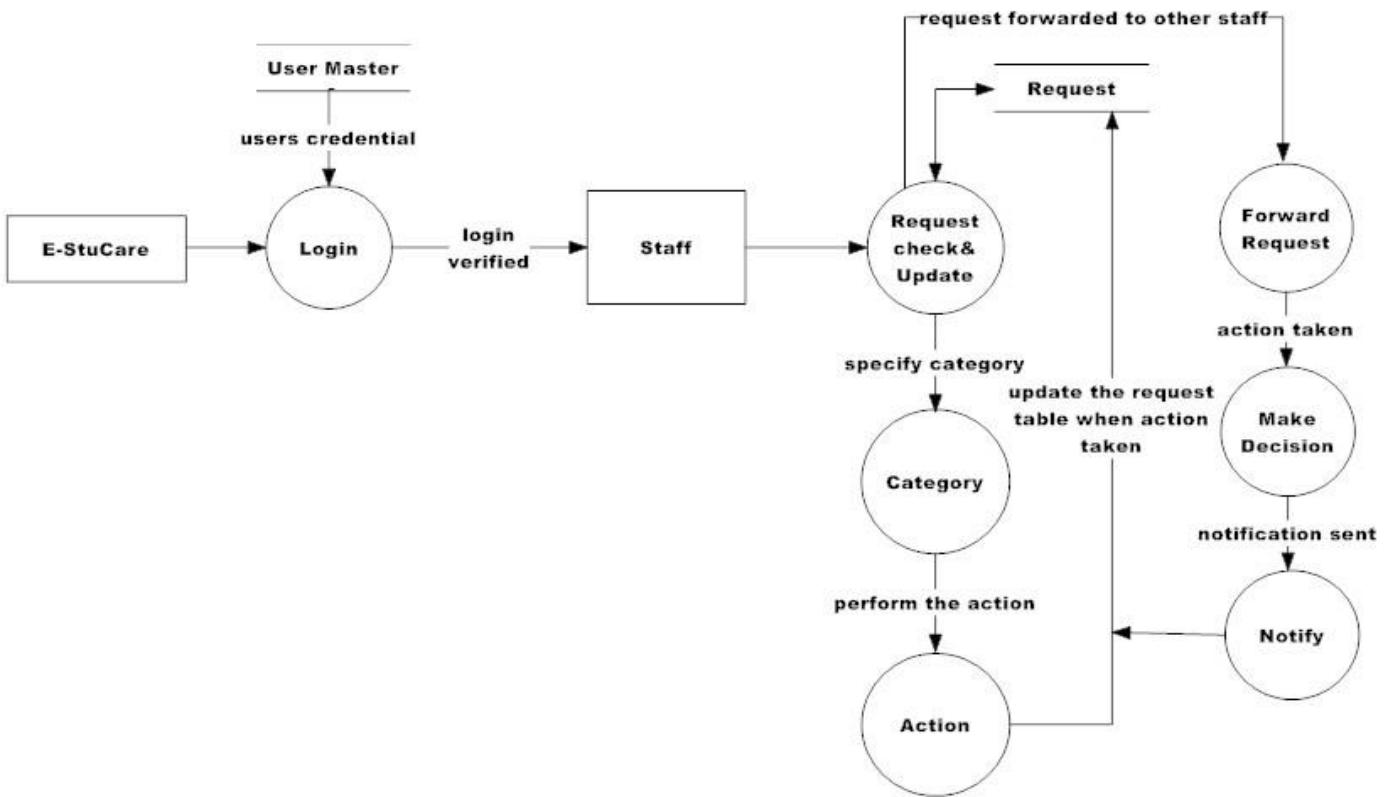
### 6.1.2.2 DFD LEVEL 1(ADMINISTRATION)



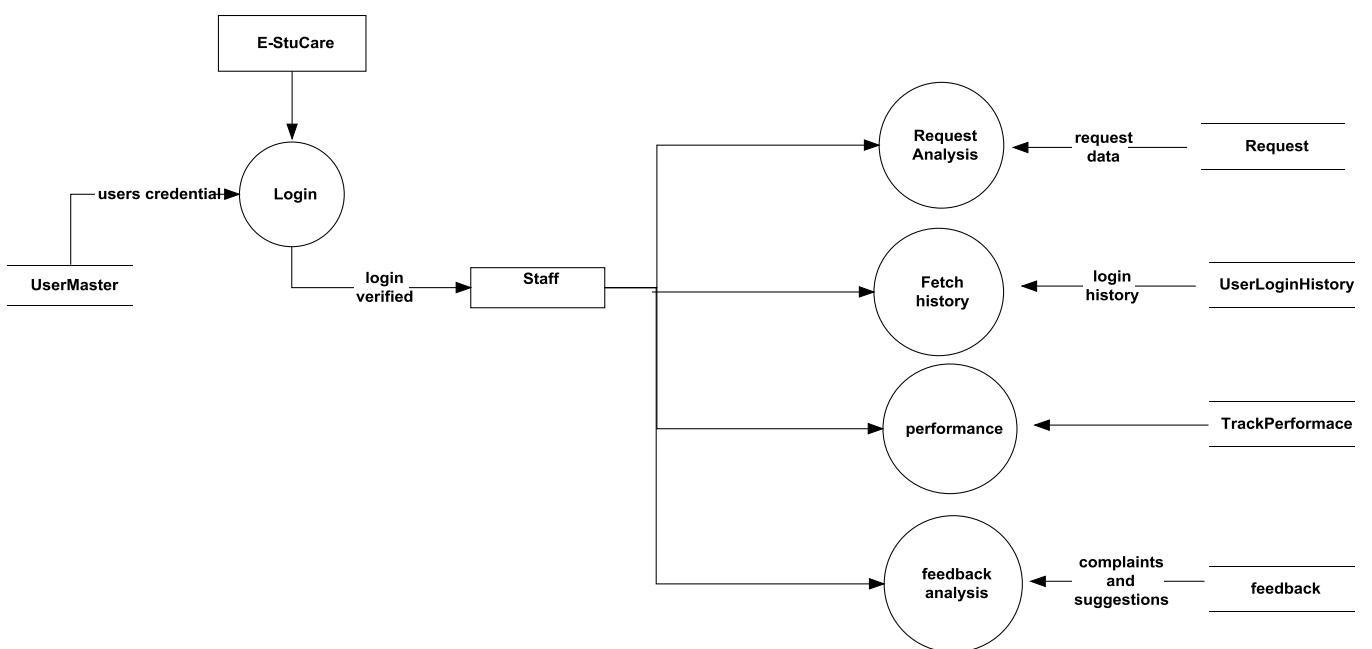
### 6.1.2.3 DFD LEVEL 1(REQUEST LOGIN & TRACKING):



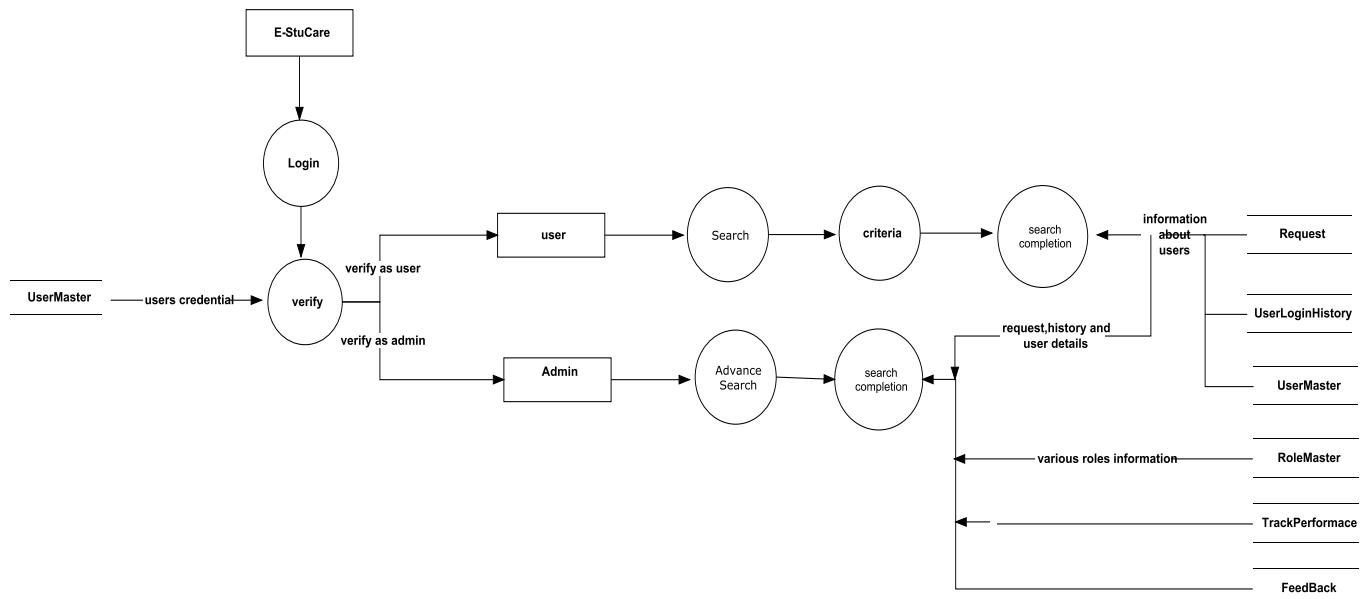
#### 6.1.2.4 DFD LEVEL 1(GRIEVANCE HANDLING):



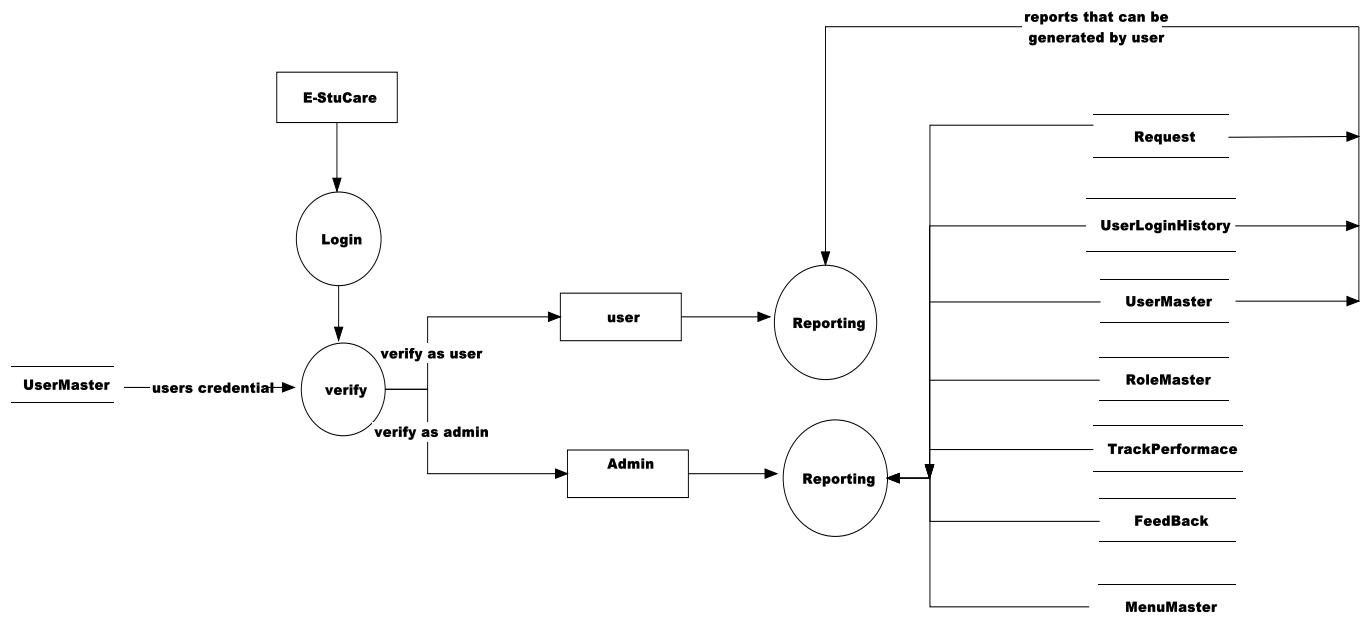
#### 6.1.2.5 DFD LEVEL 1(PERFORMANCE ACTIVITY TRACKING):



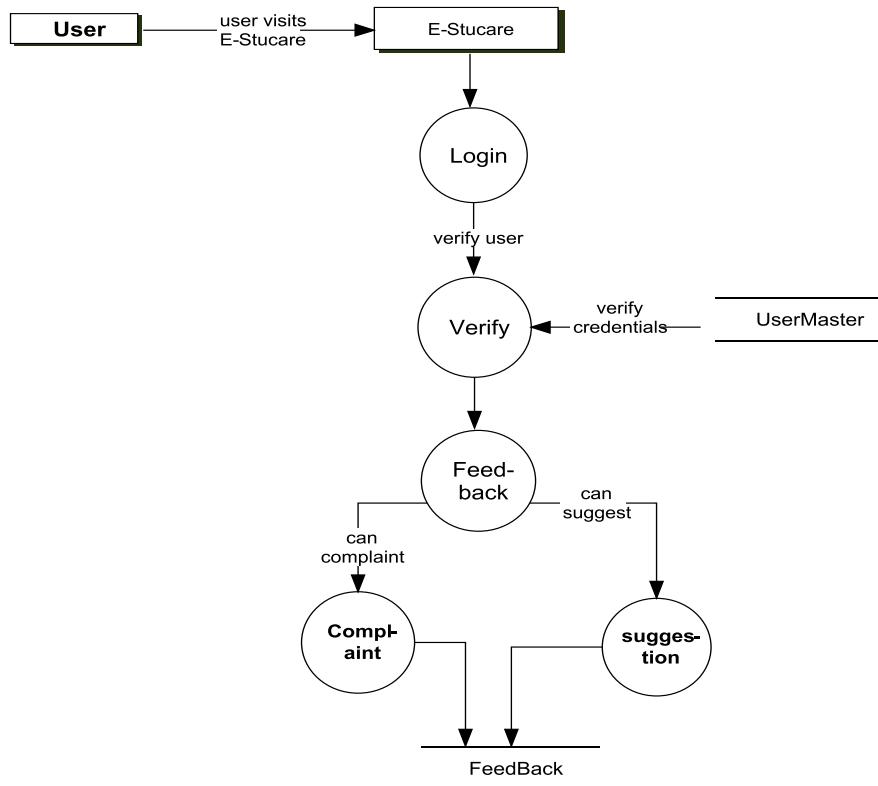
### 6.1.2.6 DFD LEVEL 1(SEARCHING):



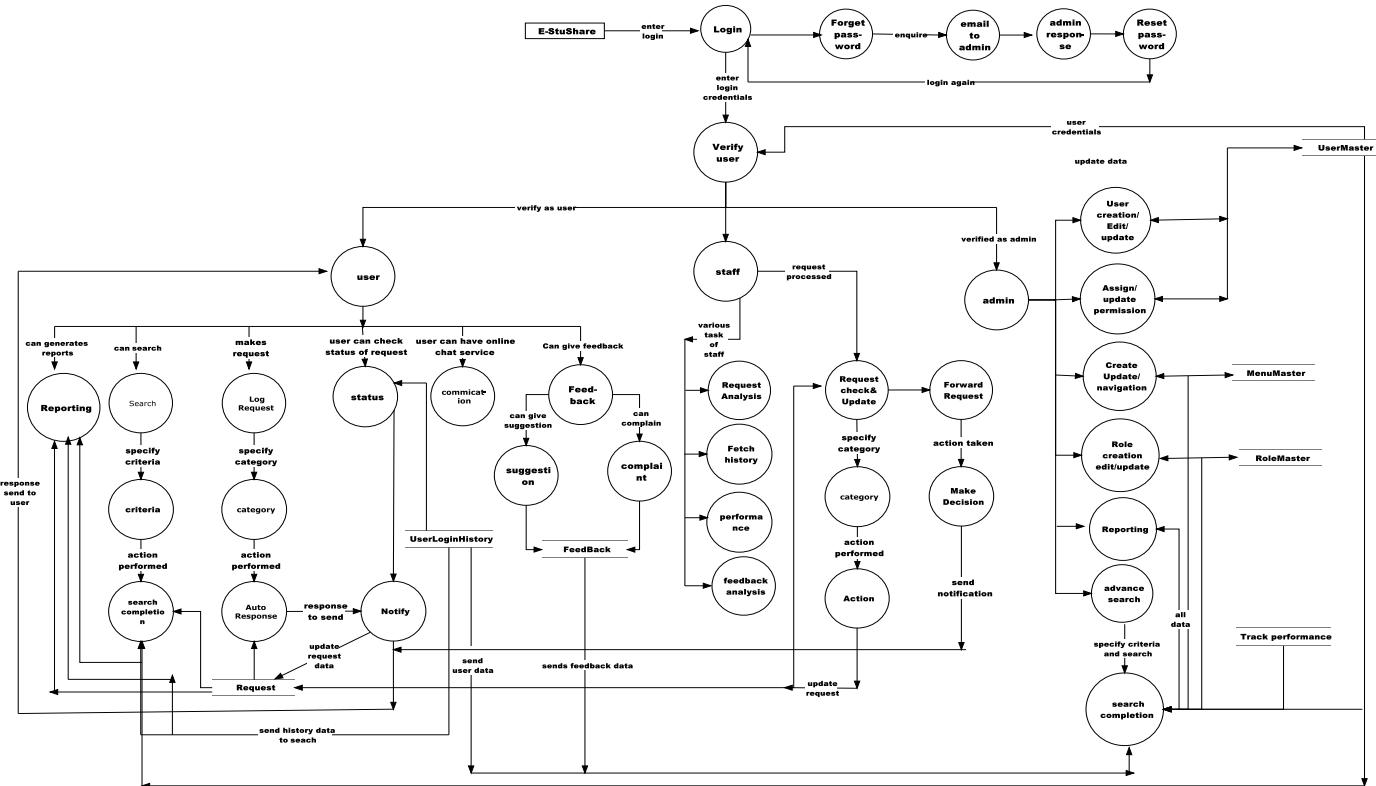
### 6.1.2.7 DFD LEVEL 1(REPORTING):



### 6.1.2.6 DFD LEVEL 1(FEEDBACK):



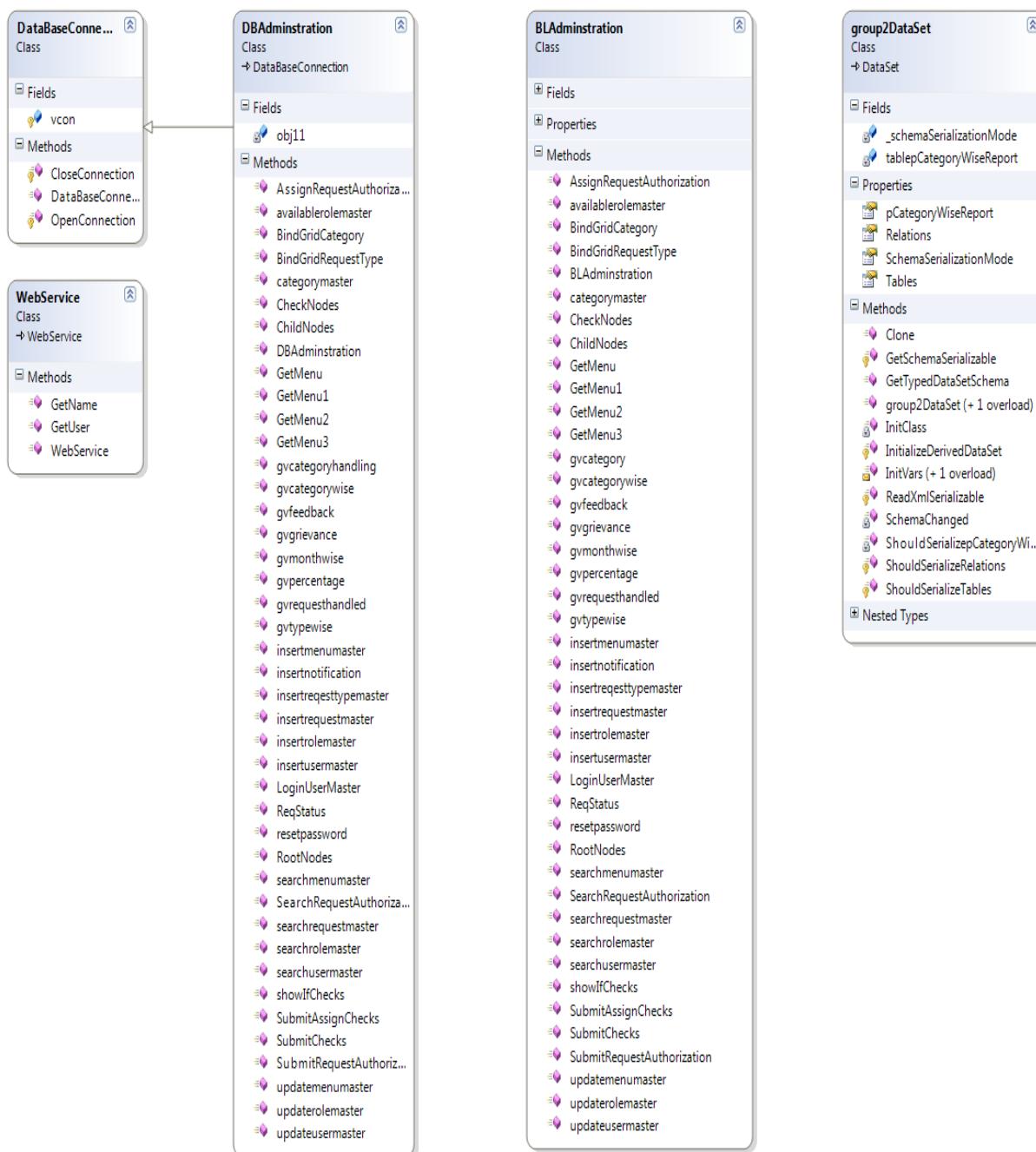
### COMPLETE DFD:



### 6.1.3 CLASS DIAGRAM:

The class diagram is the main building block of object oriented modeling. It is used both for general conceptual modeling of the systematic of the application, and for detailed modeling translating the models into programming code. Class diagrams can also be used for data modeling. The classes in a class diagram represent both the main objects, interactions in the application and the classes to be programmed.

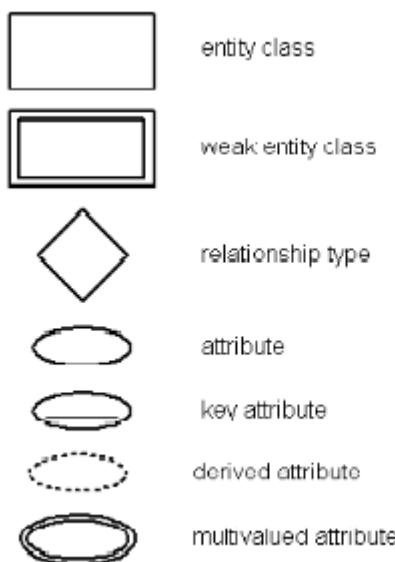
COMPLETE CLASS DIAGRAM OF PROJECT IS:



#### 6.1.4 E-R DIAGRAM:

An entity relationship diagram, also called entity relationship model, is a graphical representation of entities and their relationships to each other. There are two types of E-R diagrams: General E-R diagrams And Crow-Foot Notations.

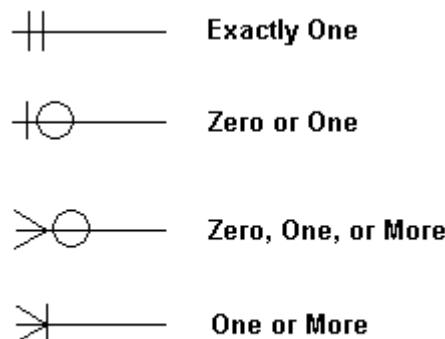
The various symbols used in E-R diagrams are:



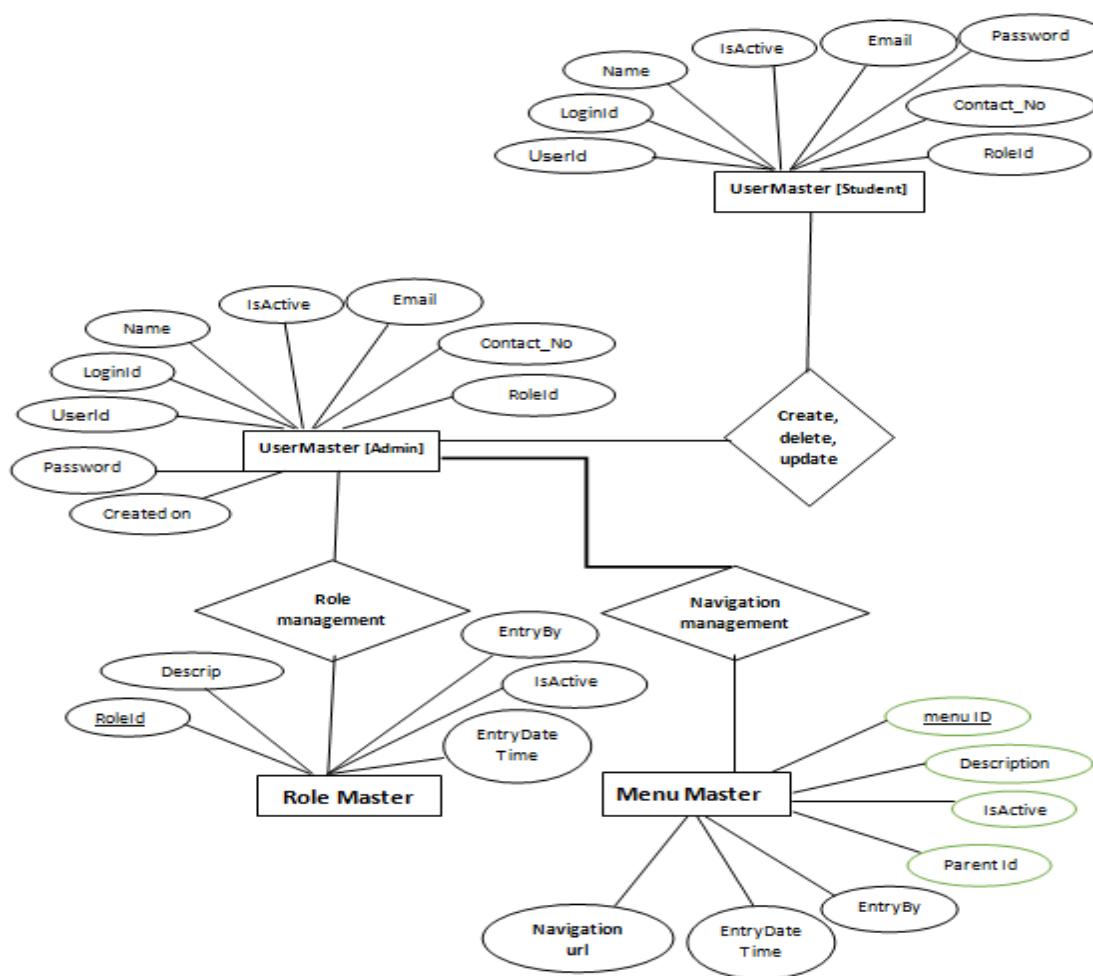
#### Crow foot Notations:

Crow's Foot diagrams represent entities as boxes, and relationships as lines between the boxes. Different shapes at the ends of these lines represent the cardinality of the relationship.

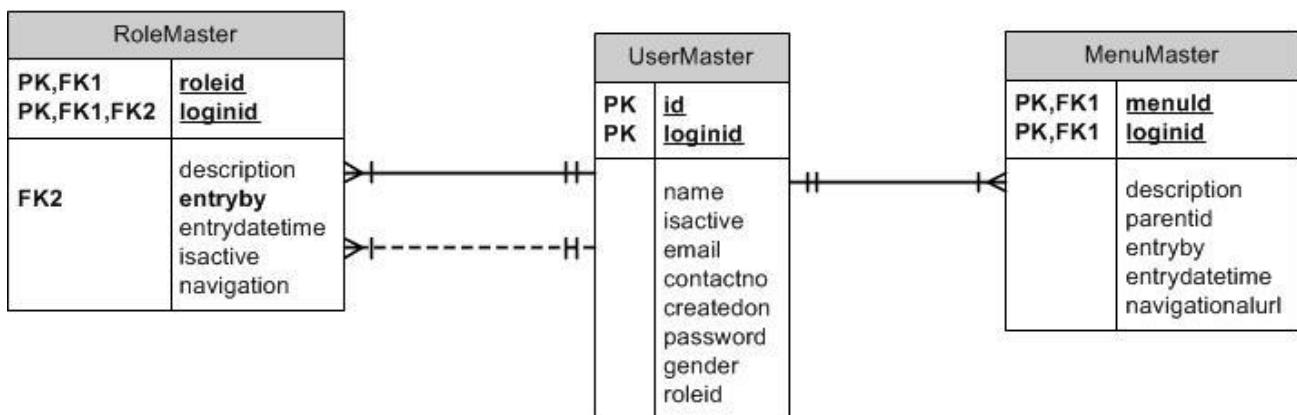
Different symbols and notations of crow foot are given below:



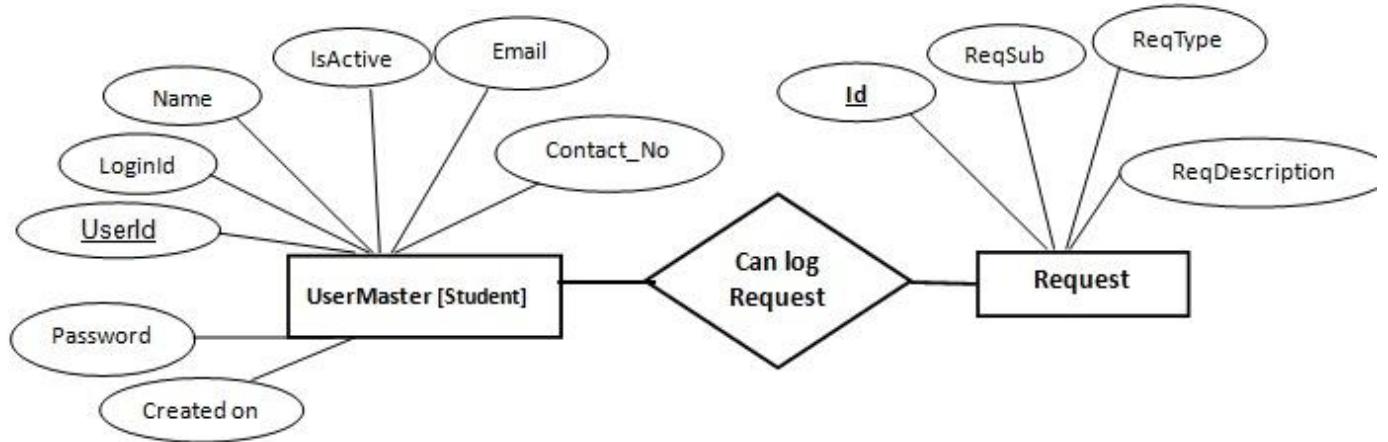
### 6.1.4.1 ER DIAGRAM FOR ADMINISTRATION:



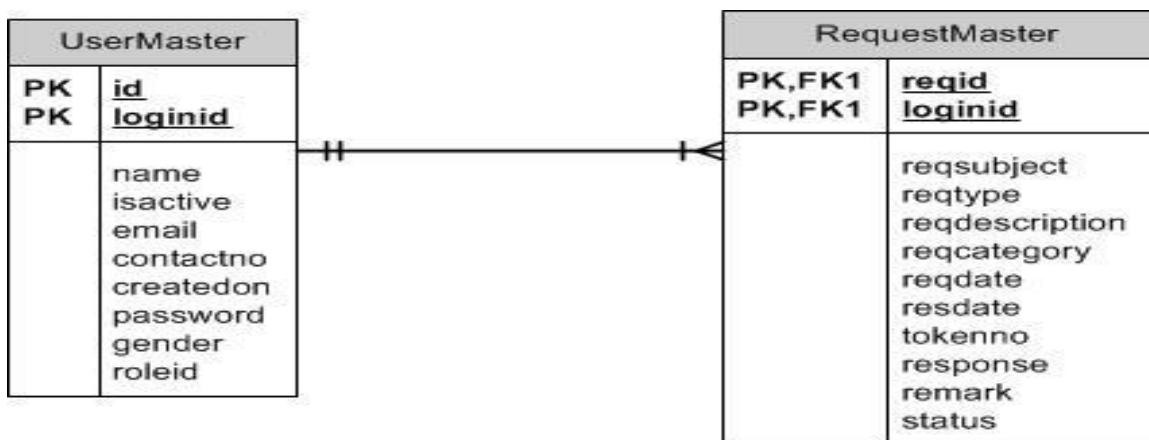
### CROW FOOT NOTATION:



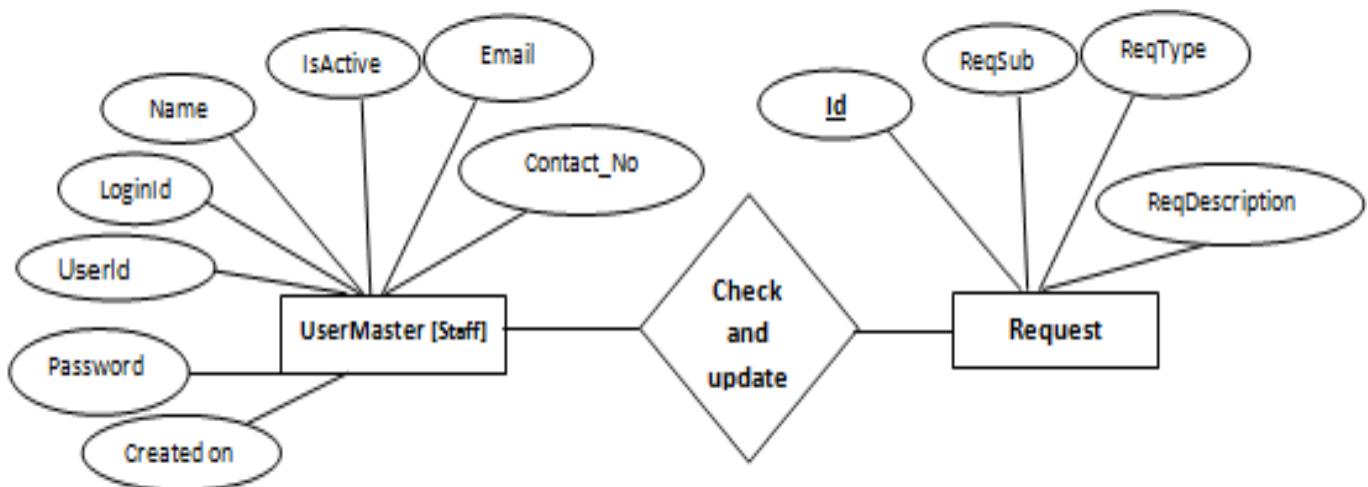
#### 6.1.4.2 ER DIAGRAM FOR REQUEST LOGIN & TRACKING:



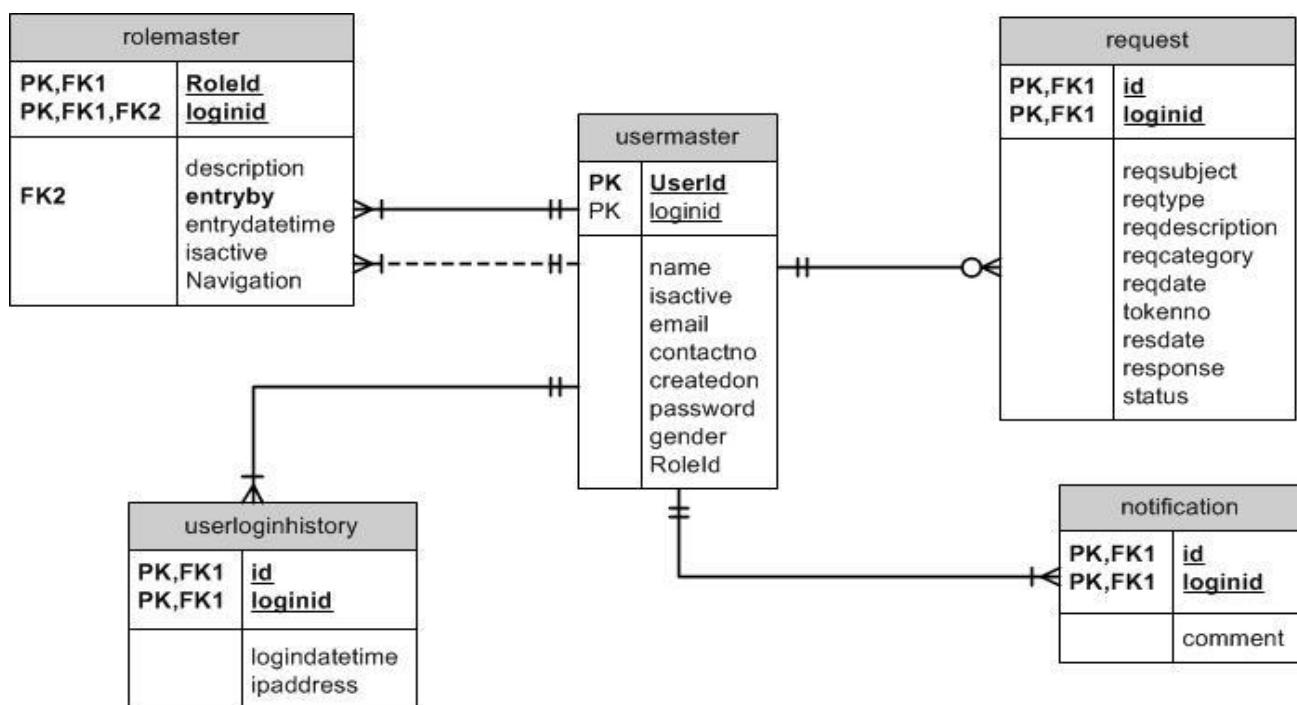
#### CROW FOOT NOTATION:



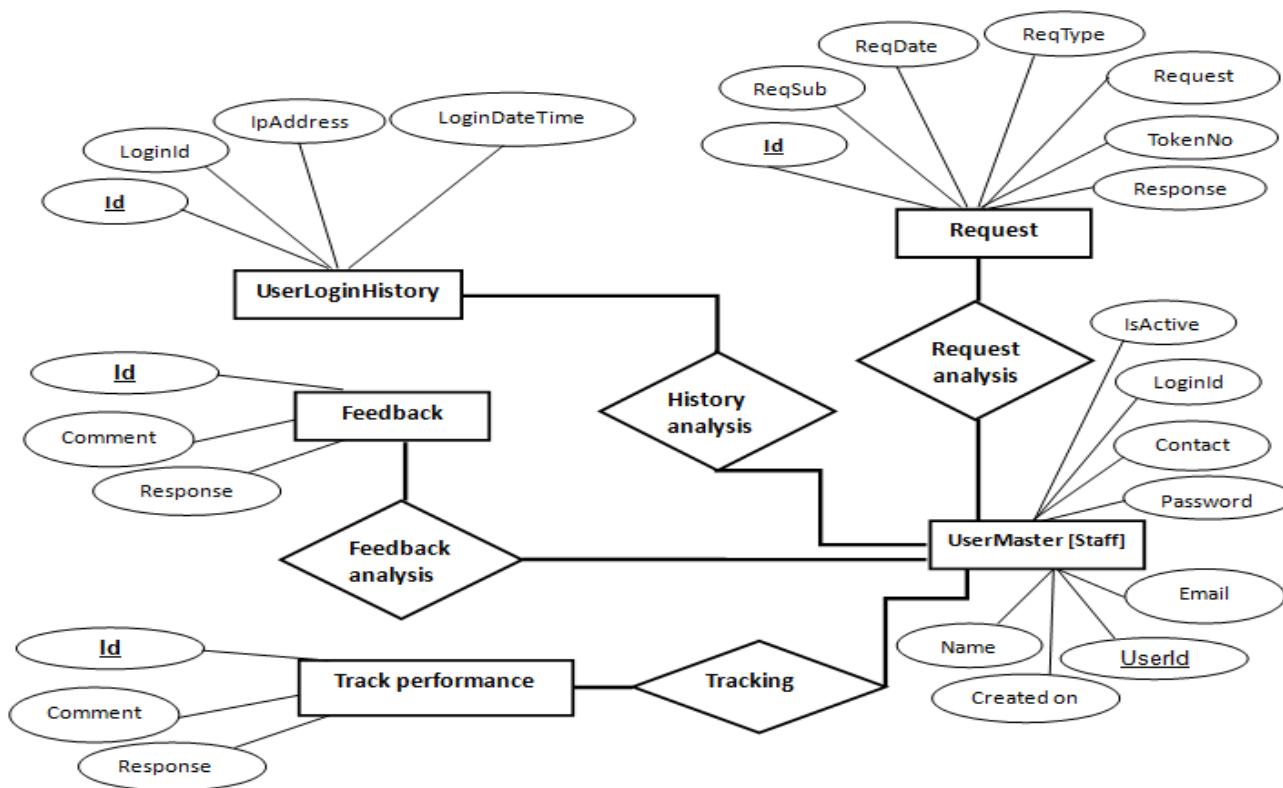
### 6.1.4.3 ER DIAGRAM FOR GRIEVANCE HANDLING



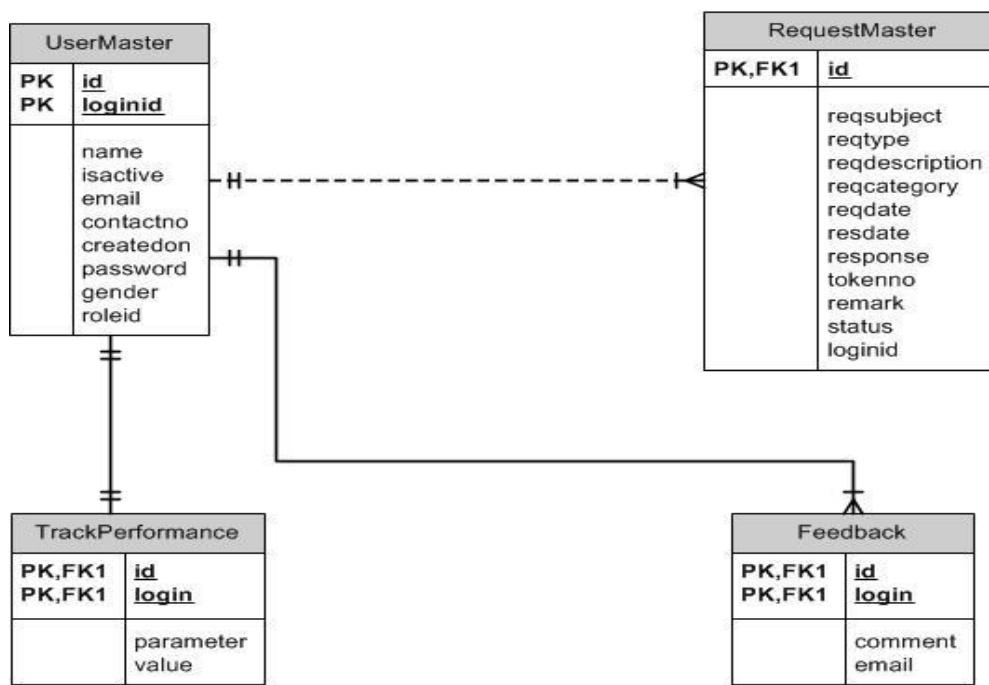
### CROW FOOT NOTATION:



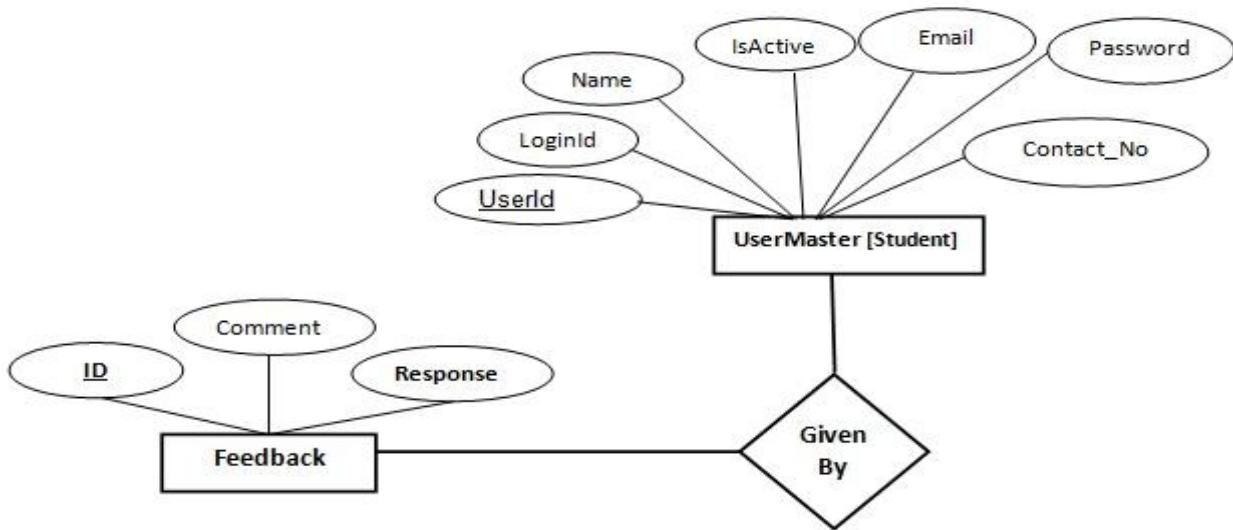
#### 6.1.4.4 ER DIAGRAM FOR PERFORMANCE ACTIVITY TRACKING



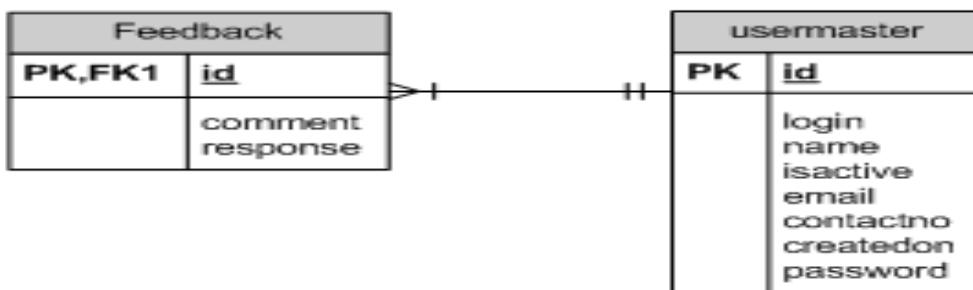
#### CROW FOOT NOTATION:



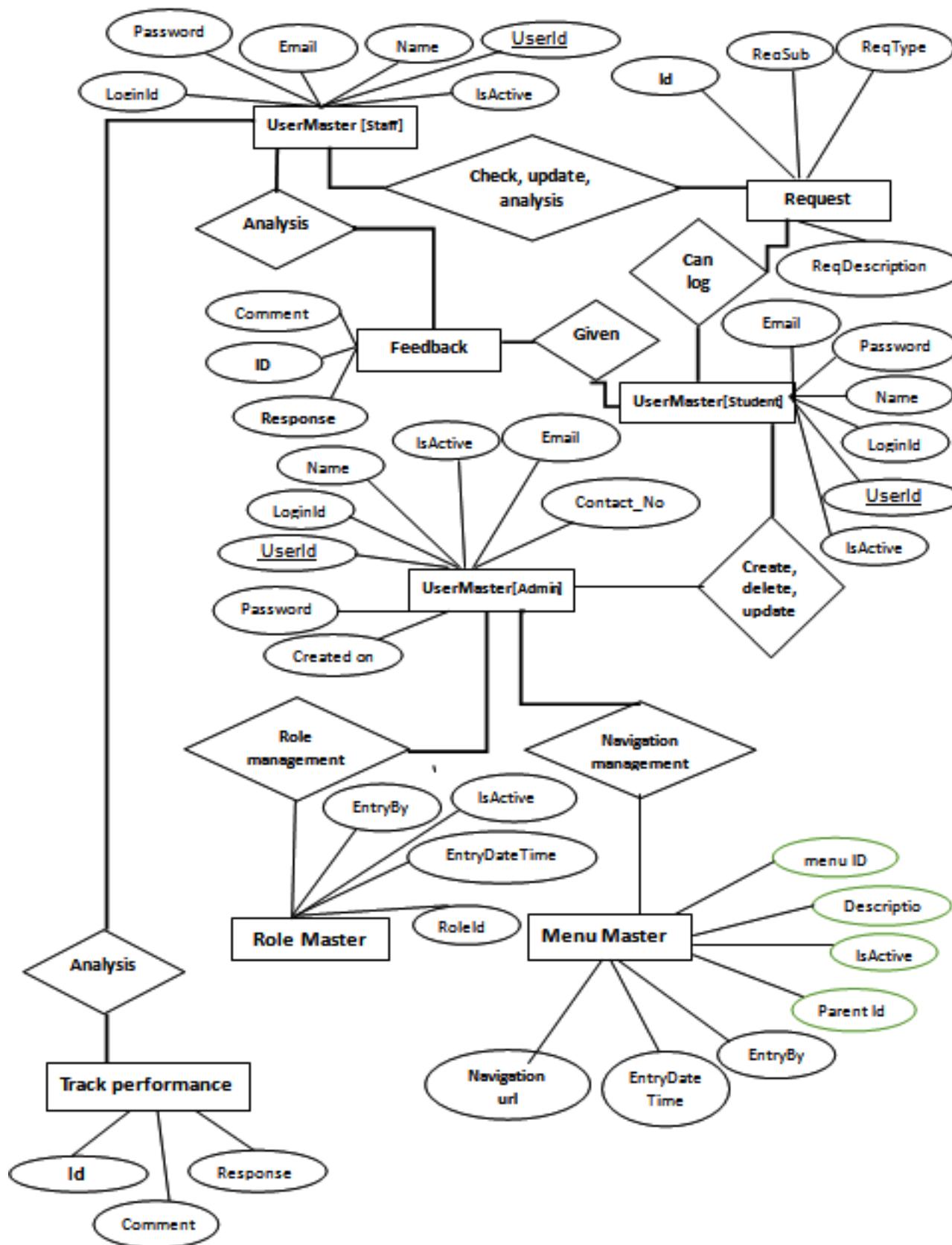
#### 6.1.4.5 ER DIAGRAM FOR FEEDBACK



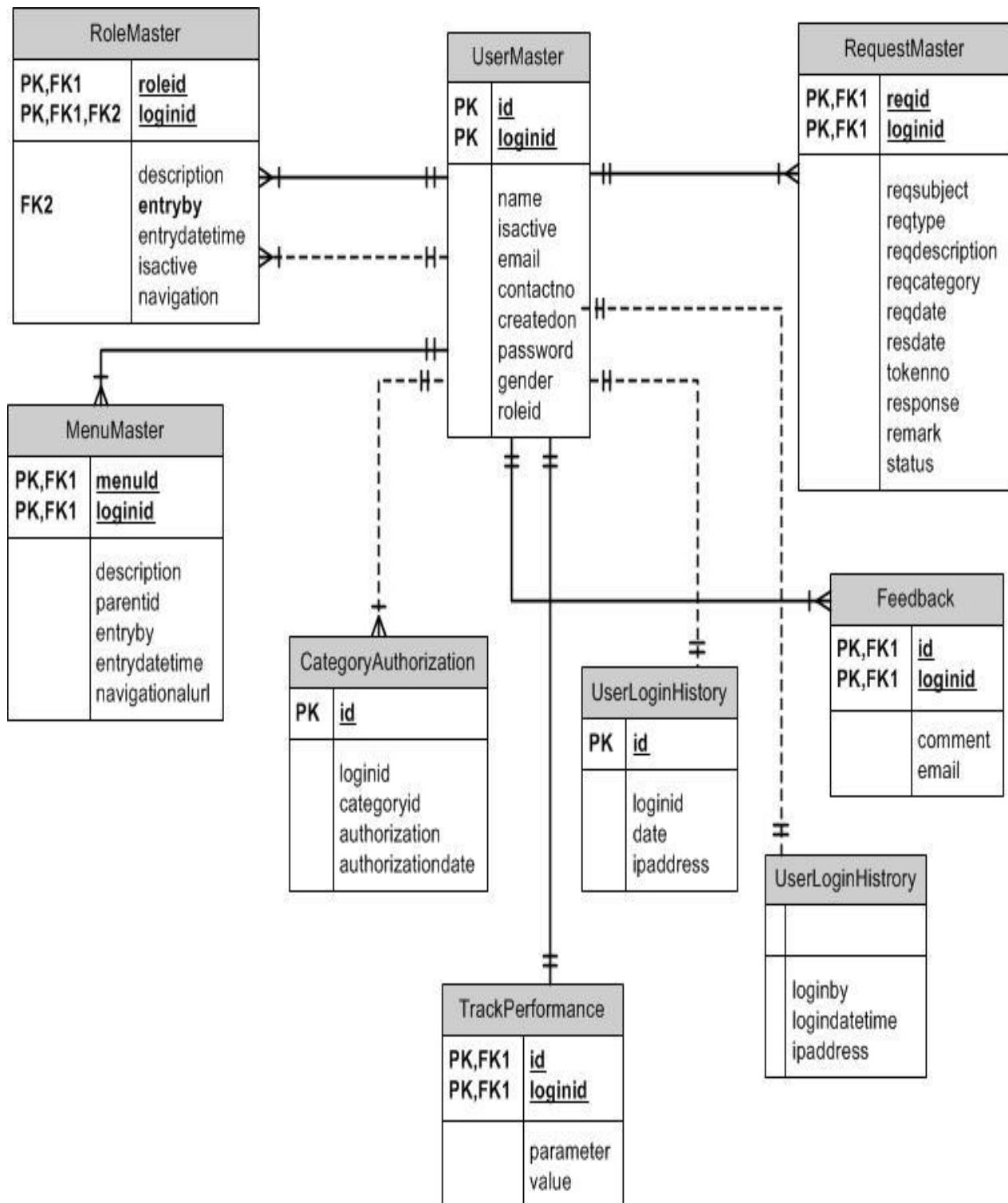
#### CROW FOOT NOTATION:



## 6.1.4.6 COMPLETE ER DIAGRAM FOR PROJECT

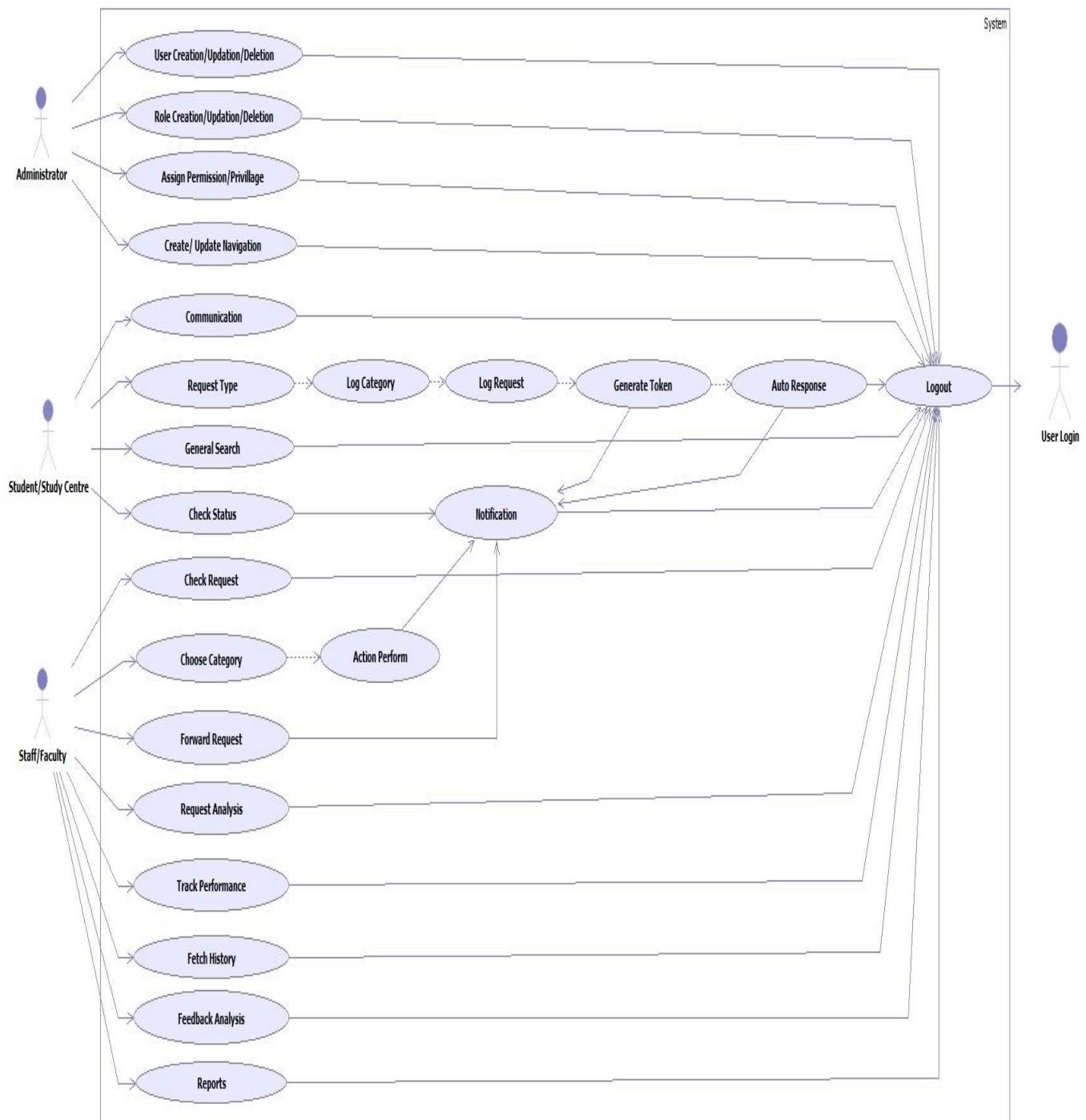


## COMPLETE CROW FOOT NOTATION FOR PROJECT:



### 6.1.5 USECASE DIAGRAMS

Use case diagrams are used to chart out the user requirements. These diagrams represent the different use cases, actors in a system with their relationships.



## 6.2 DATABASE DIAGRAMS

The database diagrams allow us to visualize a database to which they are connected. It is an easy way to have an idea that which tables reference other tables.



### 6.3 DESIGN NOTATIONS

Control	Prefix
<b>Label</b>	lbl
<b>Textbox</b>	txt
<b>DataGrid</b>	dtg
<b>Button</b>	btn
<b>ImageButton</b>	imb
<b>Hyperlink</b>	hlk
<b>DropDownList</b>	ddl
<b>ListBox</b>	lst
<b>DataList</b>	ctl
<b>Repeater</b>	rep
<b>Checkbox</b>	chk
<b>CheckBoxList</b>	cbl
<b>RadioButton</b>	rdo
<b>RadioButtonList</b>	rbl
<b>Image</b>	img
<b>Panel</b>	pnl
<b>PlaceHolder</b>	phd
<b>Table</b>	tbl
<b>Validators</b>	val

## 6.4 PSEUDO CODE FOR PROJECT MODULES

### 6.4.1 Pseudo for Administration

**Begin**

E-StuCare Website

Procedure login

Check username

Check password

Check admin

if (admin == 1) then

{

    redirect to admin-module

}

else if(count>3) then

{

    Redirect to login

}

else

{

    redirect to home/login

}

Label2: Specify task

If(user creation/edit=1) then

{

    Call procedure usermaster

}

Else if(assign/update\_permission=1) then

{

    Call procedure rolemaster

}

Elseif(create/update\_navigation==1) then

{

    Call procedure menumaster

}

Elseif(role creation edit/update==1) then

{

    Call procedure rolemaster

```
 }  
 Else  
 {  
 check data  
 }
```

**End**

#### 6.4.2 Pseudo code for Feedback:

**Begin**

E -StuCare Website

If (user! =true) Then

    Go to Label\_Out;

Else

    Login

    If (user task=Feedback) then

        If (Feedback type==complain) then

            Post complain

        Else if (Feedback type==any other suggestion)

            Post suggestion

    End if

End if

End if

**END**

### 6.4.3 Pseudo code for Grievance Handling Module

**Begin**

E-StuCare website

Procedure login

```
if(login==false)
{
    Goto Label_Out;
}
Else
{
    Staff();
}
```

**Label\_Out:** Print 'Login Unsuccessful';

**Procedure Staff()**

```
{
    Check_Request
    Case1:
        Choose category;
        Perform action;
        Record action on [Request Storage]
        Notify();
        break;
    Case2:
        Forward Request [ To Other Staff ]
        Perform action;
        Notify();
        break;
}
```

**Procedure Notify()**

```
{
    Send mail to user by database for notification;
```

}

**End**

#### 6.4.4 Pseudo code for Reporting Module

**Begin**

E-StuCare website

Procedure login

```

if(login==false)
{
    Goto Label_Out;
}
Else
{
    If(login Type=="Admin")
    {
        Call adminAccess();
    }
    Else if(login Type=="Staff")
    {
        Call staffAccess();
    }
}

```

**Label\_Out:** Print 'Login Unsuccessful';

**Procedure adminAccess()**

```

{
    Generate Report;
    Access All Database: [Request, userLogin, History, feedback, performance];
    Notify();
}

```

**Procedure staffAccess()**

```
{
    Generate Report;
    Access Some Database permit by Admin: [Request, userLogin, performance];
    Notify();
}
```

**Procedure Notify()**

```
{
    Send mail to user by database for notification;
}
```

**End****6.4.5 Pseudo code for Search Module****Begin**

E-StuCare website

Procedure login

```
if(login==false)
{
    Goto Label_Out;
}
Else
{
    If(login Type=="Admin")
    {
        Call adminSearch();
    }
    Else if(login Type=="Staff")
    {
        Call staffSearch();
    }
    Else if(login Type=="Student")
```

```

{
    Call studentSearch();
}
}
```

**Label\_Out:** Print 'Login Unsuccessful';

**Procedure adminSearch()**

```

{
    Advanced Search:
        [User up-gradation, role allocation, permission allocation, login datewise, login with IP
address Wise]
}
```

**Procedure staffSearch()**

```

{
    Advanced Search:
        [Requests up-gradation, Search queries by Student Token Id, Search queries Date/Time
Wise]
}

}
```

**Procedure studentSearch()**

```

{
    Simple Search:
        [Search submit queries by own Token Id, Search submit queries Date/Time Wise]
}

}
```

**End**

## 7. TESTING:

Software testing is an investigation conducted to provide information about the quality of the product or service under test. Software testing also provides an objective, independent view of the software to allow the business to appreciate and understand the risks at implementation of the software. Software testing is any activity aimed at evaluating an attribute or capability of a program or system and determining that it meets its required results. Software Testing is the process of executing a program or system with the intent of finding errors. Software testing can also be stated as the process of validating and verifying that a software program/application/product:

FUNCTIONALITY	ENGINEERING	ADAPTABILITY
(EXTERIOR QUALITY)	(INTERIOR QUALITY)	(FUTURE QUALITY)
➤ CORRECTNESS	➤ TESTABILITY	➤ DOCUMENTATION
➤ EFFICIENCY	➤ REUSABILITY	➤ MAINTABILITY
➤ FLEXIBILITY	➤ USABILITY	➤ INTEGRITY
➤ RELIABILITY		

### 7.1 TECHNIQUES OF SOFTWARE TESTING

#### 7.1.1 UNIT TESTING

- ❖ Unit Testing is primarily carried out by the developers themselves.
- ❖ Deals functional correctness and the completeness of individual program units.
- ❖ White box testing methods are employed

#### 7.1.2 INTEGRATION TESTING

- ❖ Integration Testing: Deals with testing when several program units are integrated.
- ❖ Regression testing: Change of behavior due to modification or addition is called "Regression". Used to bring changes from worst to least.
- ❖ Incremental Integration Testing: Checks out for bugs which encounter when a module has been integrated to the existing.
- ❖ Smoke Testing: It is the battery of test which checks the basic functionality of program. If fails then the program is not sent for further testing.

### 7.1.3 SYSTEM TESTING

- ❖ System Testing - Deals with testing the whole program system for its intended purpose.
- ❖ Recovery Testing: System is forced to fail and is checked out how well the system recovers the failure.
- ❖ Security Testing: Checks the capability of system to defend itself from hostile attack on programs and data.
- ❖ Load & Stress Testing: The system is tested for max load and extreme stress points are figured out.
- ❖ Performance Testing: Used to determine the processing speed.

### 7.1.4 BLACK-BOX TEST DESIGN

It treats the system as a "black-box", so it doesn't explicitly use knowledge of the internal structure. Black-box test design is usually described as focusing on testing functional requirements. The research in black-box testing mainly focuses on how to maximize the effectiveness of testing with minimum cost

### 7.1.5 WHITE-BOX TEST DESIGN

It allows one to peek inside the "box", and it focuses specifically on using internal knowledge of the software to guide the selection of test data. Testing plans are made according to the details of the software implementation, such as programming language, logic, and styles. Test cases are derived from the program structure. White-box testing is also called glass-box testing, logic-driven testing.

### 7.1.6 PERFORMANCE TESTING

Performance has always been a great concern and a driving force of computer evolution. Performance evaluation of a software system usually includes: resource usage, throughput, and stimulus-response time and queue lengths detailing the average or maximum number of tasks waiting to be serviced by selected resources. Typical resources that need to be considered include network bandwidth requirements, CPU cycles, disk space, disk access operations, and memory usage

### 7.1.7 SECURITY TESTING

Flaws in software can be exploited by intruders to open security holes. With the development of the Internet, software security problems are becoming even more severe. The purpose of security testing of these systems include identifying and removing software flaws that may potentially lead to security violations, and validating the effectiveness of security measures.

## 7.2 TESTING OF PROJECT: (TEST CASES)

7.2.1 TEST CASES FOR USER LOGIN				
Test Suite: Sign-In Module		Date Of Creation: 26th March 2013		
Test Case Id	Description	Expected Result	Actual result	Remarks
TC-ULA-01	leave blank : Both Login-id and Password field and press login button	It should display the error message "fill essential fields".	It display the error message "enter your Login-id and password".	pass
TC-ULA-02	Input only Login-id and leave password field empty.	Error message must be displayed prompting the user to enter the password.	"Enter the password" error message is displayed.	pass
TC-ULA-03	Input any numbers of characters in login-id field.	The number characters must be limited to 20.	Number of characters which can be entered is limited to 20.	pass
TC-ULA-04	Input incorrect login-id and click on login button.	error message must be displayed indicating that wrong login-id is entered	Wrong "Login-id" error message is displayed.	pass
TC-ULA-05	Input only password and leave Login id field empty.	Error message must be displayed prompting the user to enter the login id.	"Enter the Login Id" error message is not displayed.	pass
TC-ULA-06	Input correct Login id but incorrect password	Error message must be displayed indicating that password is incorrect.	"Login Id or Password is incorrect" Error message is displayed.	pass

<b>TC-ULA-07</b>	Input only numeric characters in "Login Id" field.	Login Id having numeric only should be allowed.	Login id containing only numeric is allowed.	pass
<b>TC-ULA-08</b>	input special characters like @#\$%!~^&*()_+";?\\{}[]<> in Login Id.	special characters must not be allowed in the login Id	Special characters are not allowed.	pass
<b>TC-ULA-09</b>	Click on Login button after entering correct Login Id and Password.	redirect to user's admin page	user is redirect to admin page	pass
<b>TC-ULA-10</b>	Enter text in password.	Text entered must not be visible to the user.	Text is not visible.	pass
<b>TC-ULA-11</b>	Check case sensitivity of password by entering password correct password having same letters of different case.	It should show an error message indicating that password is wrong.	"Login Id or password is incorrect": Error message is displayed.	pass
<b>TC-ULA-12</b>	Check where the focus is when login page is first opened.	Focus must be on "Login id" textbox.	Focus is on "Login Id" textbox.	pass
<b>TC-ULA-13</b>	Input any numbers of characters in the password textbox.	The number of characters limited to 25.	Number of characters is limited to 25.	pass
<b>TC-ULA-14</b>	Input special characters like @#\$%!~^&*()_+";?\\{}[]<>	Special characters must be allowed in the password	Special characters are allowed.	pass

	<> in password textbox.	textbox.		
TC-ULA-15	Input numeric in password textbox.	Numeric must be allowed in the password textbox.	Numerics are allowed.	pass
TC-ULA-13	Check whether "Login Id" button is the default button or not by pressing enter	"Login" button must be default button.	"Login" button is not the default button.	pass
TC-ULA-14	On Page Load, alignment must be correct.	All alignment should be correct.	On page load all alignments are correct.	pass
TC-ULA-15	Enter password more than 25 characters.	It will not accept more than 25 characters.	Doesn't accept more than 25 characters.	Pass

### 7.2.2 TEST CASES FOR CREATE USER FORM

**Test Suite: Create User form.**      **Date Of Creation: 28th March 2013**

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-CUF-01	leave blank : All fields and press Submit button	It should display the error message "fill essential fields".	It displayed the error message "enter Login id, enter Name ,enter Is-Active, enter Email, enter Contact, enter Gender."	pass
TC-CUF-03	Name = blank, Other fields valid	Error message should be displayed "enter	Error message is displayed "enter Name".	pass

		Name".		
TC-CUF-04	Is-Active=Not Selected Other fields valid	Error message should be displayed "Select Is-Active 'Yes or No'".	Error message is displayed "Select Is-Active 'Yes or No'".	pass
TC-CUF-05	Email =blank Other fields valid	Error message should be displayed "enter email".	Error message is displayed "enter email".	pass
TC-CUF-06	Contact=blank Others fields valid	Error message should be displayed "enter Contact".	Error message is displayed "enter Contact".	pass
TC-CUF-07	Gender=Not Selected Other fields valid	Error message should be displayed "Select 'Male or Female'".	Error message is displayed "Select 'Male or Female'".	pass
TC-CUF-08	Login id= already exists	Error message should be displayed "Login id is already exists"	Error message is displayed "Login id is already exists"	pass
TC-CUF-09	Login id =Valid Name = Valid Is-Active= Valid Email = Valid Contact= Valid Gender= Valid	message should be displayed "Successfully created"	Message is displayed "Successfully Created".	pass
TC-CUF-10	input any numbers of characters in the" Login Id"	The number of characters must be limited to 10.	The number of characters is limited to 10.	pass

	textbox.			
TC-CUF-11	input any numbers of characters in the " Name" textbox.	The number of characters must be limited to 15.	The number of characters is limited to 15.	pass
TC-CUF-12	input characters in the" Email" textbox.	the maximum characters must include @	the maximum characters is including @	pass
TC-CUF-13	input any numbers of characters in the" Contact" textbox.	The number of characters must be limited to 10.	The number of characters is limited to 10.	pass
TC-CUF-14	Input minimum characters in the "login Id" textbox.	Login id must include minimum 1 char.	Login id is including minimum 1 char.	pass
TC-CUF-15	Input minimum characters in the "Name" textbox.	Name must include minimum 1 char.	Name is including minimum 1 char.	pass
TC-CUF-16	Input minimum characters in the "Name" textbox.	Minimum characters must include a@a	Minimum characters is including a@a	pass
TC-CUF-17	Input special characters in "Login Id " textbox.	All special chars in "login id" field, i.e. `~!@#\$%^&*()-_=+[]{} ;':,.<>/? Must not be entered.	all special characters in "Login id " are not entered	pass
TC-CUF-18	Input special characters in "Name " textbox.	All special chars in "login id" field, i.e. `~!@#\$%^&*()-_=+[]{} ;':,.<>/? Must be entered.	all special characters in "Login id " are entered	pass

TC-CUF-19	input special characters in "contact" textbox	All special chars should not be entered in "Contact" textbox.	All special characters are not entered.	pass
TC-CUF-20	Input numeric characters in "Login Id" field.	Login Id having numeric must be allowed.	Login id containing only numeric is allowed.	pass
TC-CUF-21	Input numeric characters in "name" field.	"Name" having numeric must be allowed.	"Name" containing only numeric is allowed.	pass
TC-CUF-22	Input numeric characters in "E mail" field.	"Email" having numeric must be allowed.	"Email" containing numeric are allowed.	pass
TC-CUF-23	Input numeric characters in "Contact" field.	"Contact" textbox having numeric must be allowed.	"Contact" textbox having numeric are allowed.	pass
TC-CUF-24	Input alpha-numeric characters in "Login Id" field.	Login Id having alpha-numeric must not be allowed.	Login id containing alpha-numeric is not allowed.	pass
TC-CUF-25	Input alpha-numeric characters in "name" field.	"Name" having alpha-numeric must be allowed.	"Name" containing alpha-numeric are allowed.	pass
TC-CUF-26	Input alpha-numeric characters in "E mail" field.	"Email" having alpha-numeric must be allowed.	"Email" containing alpha-numeric are allowed.	pass
TC-CUF-27	Input alpha-numeric characters in "Contact" field.	"Contact" textbox having alpha-numeric must not be allowed.	"Contact" textbox having alpha-numeric are not allowed.	pass
TC-CUF-28	Input space characters in "Login	"Login Id" having space character must not be	Login id containing space characters	pass

	"Id" field.	allowed.	are not allowed.	
TC-CUF-29	Input space characters in "name" field.	"Name" having space characters must be allowed.	"Name" containing space characters are allowed.	pass
TC-CUF-30	Input space characters in "Email" field.	"Email" having space characters must not be allowed.	"Email" containing space characters are not allowed.	pass
TC-CUF-31	Input space characters in "Contact" field.	"Contact" textbox having space characters must not be allowed.	"Contact" textbox having space characters are not allowed.	pass
TC-CUF-32	Input Login ID = unique valid entry but all other fields are duplicate of a registered user.	Message must be displayed "successfully created".	Message is displayed "successfully created".	pass
TC-CUF-33	Check whether "Submit" button is the default button or not by pressing enter	"Submit" button must be default button.	"Submit" button is not the default button.	Fail
TC-CUF-34	Check where the focus is when admin page is first opened.	Focus must be on "Login id" textbox.	Focus is not on "Login Id" textbox.	fail
TC-CUF-35	Check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when email= a.	error message is displayed "enter valid email", when email= a.	pass

TC-CUF-36	Check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a.b	error message must be display "enter valid email", when Email = a.b	pass
TC-CUF-37	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a@b	error message must be display "enter valid email", when Email = a@b	pass
TC-CUF-38	check the valid email and valid format of the "email" textbox.	email must be accepted, when Email = a@b.c	email is accepted, when Email = a@b.c	pass
TC-CUF-39	check the valid email and valid format of the "email" textbox.	email must be accepted, when a@b.com	email must be accepted, when a@b.com	pass
TC-CUF-40	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a @b.com	error message is displayed "enter valid email", when Email =a @b.com	pass
TC-CUF-41	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a.b	error message is displayed "enter valid email", when Email =a @b.com	pass
TC-CUF-42	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email =a@ .com	error message is displayed "enter valid email", when Email =a@ .com	pass
TC-CUF-43	check the valid email and valid format of the	error message must be display "enter valid email",	error message is displayed "enter valid email", when	pass

	"email" textbox.	when Email = a b@c.com	Email =a b@c.com	
TC-CUF-44	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a b @c.com	error message is displayed "enter valid email", when Email =a b @c.com	pass
TC-CUF-45	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a@b@c.com	error message is displayed "enter valid email", when Email =a@b@c.com	pass
TC-CUF-46	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a`~!@#\$%^&*()=-_+{}';,<>/?=+_+{}';,<>/?	error message is displayed "enter valid email", when Email =a`~!@#\$%^&*()=-_+{}';,<>/?=+_+{}';,<>/?	pass
TC-CUF-47	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a`~!#%^&*()=-_+{}';,<>/ ?b@c.com	error message is displayed "enter valid email", when Email =a`~!#%^&*()=-_+{}';,<>/ ?b@c.com	pass
TC-CUF-48	check the valid email and valid format of the "email" textbox.	error message must be display "enter valid email", when Email = a.b	error message is displayed "enter valid email", when Email =a @b.com	pass
TC-CUF-49	On Page Load, alignment must be correct.	All alignment should be correct.	On page load all alignments are correct.	Pass

<b>7.2.3 TEST CASES FOR SEARCHING IN CREATE USER FORM</b>				
Test Case Id	Description	Expected Result	Actual result	Remarks
TC-CUF-SRH-01	On page Load	all the fields in the searching panel must be blanked or unselected.	all the fields in the searching panel are blanked or unselected.	pass
TC-CUF-SRH-02	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when login id=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of Login Id.	pass
TC-CUF-SRH-03	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Name=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of Name.	pass
TC-CUF-SRH-04	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Email=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of Email.	pass
TC-CUF-SRH-05	Verify the search module has been providing appropriate result in the grid view	Providing appropriate result in the grid view ,when Contact=valid and	Providing appropriate result in the grid view matching by the	pass

	matching by the entries.	other fields are blank.	entry of Contact.	
TC-CUF-SRH-06	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Is Active=Selected and other fields are blank.	Providing appropriate result in the grid view matching by the Selection of Is Active.	pass
TC-CUF-SRH-07	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Gender=Selected and other fields are blank.	Providing appropriate result in the grid view matching by the Selection of Gender.	pass
TC-CUF-SRH-08	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when From Date=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of From Date.	pass
TC-CUF-SRH-09	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when To Date =valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of To Date.	pass
TC-CUF-SRH-10	Verify the search module has been providing	when all fields are valid but it doesn't lie in the database.	when all fields are valid but it doesn't lie in the database.	fail

	appropriate result in the grid view matching by the entries.	Message must be displayed "Not Found".	Message is not displayed "Not Found".	
TC-CUF-SRH-11	After clicking search button .	all the fields must be blanked or unselected.	all the fields are not blanked or unselected such as login id,Name and To date fields are not blanked.	fail
TC-CUF-SRH-12	after selecting the row from the grid view	"Submit" button will change to "update" button	"Submit" button is changing to "update" button.	pass
TC-CUF-SRH-13	after selecting the row from the grid view	Data field of the selected row in the grid view must show in their appropriate field in the update panel.	data field of the selected row in the grid view are shown in their appropriate field in the update panel.	pass
TC-CUF-SRH-14	After clicking "update " button in the update panel of the create user form	all the updating will be shown in the grid view and message box must be displayed"successfully updated".	All the updation is shown in the grid view and message box is displayed"successfully updated".	pass

#### 7.2.4 TEST CASES FOR ROLE MASTER FORM

**Test Suite: Role Master form.**      **Date Of Creation: 29th March 2013**

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-RMF-01	On page Load	all the fields in the Role Master form must be blanked or	all the fields in the Role Master form are blanked or	pass

		unselected.	unselected.	
TC-RMF-02	leave blank : All fields and press Submit button	it should display the error message "fill essential fields".	It displayed the error message "enter Description ,enter Is-Active".	pass
TC-RMF-03	Description = blank, Other fields valid	Error message should be displayed "enter Description".	Error message is displayed "enter Description".	pass
TC-RMF-04	Is-Active=Not Selected Other fields valid	Error message should be displayed "it is required set user active".	Error message is displayed "it is required set user active".	pass
TC-RMF-05	Description= already exists	Error message should be displayed "Menu already exists".	Error message is displayed "Menu already exists".	pass
TC-RMF-06	Description =Valid Is-Active= Valid	message should be displayed "Successfully inserted"	Message is displayed "Successfully inserted".	pass
TC-RMF-07	input any numbers of characters in the" Description" textbox.	the number of characters must be limited to 35.	the number of characters is limited to 35.	pass
TC-RMF-08	input minimum characters in the "Description" textbox.	Name must include minimum 1 char.	Name is including minimum 1 char.	pass

TC-RMF-09	input special characters in "Description" textbox.	all special chars in "Description" field, i.e. `~!@#\$%^&*()_-+=[]{} ;':,<>/? must be entered.	all special characters in "Description" are entered.	pass
TC-RMF-10	Input numeric characters in "Description" field.	"Description" textbox having numeric must be allowed.	"Description" textbox having numeric are allowed.	pass
TC-RMF-11	Input alpha-numeric characters in "Description" field.	Description having alpha-numeric must be allowed.	Description containing alpha-numeric is allowed.	pass
TC-RMF-12	Input space characters in "Description" field.	"Description" textbox having space characters must be allowed.	"Description" textbox having space characters are allowed.	pass
TC-RMF-13	Check whether "Submit" button is the default button or not by pressing enter	"Submit" button must be default button.	"Submit" button is the default button.	pass
TC-RMF-14	check where the focus is when admin page is first opened.	focus must be on "Description" textbox.	Focus is on "Description" textbox.	pass

#### 7.2.5 TEST CASES FOR SEARCHING IN ROLE MASTER FORM

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-RMF-SRH-01	On page Load	all the fields in the searching panel must be blanked or	all the fields in the searching panel are blanked or	pass

		unselected.	unselected.	
<b>TC-RMF-SRH-02</b>	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Description=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of Description.	pass
<b>TC-RMF-SRH-03</b>	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when date=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entered date.	pass
<b>TC-RMF-SRH-04</b>	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Is Active=Selected and other fields are blank.	Providing appropriate result in the grid view matching by the Selection of Is Active.	pass
<b>TC-RMF-SRH-05</b>	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing all entries as result in the grid view ,when Is Active= non- Selected ,description=blank, date= valid.	Providing all entries as result in the grid view	pass
<b>TC-CUF-RMF-06</b>	Verify the search module has been providing appropriate result	when all fields are valid but it doesn't lie in the database. Message must be	when all fields are valid but it doesn't lie in the database. Message is not	pass

	in the grid view matching by the entries.	displayed "Not Found".	displayed "Not Found".	
TC-RMF-SRH-07	After clicking search button .	all the fields must be blanked or unselected.	all the fields are blanked or unselected .	pass
TC-RMF-SRH-08	after selecting the row from the grid view	"Submit" button will change to "update" button	"Submit" button is changing to "update" button.	pass
TC-RMF-SRH-09	after selecting the row from the grid view	data field of the selected row in the grid view must show in their appropriate field in the update panel.	data field of the selected row in the grid view are shown in their appropriate field in the update panel.	pass
TC-RMF-SRH-10	After clicking "update " button in the update panel of the Role Master form	All the Updation will be shown in the grid view and message box must be displayed"successfully updated".	All the Updation is shown in the grid view and message box is displayed"successfully updated".	pass

#### 7.2.6 TEST CASES FOR MENU MASTER FORM

**Test suite: Submit Menu Master form.**      **Date Of Creation:** 29th March 2013

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-MMF-01	On page Load	All the fields in the Role Master form must be blanked or unselected.	All the fields in the Role Master form are blanked or unselected.	pass

<b>TC-MMF-02</b>	leave blank : All fields and press Submit button	Error message must be displayed "Description needed , URL needed, select Is Active".	it displayed the error message" Description needed , URL needed" but "select Is Active" error is not shown.	fail
<b>TC-MMF-03</b>	Description = blank, Other fields valid	Error message should be displayed "Description Needed".	Error message is displayed "Description needed".	pass
<b>TC-MMF-04</b>	Parent-Name = Not selected, Other fields valid	null input must be allowed.	null input is allowed.	pass
<b>TC-MMF-05</b>	Is-Active=Not Selected Other fields valid	Error message should be displayed "Select Is-Active ".	Error message is not displayed "Select Is-Active ".	fail
<b>TC-MMF-06</b>	URL =blank Other fields valid	Error message should be displayed "URL needed".	Error message is displayed "URL needed".	pass
<b>TC-MMF-07</b>	Description = already exists(as a root)	Error message must be displayed "Description is already exists"	Error message is not displayed "Description is already exists"	fail
<b>TC-MMF-08</b>	Description = already exists(as a sub menu of the same Description)	Error message must be displayed "Sub menu is already exists"	Error message is not displayed "Sub Menu is already exists"	fail
<b>TC-MMF-09</b>	Description = already exists(as a	Error message must be displayed "Description is	Error message is not displayed "Description is	pass

	root)	already exists"	already exists"	
<b>TC-MMF-10</b>	Description =Valid Parent-Name = Valid Is-Active= Selected URL= Valid .	message should be displayed "Successfully inserted"	Message is displayed "Successfully inserted".	pass
<b>TC-MMF-11</b>	input any numbers of characters in the " Description" textbox.	the number of characters must be limited to 25.	the number of characters is not limited to 25.	fail
<b>TC-MMF-12</b>	input any numbers of characters in the" URL" textbox.	the number of characters must be unlimited .	the number of characters is unlimited .	pass
<b>TC-MMF-13</b>	input minimum characters in the "Description" textbox.	Description must include minimum 1 char.	Description is including minimum 1 char.	pass
<b>TC-MMF-14</b>	input minimum characters in the "URL" textbox.	URL must include "a.a" .	URL is not including "a.a" .	fail
<b>TC-MMF-15</b>	input special characters in "Description" textbox.	all special chars in "Description" field, i.e. `~!@#\$%^&*()-_=+[]{} ;':,<>/? must not be allowed.	all special characters in "Description " are not allowed.	pass
<b>TC-MMF-16</b>	input special characters in "URL" textbox.	all special chars in "URL" field, i.e. `~!@#\$%^&*()-_=+[]{} ;':,<>/? must be allowed.	all special characters in "URL" are allowed.	pass

<b>TC-MMF-17</b>	Input numeric characters in "description" field.	description having numeric must not be allowed.	Description containing only numeric is not allowed.	pass
<b>TC-MMF-18</b>	Input numeric characters in "URL" field.	"URL" having numeric must be allowed.	"URL" containing only numeric is allowed.	pass
<b>TC-MMF-19</b>	Input alpha-numeric characters in "Description" field.	Description having alpha-numeric must not be allowed.	Description containing alpha-numeric is not allowed.	pass
<b>TC-MMF-20</b>	Input alpha-numeric characters in "URL" field.	URL having alpha-numeric must be allowed.	URL containing alpha-numeric is allowed.	pass
<b>TC-MMF-21</b>	Input space characters in "Description" field.	"Description" having space characters must be not allowed.	"Description" containing space characters are not allowed.	pass
<b>TC-MMF-22</b>	Input space characters in "URL" field.	"URL" having space characters must be allowed.	"URL" containing space characters are allowed.	pass
<b>TC-MMF-23</b>	Check whether "Submit" button is the default button or not by pressing enter	"Submit" button must be default button.	"Submit" button is not the default button.	fail
<b>TC-MMF-24</b>	check where the focus is when admin page is first opened.	focus must be on "Description" textbox.	Focus is not on "Description" textbox.	fail

### 7.2.7 TEST CASES FOR SEARCHING IN MENU MASTER FORM

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-MMF-SRH-01	On page Load	all the fields in the searching panel must be blanked or unselected.	all the fields in the searching panel are blanked or unselected.	pass
TC-MMF-SRH-02	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Description=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of Description.	pass
TC-MMF-SRH-03	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Parent Name=valid and other fields are blank.	Providing appropriate result in the grid view matching by the entry of Parent Name.	pass
TC-MMF-SRH-04	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing appropriate result in the grid view ,when Is Active=Selected and other fields are blank.	Providing appropriate result in the grid view matching by the Selection of Is Active.	pass
TC-MMF-SRH-05	Verify the search module has been providing appropriate result in the grid view	Providing appropriate result in the grid view ,when URL=valid and other fields are	Providing appropriate result in the grid view matching by the	pass

	matching by the entries.	blank.	entry of URL.	
<b>TC-MMF-SRH-06</b>	Verify the search module has been providing appropriate result in the grid view matching by the entries.	Providing all entries as a result in the grid view ,when Is Active= non- Selected ,description=blank, URL= blank, Parent Name=blank.	Providing all entries as result in the grid view	pass
<b>TC-MMF-SRH-07</b>	Verify the search module has been providing appropriate result in the grid view matching by the entries.	when all fields are valid but it doesn't lie in the database. Message must be displayed "Not Found".	when all fields are valid but it doesn't lie in the database. Message is not displayed "Not Found".	fail
<b>TC-MMF-SRH-08</b>	After clicking search button .	all the fields must be blanked or unselected.	all the fields are blanked or unselected .	pass
<b>TC-MMF-SRH-09</b>	after selecting the row from the grid view	"Submit" button will change to "update" button	"Submit" button is changing to "update" button.	pass
<b>TC-MMF-SRH-10</b>	after selecting the row from the grid view	Data fields of the selected row in the grid view must show in their appropriate fields in the update panel.	data fields of the selected row in the grid view are shown in their appropriate fields in the update panel.	pass
<b>TC-MMF-SRH-11</b>	After clicking "update " button in the update panel of the Role Master	All the Updation will be shown in the grid view and message box must	All the Updation is shown in the grid view and message box is	pass

	form	be displayed"successfully updated".	displayed"successfully updated".	
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### 7.2.8 TEST CASES FOR REQUEST TYPE FORM

**Test Suite: Submit Request type form.**      **Date of creation: 27 march 2013.**

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-RTF-01	On page Load	all the fields in the Request type form must be blanked or unselected.	all the fields in the Request type form are blanked or unselected.	pass
TC-RTF-02	leave blank : All fields and press Submit button	it should display the error message "fill essential fields".	It displayed the error message "enter Request type ,choose Status".	pass
TC-RTF-03	Request type = blank, Other fields valid	Error message should be displayed "enter Request type".	Error message is displayed "enter Request type".	pass
TC-RTF-04	Status=Not Selected Other fields valid	Error message should be displayed "Choose Status".	Error message is displayed "Choose Status".	pass
TC-RTF-05	Request type= already exists	Error message should be displayed "Request type already exists".	Error message is displayed "Request type already exists".	pass
TC-RTF-06	Request type =Valid	message should be displayed "Successfully"	Message is displayed "Successfully"	pass

	Status= Valid	inserted"	inserted".	
TC-RTF-07	input any numbers of characters in the " Request type" textbox.	the number of characters must be limited to 25.	the number of characters is limited to 25.	pass
TC-RTF-08	input minimum characters in the "Request type" textbox.	Request type must include minimum 1 char.	Request type is including minimum 1 char.	pass
TC-RTF-09	input special characters in "Request type " textbox.	all special chars in "Request type" field, i.e. `~!@#\$%^&*()-_=+[]{} \';:,.<>/? must be not entered.	all special characters in "Request type " are not entered.	pass
TC-RTF-10	Input numeric characters in "Request type" field.	"Request type" textbox having numeric must not be allowed.	"Request type" textbox having numeric are not allowed.	pass
TC-RTF-11	Input alpha-numeric characters in "Request type" field.	Request type having alpha-numeric must not be allowed.	Request type containing alpha-numeric is not allowed.	pass
TC-RTF-12	Input space characters in "Request type" field.	"Request type" textbox having space characters must not be allowed.	"Request type" textbox having space characters are not allowed.	pass
TC-RTF-13	Check whether "Submit" button is the default button	"Submit" button must be default	"Submit" button is the default button.	pass

	or not by pressing enter	button.		
TC-RTF-14	check where the focus is when Request type page is first opened.	focus must be on "Request type" textbox.	Focus is on "Request type" textbox.	pass

### 7.2.9 TEST CASES FOR CATEGORY MASTER FORM.

**Test suite: Submit Request Category form.**      **Date Of Creation:** 29th March 2013

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-RCF-01	On page Load	all the fields in the Request Category form must be blanked or unselected.	all the fields in the Request Category form are blanked or unselected.	pass
TC-RCF-02	leave blank : All fields and press Submit button	it should display the error message "fill essential fields".	It displayed the error message "enter Request Category ,choose Status".	pass
TC-RCF-03	Request Category = blank, Other fields valid	Error message should be displayed "enter Request Category".	Error message is displayed "enter Request Category".	pass
TC-RCF-04	Status=Not Selected Other fields valid	Error message should be displayed "Choose Status".	Error message is displayed "Choose Status".	pass
TC-RCF-05	Request Category= already exists	Error message should be displayed "Request	Error message is displayed "Request Category already	pass

		Category already exists".	exists".	
<b>TC-RCF-06</b>	Category type =Valid Status= Valid	message should be displayed "Successfully inserted"	Message is displayed "Successfully inserted".	pass
<b>TC-RCF-07</b>	input any numbers of characters in the " Request Category" textbox.	the number of characters must be limited to 25.	the number of characters is limited to 25.	pass
<b>TC-RCF-08</b>	input minimum characters in the "Request Category" textbox.	Request Category must include minimum 1 char.	Request Category is including minimum 1 char.	pass
<b>TC-RCF-09</b>	input special characters in "Request Category" " textbox.	all special chars in "Request Category" field, i.e. `~!@#\$%^&*()-_=+[]{} ;:,.<>/? must be not entered.	all special characters in "Request Category" " are not entered.	pass
<b>TC-RCF-10</b>	Input numeric characters in "Request Category" field.	"Request Category" textbox having numeric must not be allowed.	"Request Category" textbox having numeric are not allowed.	pass
<b>TC-RCF-11</b>	Input alpha-numeric characters in "Request Category" field.	Request Category having alpha-numeric must not be allowed.	Request Category containing alpha-numeric is not allowed.	pass
<b>TC-RCF-12</b>	Input space characters in "Request Category"	"Request Category" textbox having space characters must not be	"Request Category" textbox having space characters	pass

	field.	allowed.	are not allowed.	
TC-RCF-13	Check whether "Submit" button is the default button or not by pressing enter	"Submit" button must be default button.	"Submit" button is the default button.	pass
TC-RCF-14	check where the focus is when Request Category page is first opened.	focus must be on "Request Category" textbox.	Focus is on "Request Category" textbox.	pass

#### 7.2.10 TEST CASES FOR CHANGE PASSWORD FORM

Test Suite: Reset Password form		Date Of Creation: 29th March 2013		
Test Case Id	Description	Expected Result	Actual result	Remarks
TC-RPF-01	On Page Load, alignment must be correct.	All alignment should be correct.	On page load all alignments are correct.	Pass
TC-RPF-02	Do not enter password , New Password and confirm password and click on Reset Password button.	The Validator gets activated and asks the user to fill the fields.	Validator gets activated.	Pass
TC-RPF-03	enter only current password and click on Reset password button.	Give an error message that "fill new password and confirm new password".	No message appears.	Fail

TC-RPF-04	enter only New password and click on Reset password button.	Give an error message that "fill current password and confirm new password".	No message appears.	Fail
TC-RPF-05	enter only Confirm New password and click on Reset password button.	Give an error message that "fill current password and new password".	No message appears.	Fail
TC-RPF-06	enter Current password , New Password but different confirm password and click on Reset password button.	Give an error message that "fill new password and confirm new password should me same".	No message appears.	Fail
TC-RPF-07	enter Current password , New Password and confirm password same and click on Reset password button.	The Validator gets activated and gives an error message that "new password and current password can't be same".	No message appears.	Fail
TC-RPF-08	Enter invalid current password and other field valid then click on Reset password button.	Give an error message that "your current password is wrong".	an error message is appeared that "your current password is wrong".	pass
TC-RPF-09	Enter current Password, new Password and confirm new password more	It will not accept more than 25 characters.	Doesn't accept more than 25 characters.	Pass

	than 25 characters respectively.			
TC-RPF-10	Try to change the Login- id.	Login id is read-only, so it doesn't change.	Login id is read only	Pass
TC-RPF-11	Enter valid value in all the fields and click on reset password button.	a message will be appeared that "your password is successfully updated:..	a message is appeared that "your password is successfully updated:..	Pass
TC-RPF-12	enter values in all fields	values in all textbox should be read only.	values in all textbox are read only.	pass
TC-RPF-13	Check whether "Reset password" button is the default button or not by pressing enter	"Reset password" button must be default button.	"Reset password" button is the default button.	Fail
TC-RPF-14	check where the focus is when Reset Password page is first opened.	focus must be on "Current Password" textbox.	Focus is on "Current password" textbox.	Fail

#### 7.2.11 TEST CASES FOR GRIEVANCE HANDLING FORM

Test Suite: Grievance Handling form			Date Of Creation: 5th April 2013	
Test Case Id	Description	Expected Result	Actual result	Remarks
TC-GHF-01	On Page Load, alignment must be correct.	All alignment should be correct.	On page load all alignments are correct.	Pass
TC-GHF-02	On Page Load,	Category dropdown	Category dropdown	Pass

	Category dropdown list default text.	list default text will be "select"	list default text is "select".	
TC-GHF-03	On Page Load, focus is on.	focus is on Dropdown list	focus is not on Dropdown list	Fail
TC-GHF-04	On Page Load	Data Grid View will be hidden	Data Grid View is hidden	pass
TC-GHF-05	After Selecting the value in dropdown list and click on the category type	Data Grid View will be Shown with required data	Data Grid View is Shown with required data	pass
TC-GHF-06	if no data found in data grid view	Empty text property of grid view will show "no data found"	Empty text property of grid view shown "no data found"	pass
TC-GHF-07	After selecting the request in response option of grid view	A request response popup window will open	A request response popup window is opened.	pass

### Test Cases For Search panel in Grievance Handling Form

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-GHF-SRH-01	On Page Load, alignment must be correct.	All alignment should be correct.	On page load all alignments are correct.	Pass
TC-GHF-SRH-02	On Page Load.	all fields are empty except dropdown list	all fields are empty except dropdown list	Pass
TC-GHF-SRH-03	On Page Load.	Default value of dropdown list Status and Category must be	Default value of dropdown list Status and Category is	Pass

		"Select"	"Select"	
TC-GHF-SRH04	On click in the Fromdate textbox	Calendar extender will open.	Calendar extender is opened.	Pass
TC-GHF-SRH05	On click in the To date textbox	Calendar extender will open.	Calendar extender is opened.	Pass
TC-GHF-SRH-06	after the selection of the date from Calendar extender in "From Date" Field, we cannot enter the invalid date manually	Regular expression Validator will work and show an error "Invalid date"	Regular expression Validator will not working and doesn't show an error "Invalid date"	fail
TC-GHF-SRH-07	after the selection of the date from Calendar extender in "To Date" Field, we cannot enter the invalid date manually	Regular expression Validator will work and show an error "Invalid date"	Regular expression Validator will not working and doesn't show an error "Invalid date"	fail
TC-GHF-SRH-08	After valid entries in the field and click on the type	Searched data will show in grid view	Searched data is shown in grid view	pass
TC-GHF-SRH-09	After valid entries in the field but it don't exist in the database and click on the type.	A message will appear "no record found"	A message will appear "no record found"	pass

#### 7.2.12 TEST CASES FOR PERFORMANCE TRACKING FORM.

Test Suite: Performance Tracking form.	Date Of Creation: 7th April 2013
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<b>Test Case Id</b>	<b>Description</b>	<b>Expected Result</b>	<b>Actual result</b>	<b>Remarks</b>
TC-PTF-01	On Page Load, all alignment must be correct.	All alignment should be correct.	On page load all alignments are correct.	Pass
TC-PTF-02	On Page Load, all Fields are empty.	all Fields must be empty	all Fields are empty	pass
TC-PTF-03	Check whether "Enter" button is the default button or not by pressing enter from keyboard.	"enter" button must be default button.	"enter" button is not the default button.	Fail
TC-PTF-04	Check where the focus is when Performance Tracking page is first opened.	focus must be on "Name" textbox.	Focus is not on "Name" textbox.	Fail
TC-PTF-05	leave blank : Name fields and press Enter button	Required field Validator returns a message "fill the name".	Required field Validator doesn't returns a message "fill the name".	Fail
TC-PTF-07	Input Special characters in "Name" field.	Special characters are allowed.	Special characters are allowed.	Pass
TC-PTF-08	Input Numeric in "Name" field.	Numeric is allowed.	Numeric is allowed.	Pass
TC-PTF-09	Input spaces in "Name" field.	spaces are allowed.	spaces are allowed.	Pass
TC-PTF-10	after filling valid entry in "Name" field	All Required Data will be shown in All grid views	All Required Data is shown in All grid views	Pass

<b>TC-PTF-11</b>	Editing of data in the grid views	All data in the grid view is in read only mode	All data in the grid view is in read only mode	Pass
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**7.2.13 TEST CASES FOR REQUEST CATEGORY AUTHORIZATION FORM.**

<b>Test Suite: Request Category Authorization form.</b>		<b>Date Of Creation: 13th April 13</b>		
<b>Test Case Id</b>	<b>Description</b>	<b>Expected Result</b>	<b>Actual result</b>	<b>Remarks</b>
TC-RCA-01	On Page Load, all alignment must be correct.	All alignment should be correct.	On page load all alignments are correct.	Pass
TC-RCA-02	On Page Load, all Fields are empty.	all Fields must be empty	all Fields are empty	pass
TC-RCA-03	On Page Load, User id dropdown list default text.	User id dropdown list default text will be "select"	User id dropdown list default text is "select".	Pass
TC-RCA-04	On Page Load, Category dropdown list default text.	Category dropdown list default text will be "select"	Category dropdown list default text is "select".	Pass
TC-RCA-05	On Page Load, focus is on.	focus is on User id Dropdown list	focus is not on User id Dropdown list	Fail
TC-RCA-06	Check whether "Submit" button is the default button or not by pressing enter	"Submit" button must be default button.	"Submit" button is the default button.	Fail
TC-RCA-07	check where the focus is when Request Category Authorization page	focus must be on "User id" Field.	Focus is on "User id" Field.	Fail

	is first opened.			
TC-RCA-08	Leave all fields empty and click on submit button	error message will appear "fill required fields".	error message is not appear "fill required fields".	Fail
TC-RCA-09	user id is not Selected and other fields Valid entry	error message will appear "fill user id".	error message do not appear "fill user id".	Fail
TC-RCA-10	Category is not Selected and other fields Valid entry	error message will appear "fill Category".	error message do not appear "fill Category".	Fail
TC-RCA-10	Authorized is not Selected and other fields Valid entry	Error message will appear "Select Authorized or not".	Error message do not appear "select authorized or not".	Fail

**Test suite: Search panel in request category authorization form**

Test Case Id	Description	Expected Result	Actual result	Remarks
TC-RCA-SRH-01	On page load in search panel	Data grid view must be hidden	Data grid view is hidden.	Pass
TC-RCA-SRH-02	Input lowercase or uppercase Alphabets in "Name" field.	Web services will work and show the name with login id.	Web services is working and showing the name with login id.	Pass
TC-RCA-SRH-03	input valid entry in the Username	data grid view will appear with required information	data grid view is appeared with required information.	pass
TC-RCA-SRH-04	after editing authorization in the grid view, click on	A message box will open "Category assigned	A message box is open "Category assigned	pass

	Update button	successfully"	successfully"	
TC-RCA-SRH-05	without any changes in grid view and click on Update button	Nothing will happen	A message box is open "Category assigned successfully"	Fail
TC-RCA-SRH-05	On click Reset button	Clear the text of username and data grid view will hidden	Clear the text of username and data grid view will hidden	pass

## 8. IMPLEMENTATIONS

### 8.1 IMPLEMENTATION OF PROJECT:

Implementation is the realization of an application, or execution of a plan, idea, model, design, specification, standard, algorithm, or policy. This phase is less creative than system design. It's mainly concerned with user training site preparation and file conversions. It is the phase in the guideline life-cycle in which strategies, systems, and tools are created to operationalize the knowledge and recommendations set forth by the guideline developers. Depending upon the size of the organization that will use the application, the risks are involved in its use.

The Implementation Phase has one key activity i.e. deploying the new system in its target environment. Supporting actions include training end-users and preparing to turn the system over to maintenance personnel. After this phase, the system enters the Operations and Maintenance Phase for the remainder of the system's operational life.

System developers may choose to test the operation in only one area of the firm with only one or two persons. Sometimes they may run an old or new system in parallel way to compare the results. In other situation system developers stop using the old system one-way and start using the old system the other way. During the final step user acceptations is tested followed by user training depending upon the nature of the system extensive user training may be required. Conversion usually takes place at about the same time the user is being trained or later. System testing checks the readiness and accuracy of the system to access update and retrieve data from new files. Once the program becomes available, test data are used for testing. If successful the program are run with actual live data. Successful completion of the Implementation Phase should comprise of System deployment and training on the system

## 8.2 CONVERSION PLAN:

When implementing a new system the method of changeover also has to be taken into account. Possible options include direct, phased, pilot, and parallel, although the decision is dependent upon cost, speed of changeover, and ability to risk disruption to staff and productivity. The methods of conversion are:

- ❖ Direct Conversion
- ❖ Parallel Conversion
- ❖ Phased Conversion
- ❖ Pilot Conversion

These all are explained as:

### 8.2.1 DIRECT CONVERSION:

In this Conversion all the users stop using the old system at the same time, then begin using the new system, this option is fast and disruptive so is not feasible in our case as large no of Process will be carried out simultaneously, so to stop the running system and start using new one will be difficult to use.

### 8.2.2 PHASED CONVERSION:

Users in this start using the new system component by component. This option works only with the system that is compartmentalized.

### 8.2.3 PILOT CONVERSION:

Personal single site uses the new system then the entire organization makes the switch. Although this approach takes more time than the other type of conversions, it gives opportunity to test user response to the system thoroughly.

### 8.2.4 PARALLEL CONVERSION:

Users continue to use the old system while an increasing amount of data is processed through the new system .The Outputs from the two systems are compared: if they agree then the switch is made which is further used for the testing of the new system.

## 8.3 POST IMPLEMENTATION AND SOFTWARE MAINTENANCE

### 8.3.1 POST IMPLEMENTATION:

After installation phase is complete and user staff is adjusted to the changes traded by the new system, evaluation and maintenance starts. Like any other system, this is an aging process that requires periodic maintenance of hardware and software. If the new information is inconsistent with the design specification maintenance to keep it tuned with the design specification. The

importance of the maintenance is to continue, to bring the new system to the standards. User priority changes in the organizational programs or the environmental factors also caught for the system analysis. Maintenance is necessary to eliminate errors in the working system. During its working live and to tune the system to any variations in it's working environment. Often small system is brought to the operation and changes are made to remove them. System planners must always plan them for resources availability to carry out their maintenance function. The importance of maintenance is to continue to bring new system to standard.

### **8.3.2 SOFTWARE MAINTENANCE:**

Computer software programmers and engineers perform various software maintenance functions to keep software running with as few problems as possible. Programmers and engineers also constantly seek to improve the reliability and functionality of software through maintenance activities. Many businesses rely on various software programs to manage their finances, inventory, employees, security systems, and other facets of business activity.

#### **8.3.2.1 CORRECTIVE**

Corrective software maintenance involves developing and deploying solutions to problems ("bugs") that arise during use of a software program. Computer users will notice performance problems with software, such as error messages coming on the screen or the program freezing or crashing, meaning corrective software maintenance is needed. Often these fixes permanently solve the problem, but not always. Some fixes act as a temporary solution while computer programmers work on a more permanent solution.

#### **8.3.2.2 PERFECTIVE**

No software program contains zero flaws or areas for improvement. Perfective software maintenance involves computer programmers working to improve the way a software program functions or how quickly it processes requests. Programmers may also engage in perfective software maintenance to improve the software's menu layouts and command interfaces. Sometimes programmers need to conduct perfective maintenance on software because of outside influences, such as new government regulations that affect how a business operates.

#### **8.3.2.3 ADAPTIVE**

The field of technology constantly changes through both hardware and software developments. Adaptive software maintenance addresses these changes. A change in a processor's speed, for example, will affect how the software performs on a single computer. Software interacts with other software programs on a computer or network, meaning changes in one program can require changes in other programs.

#### **8.3.2.4 PREVENTATIVE**

When computer programmers engage in preventative software maintenance they try to prevent problems with software programs before they occur. Programmers seek to prevent corrective maintenance as much as possible, while also anticipating adaptive maintenance needs before users experience problems. Computer programmers test software, as automotive companies test the vehicles they make, to make sure the software can handle high data loads and other stressful operations without problems. Computer programmers also test the software with other programs users likely will use on their computers, making sure compatibility issues do not arise.

### **9. PROJECT LEGACY**

#### **9.1 CURRENT STATUS OF THE PROJECT**

In our project we have implemented all the important features that are required for the distance education learners to Establish and Maintain Communication between Student, Staff, Study Center and University. Our project consists of the following features:

- There are four types of Users i.e. Admin, Students, Staff and Study Centre.
- A System for Administrator to handle all administration related activities like user roles and Permissions, the Administrator has the full access to all the modules of the software.
- A Unique Token Number is generated each time when Student/Staff/Study Centre Log any Request/Complaint/Suggestion/Feedback.
- Student can Log their Request/Complaint/Suggestion/Feedback online from anywhere and at anytime.
- A System for Study Centres and Staff to Track and Respond to Logged Request having unique token number and Student can also check the status of his/her logged request with unique token no.
- Student can check his/her Request/Complaint Status according to Open/Closed/Partially Closed and can view their response.
- Student has Facility to save feedback for Response that they get for their Request/Complaint.
- A System that provide Notifications to Student and Study Centre about their request and to Staff about assigned Request/Complaint/Suggestion/Feedback.

- Provision for E-mail Notification to Students and Study Centres about the current action Performed on his/her logged request.
- An Intelligent System to Auto responds to the requests those are Repetitive in Nature.
- User Friendly environment for the Staff for Grievance handling according to Request Type and Category.
- Grievance Handling module have facility to Forward Unhandled/Wrong request to Specialized Person of respective Department.
- Graphical Performance/Request Representation.
- User can reset their Password.
- A System for the Management to measure the Performance of the Staff members deployed to handle the Requests. Provision to generate analysis reports in different formats.
- Auto/Random Password Generated For New User.
- Dynamic Generation of the Menu according to the type of the users.

## 9.2 REMAINING AREAS OF CONCERN

Besides above mentioned features, some of future enhancements planned are as follows:

- Automated reminders/ alert provision to remind important actions to Perform for Staff.
- Master Page Layout modifications.
- Google Search Engine facility on Home Page.
- Chat Module will be implemented in the website.
- Notification Module in Admin.

## 9.3 TECHNICAL AND MANAGERIAL SKILLS LEARNED

- In SQL Server we have learned about stored procedures, query handling and some new features of SQL Server 2008.
- In ASP.net we have learned session handling, view state management, Ajax controls, CSS, JavaScript, validating data, reporting i.e. using Crystal reports.

- ➔ In managerial skills we have learned about team work, group effort and Coordination in group, and the way to work on the live projects.

## 10. USER MANUAL: HELP GUIDE

### 10.1 STUDENT MODULE

#### 10.1.1 HOME PAGE



#### DESCRIPTION:

The home page consists of the main menus with the help of which the users can view the information as per his/her interest. This page provides the login to the users, admin, staff members.

It also enlists the key features of the website named “E-STUCARE”.

The quick search option is also provided for the website visitors for their convenience.

## 10.1.2 WHAT'S NEW



## 10.1.3 FREQUENTLY ASKED QUESTION PAGE

**Frequently Asked Questions**

\*\*\* How Can I Register My Complaints?  
To register your Complaint You have to first Login to your Account ,then goto Log Request ,Choose Type and Category.Add Complaint/Request Subject And Description.Then Submit Your Request.

\*\*\* What is TokenNo?  
TokenNo is tracking number of Complaint which is useful to get information regarding a Complaint at anytime.

\*\*\* What is the Status of My Complaint?  
Complainant can view Status Of his/her Complaint After login,Goto RequestStatus.

\*\*\* How The Complaint Processed?  
When Complaint/Request is received information regarding type of Complaint/Request,category,Generated TokenNo,Complainant ID all are stored in the Complaint Register.  
Then Complaint Regarding Different Departments are handled by some Specialized Persons.  
After Respond To Complaint Staff set the Complaint status and that is sent to Student as Notification.

\*\*\* Will the System Email me everytime when is log Request?  
With every Request/complaint Complainant get an Email.

[Back To Home](#)

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## 10.1.4 STUDENT REQUEST



### DESCRIPTION:

The student after login, can submit his\her request by filing all the mandatory fields to submit an efficient request. The student user is given the option whether they want the satisfied or unsatisfied response. The token number is generated when the request is made by the user. The user can also find the current status of the request on the basis of its token number. The token number act as unique id of the request being requested by the user.

## 10.1.5 REQUEST STATUS



View	Token No	Subject	Date	Status	FeedBack
	REAC130001	Fee	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	SUAC130001	testingsuggesstion	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	SUEX130001	testingsuggesstion1	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	SUFE130001	testingsuggesstion4	18-Mar-13 12:00:00 AM	Open	Satisfied
	SUST130001	testingsuggesstion5	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	REEX130001	testingrequest1	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	RERE130001	testingrequest2	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	COEX130001	testingcompliant1	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	CORE130001	testingcompliant3	18-Mar-13 12:00:00 AM	Open	NotSatisfied
	COFE130001	testingcompliant3	18-Mar-13 12:00:00 AM	Open	NotSatisfied

### DESCRIPTION:

It facilitates the students to know the status of the request being submitted by them in regards to their queries. The token number is generated to the student who makes a request. The user can find the current status of the request on the basis of its token number. The token number act as unique id of the request being requested by the user.

Besides the status , the feedback corresponding to the particular token number is shown to the student.

## 10.1.5 ABOUT US PAGE

[Back To Home](#)



- »» Auto Response Facility
- »» Performance Calculation Feature
- »» Grievance Handling



### About Us

Our main objective is to improve the relationship among the Study Centers, Students and the University in the field of Distance Education. Allow Student and Study Centers to get redressed their grievances on time. Allow management to measure the performance of staff deployed to handle the grievance System of the University. Provide Automated Analysis tools to improve and enhance the education System.

It Provides Provision of two way communication between Teacher, Tutor and University. It will bridge the Physical gap between lecturers and students and also helpful for handling queries. It also helps us in deep searching and analysis of various methods that also helps in Decision Making. A Project uses Auto Response System from database for Quick Response. This Project is also helping us to analyze in various ways whether a student or Staff. Our Project basically considers "Student Grievance Redressal".

Any Query

You can also Contact us on

[estucare@gmail.com](mailto:estucare@gmail.com)

### About Infotech



Lovely Infotech is involved in the Development And implementation of IT projects for LPU. These Projects also provide hands on Experience to the students in handling technology. Lovely Infotech Division has Four Departments:

- Department of Software Development
- WebSite Development(PHP,CSS design etc)
- IT \Data Center Cell
- Students Training IT Cell

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## 10.2 ADMIN MODULE

### 10.2.1 FORM NAME: ACCESS PERMISSION



The screenshot shows the e-StuCare Admin Module interface. At the top, there's a navigation bar with links: MenuMaster, RoleMaster, UserMaster, AccessPerm (which is highlighted with a red oval), LogRequest, GrievanceHandle, and TrackPerformance. Below the navigation is a banner featuring a group of diverse students looking at a laptop screen. The main content area is titled "Choose/Edit Permission". It has a dropdown menu labeled "Choose Role: Staff" (also circled in red) with a list of roles: MenuMaster, RoleMaster, UserMaster, AccessPerm, LogRequest, RequestType, RequestCategory, GrievanceHandle, GrievanceSummary, TrackPerformance, PerformanceGraphs, and PerformanceReport. Under "LogRequest", "GrievanceHandle", and "TrackPerformance", there are checkboxes for "RequestType", "RequestCategory", "GrievanceSummary", and "PerformanceReport" respectively, some of which are checked. At the bottom of the form are "Update" and "Reset" buttons. Red arrows point from the circled "AccessPerm" link in the navigation and the "AccessPerm" role in the dropdown to the explanatory text "Admin Set/Update Access Permission of Menus to Particular Role".

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Design by: e-StuCare Team

#### DESCRIPTION:

The admin can choose the role and then he can set\update the access permissions of the menus as per the role. It helps to enhance the administration task moreover the admin got the form to control all the access permissions related to E-STUCARE.

## 10.2.2 FORM NAME: MENU MASTER



**Create/Edit Menu**

Description : TrackGraphPerformance  
Parent-Name : TrackPerformance  
Menu URL : trackgraph.aspx  
IsActive :  Yes  No

Submit Reset

**Search Menu Information**

Description: role Parent Name: TrackPerformance  
URL: aspx IsActive:  Yes  No

Search

Description	Is Active	Navigation URI	Parent	Select
MenuMaster	<input type="checkbox"/>	MenuMaster.aspx		
RoleMaster	<input checked="" type="checkbox"/>	RoleMaster.aspx		
UserMaster	<input checked="" type="checkbox"/>	usermaster.aspx		
AccessPerm	<input checked="" type="checkbox"/>	AccessPermission.aspx		
LogRequest	<input checked="" type="checkbox"/>	Request.aspx		
GrievanceHandle	<input checked="" type="checkbox"/>	GrievanceHandling.aspx		

1 2

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Design by: e-StuCare Team

### DESCRIPTION:

Admin is facilitated to create the new menu dynamically with help of this module. In case if user wants to search the information about the menus then he/she can search for menu information on basis of different criteria shown in the form.

### 10.2.3 FORM NAME: ROLE MASTER



**Create/Edit Role**

**Search Role Information**

IsActive	Description	EntryDateTime	Select
<input checked="" type="checkbox"/>	Admin	27-Feb-13 10:37:00 AM	
<input checked="" type="checkbox"/>	Moderate	27-Feb-13 10:37:00 AM	
<input checked="" type="checkbox"/>	Staff	27-Feb-13 11:12:00 AM	
<input type="checkbox"/>	Student	27-Feb-13 11:17:00 AM	
<input type="checkbox"/>	Study Center	12-Mar-13 11:15:00 AM	

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Design by: e-StuCare Team

#### DESCRIPTION:

Admin is facilitated to create the new roles or to edit the existing roles dynamically with help of this module. In case if user wants to search the information about the roles then he\she can search for role information on basis of different criteria shown in the form.

## 10.2.4 FORM NAME: USER MASTER



**Create/Edit User With Particular Role**

**Advance Information Search by Admin**

User Id	Login Id	Name	Is Active	Email	Contact No	Gender	Edit
1	1100	Rahul	True	rahul@gmail.com	9041098813	Male	
2	1300	Hitesh	True	honey.jan4u@gmail.com	9041098813	Male	
3	1200	Rishma	True	rishma.vasdev@gmail.com	9098899000	Female	
4	1400	Ajay	True	ajay@gmail.com	9087678790	Male	

### DESCRIPTION:

Admin is facilitated to create or to edit the existing user dynamically with the particular role. In case if user wants to search the information about the users being created\edited as per role then he\she can search for user information on basis of different criteria shown in the form.

## 10.2.5 FORM NAME: PERFORMANCE TRACKING



**Staff Handle Which Categories Requests**

CategoryDescription	Categories	Name	LoginId
ACADEMICS, EXAMINATION, RECORD CELL, STUDY CENTER	5	Rahul	1100
ACADEMICS, EXAMINATION, RECORD CELL, STUDY CENTER	5	Rishma	1200
EXAMINATION	2	Ajay	1400
EXAMINATION, FEE	1	Hitesh	1300

**Name:** Rahul\_1100

**Display Grievance Summary According to User Id**

Grievance Request Summary			Grievance Request Feedback			Grievance Requests Percentage		
Handled	Pending	Total	Satisfied	Partially Satisfied	Unsatisfied	Total	Handled	PercentageRequestHandled
1	20	21	2	1	2	21	1	4.76%

### DESCRIPTION:

It can be used by the admin and the high level staff for tracking the performance of grievance handler staff, depending upon various factors. Such as how many requests are being handled by the staff and how was their feedback, whether their response was positive or negative etc.

## 10.2.6 FORM NAME: GRIEVANCE PERFORMANCE GRAPH



Display Total RequestType Wise Graph Performance

RequestTypeWise

Request Type	Complaints Count
SUGGESTION	~5
REQUEST	~10
FEEDBACK	~5
COMPLAINT	~5

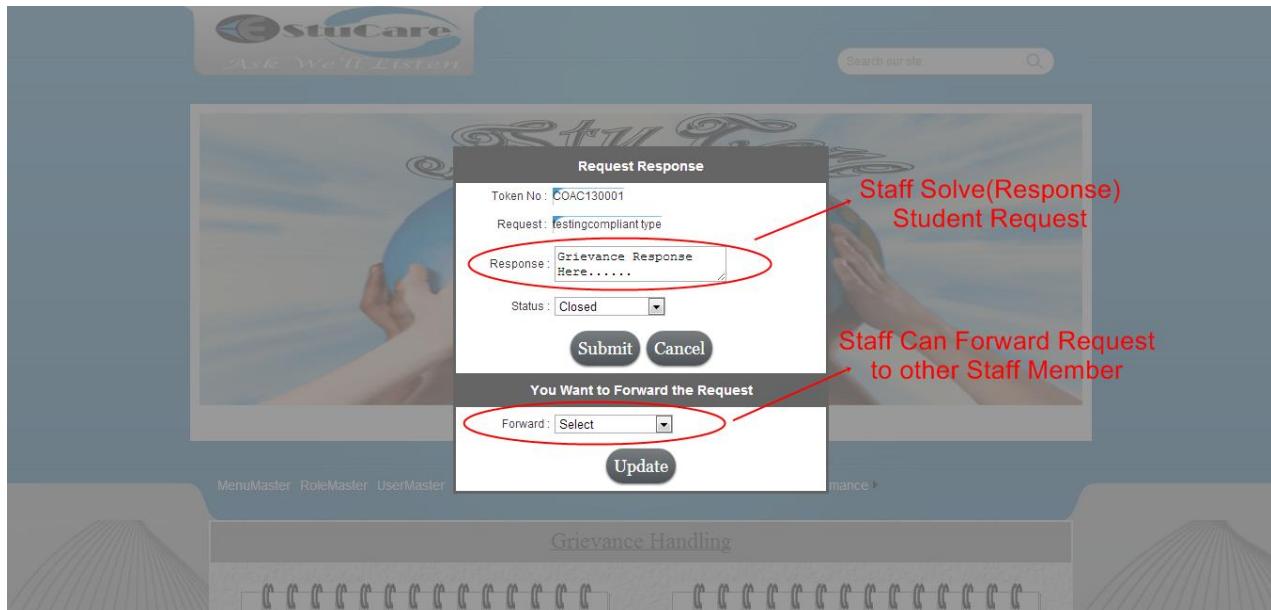
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### DESCRIPTION:

The admin can have the precise view of the grievance handling in the form of the graph. The admin can find the grievance performance by looking upon the graph. It enhances the admin-friendliness and is helpful in making quick judgment.

## 10.3 GRIEVANCE HANDLING STAFF

### 10.3.1 GRIEVANCE HANDLING POPUP



### 10.3.2 GRIEVANCE HANDLING



### 10.3.3 GRIEVANCE HANDLING POST


  
 Ask We'll Listen

Search our site:




  
 Ask We'll Listen



[MenuMaster](#) [RoleMaster](#) [UserMaster](#) [AccessPerm](#) [LogRequest](#) [GrievanceHandle](#) [TrackPerformance](#)

**Grievance Handling**

**Welcome Rahul**

Your Name: Rahul Today Date: Apr 24 2013

Your LogInId: 1100 Current Time: 21:22:12

Your User Role: Admin

**Grievance Schedule**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
1	2	3	4	5	6	7
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Click To Open Control Panel

**You are Authorized For Category**

ACADEMICS
EXAMINATION
RECORD CELL
STUDY CENTER

**Choose Category**

ACADEMICS

Response	TokenNo	Request_Subject	Request	Response	Permission	Request_Status
<input checked="" type="checkbox"/>	COAC130001	testingcompliant	testingcompliant type	testing comp	<input checked="" type="checkbox"/>	Partially Closed
<input checked="" type="checkbox"/>	COEX130001	testingcompliant1	testingcompliant1	pending	<input checked="" type="checkbox"/>	Open
<input checked="" type="checkbox"/>	CORE130001	testingcompliant3	testingcompliant3	pending	<input checked="" type="checkbox"/>	Open

**Search Grievance Information**

Status:

FromDate:

ToDate:

Type:

Token_No	Request_Subject	Request	Response	Request_Date	Request_Status
REAC130001	Fee	About Fee	Ok ji, fee na pay kro.	18-Mar-13 12:00:00 AM	Open
REAC130002	testingrequest	testing request type	Response Request	18-Mar-13 12:00:00 AM	Partially Closed
REEX130001	testingrequest1	testing request 1	pending	18-Mar-13 12:00:00 AM	Open
RERE130001	testingrequest2	testing request 2	pending	18-Mar-13 12:00:00 AM	Open
REFE130001	testingrequest3	testing request 3	pending	18-Mar-13 12:00:00 AM	Open

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#### 10.3.4 GRIEVANCE SUMMARY



**Grievance Summary**

RequestType	TotalCount
COMPLAINT	1
FEEDBACK	12
REQUEST	2
SUGGESTION	6

RequestCategory	Pending	Handled	Total
ACADEMICS	0	1	1
ACADEMICS	1	0	1
EXAMINATION	0	1	1
EXAMINATION	9	0	9
FEE	1	0	1
RECORD CELL	4	0	4

	Pending	Handled	Total
Pending	5	2	7

	Pending	Handled	Total
Pending	15	4	19

Grievance Summary display according to Staff that are login by his/her loginid

#### DESCRIPTION:

The grievance handling staff can view their grievance summary in various criteria such as:

- Request type and their total count
- Total request, handled request and pending request summary on basis of request category
- Total request, handled request and pending request summary on monthly basis
- Summary of total request handled and pending.

## 10.4 REPORTS AND GRAPH

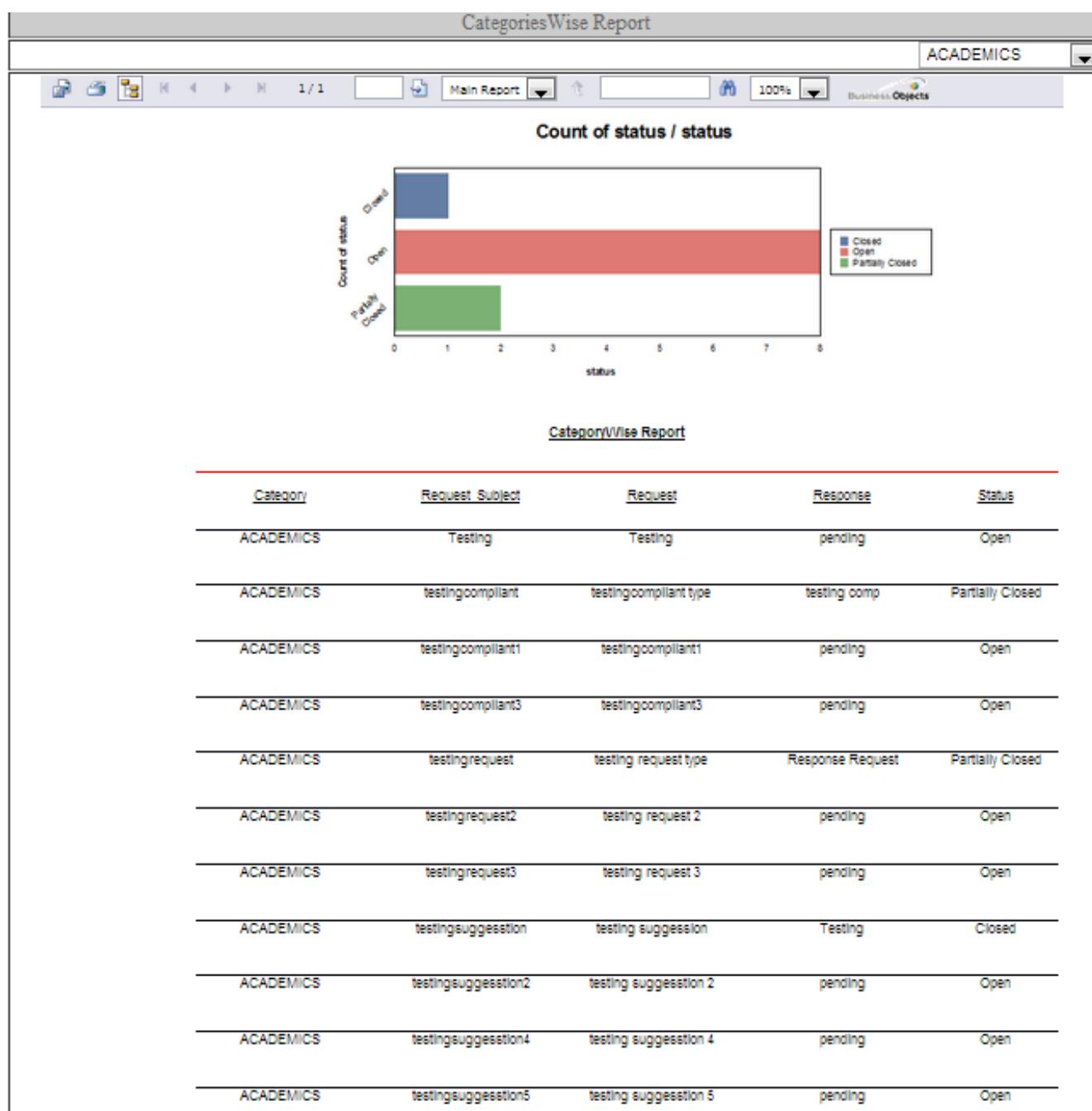
### 10.4.1 CATEGORY WISE GRAPH



#### DESCRIPTION:

This module provides the precise view of the grievance performance on basis of category in the form of the graph. It enhances the user-friendliness and is helpful in making quick judgment.

## 10.4.2 CATEGORY WISE REPORT



### DESCRIPTION:

This module provides the detailed view of the grievance performance on basis of category in the form of the crystal reports. It enhances the user-friendliness and is helpful in making quick judgment.

### 10.4.3 REQUEST WISE GRAPH



#### DESCRIPTION:

This module provides the precise view of the grievance performance on basis of requests. It shows the total user performance graph. It gives a simple and clear view of the grievance handling which can be helpful in making decisions.

#### 10.4.4 REQUEST WISE REPORT

CategoryRequestTypeWise Report			
	Category	RequestType	N
ACADEMICS			
EXAMINATION	ACADEMICS	REQUEST	5
FEE	ACADEMICS	COMPLAINT	3
RECORD CELL	ACADEMICS	SUGGESTION	5
STUDY CENTER			
ACADEMICS	EXAMINATION	SUGGESTION	2
EXAMINATION			
FEE	EXAMINATION	SUGGESTION	2
FEE			
RECORD CELL	FEE	REQUEST	1
RECORD CELL	FEE	FEEDBACK	13
RECORD CELL			
RECORD CELL	RECORD CELL	REQUEST	1
RECORD CELL	RECORD CELL	COMPLAINT	1
RECORD CELL	RECORD CELL	FEEDBACK	1
STUDY CENTER			
STUDY CENTER	STUDY CENTER	SUGGESTION	8

#### DESCRIPTION:

This module provides the detailed view of the grievance performance request-wise in the form of the crystal reports. It enhances the user-friendliness and is helpful in making quick judgment.

## 11. SOURCE CODE

### 11.1 DATABASE CONNECTION LAYER

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
using System.Configuration;
using System.Data.SqlClient;
using System.Data.SqlClient;
using System.Data;
public class DataBaseConnection
{
    protected SqlConnection vcon = new SqlConnection();
    public DataBaseConnection()
    {
        vcon.ConnectionString =
ConfigurationManager.ConnectionStrings["group2ConnectionString"].ConnectionString;
    }
    protected void OpenConnection()
    {
        if (vcon.State == ConnectionState.Closed)
            vcon.Open();
    }
    protected void CloseConnection()
    {
        if (vcon.State == ConnectionState.Open)
            vcon.Close();
    }
}

```

### 11.2 DATA ACCESS LAYER

```

using System;
using System.Collections;
using System.Collections.Generic;
using System.Data;
using System.Data.SqlClient;
using System.Data.SqlTypes;
using System.IO;
using System.Linq;
using System.Runtime;
using System.Text;
using System.Web;
using System.Web.UI;
using System.Web.UI.Design;
using System.Web.UI.HtmlControls;

```

```

using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;

namespace dba
{
    public class DBAdminstration : DataBaseConnection
    {
        bla.BLAdminstration obj11 = new bla.BLAdminstration();
        public DBAdminstration()
        {

        }

        #region LoginIn Home
        //for login search
        int flag;
        SqlDataAdapter objda = new SqlDataAdapter();
        DataTable objdt = new DataTable();
        DataSet objds = new DataSet();
        public string LoginUserMaster(string id, string key, string ip)
        {
            string isSuccess = "";
            string flag;
            try
            {
                OpenConnection();
                SqlCommand vcom = new SqlCommand();
                vcom.Connection = vcon;
                vcom.CommandType = CommandType.StoredProcedure;
                vcom.CommandText = "pLoginUsermaster";
                vcom.Parameters.AddWithValue("@id", id);
                vcom.Parameters.AddWithValue("@ip", ip);
                vcom.Parameters.AddWithValue("@pass", key);
                vcom.Parameters.Add("@role", SqlDbType.VarChar, 100);
                vcom.Parameters["@role"].Direction = ParameterDirection.Output;

                flag = vcom.ExecuteNonQuery().ToString();
                if (flag == null)
                {
                    isSuccess = null;
                }
                else
                {
                    isSuccess = vcom.Parameters["@role"].Value.ToString();
                }
                vcom.Parameters.Clear();
                vcom.Dispose();

                CloseConnection();
            }
            catch
            {
                isSuccess = "";
            }
            return isSuccess;
        }
    }
}

```

```

}

#endregion

#region RoleMaster

#region INSERTROLEMASTER
public bool insertrolemaster(string _description, bool _isactive)
{
    bool isSuccess = false;
    try
    {
        OpenConnection();
        SqlCommand vcom = new SqlCommand();
        vcom.Connection = vcon;
        vcom.CommandType = CommandType.StoredProcedure;
        vcom.CommandText = "pinsertrolemaster";
        vcom.Parameters.AddWithValue("@description", _description);
        vcom.Parameters.AddWithValue("@isactive", _isactive);
        vcom.ExecuteNonQuery();
        vcom.Parameters.Clear();
        vcom.Dispose();
        CloseConnection();
        isSuccess = true;
    }
    catch
    {
        isSuccess = false;
    }
    return isSuccess;
}
#endregion

#region UPDATEROLEMASTER
public bool updaterolemaster(int _roleid, string _description, bool _isactive)
{
    bool isSuccess = false;
    try
    {
        OpenConnection();
        SqlCommand vcom = new SqlCommand();
        vcom.Connection = vcon;
        vcom.CommandType = CommandType.StoredProcedure;
        vcom.CommandText = "pupdaterolemaster";
        vcom.Parameters.AddWithValue("@roleid", _roleid);
        vcom.Parameters.AddWithValue("@description", _description);
        vcom.Parameters.AddWithValue("@isactive", _isactive);
        vcom.ExecuteNonQuery();
        vcom.Parameters.Clear();
        vcom.Dispose();
        CloseConnection();
        isSuccess = true;
    }
    catch
    {
        isSuccess = false;
    }
}

```

```

        return isSuccess;
    }
#endregion

#region availablerolemaster
public bool availablerolemaster(string _description)
{
    bool isSuccess = false;
    try
    {
        OpenConnection();
        SqlCommand mycom = new SqlCommand();
        vcon.Open();
        mycom = new SqlCommand("select Descrip from rolemaster where Descrip=@a", vcon);
        mycom.Connection = vcon;
        mycom.Parameters.AddWithValue("@a", _description);
        object x;
        x = mycom.ExecuteScalar();
        if (x != null)
        {
            isSuccess = false;
        }
        else
        {
            isSuccess = true;
        }
        mycom.Parameters.Clear();
        mycom.Dispose();
        CloseConnection();
    }
    catch
    {
        isSuccess = false;
    }
    return isSuccess;
}
#endregion

#region Searchrolemaster

public DataSet searchrolemaster(string @desc, string @datetime, string @active)
{
    DataSet isSuccess;
    OpenConnection();
    SqlCommand vcom = new SqlCommand();
    SqlDataAdapter da = new SqlDataAdapter(vcom);
    DataSet ds = new DataSet();
    vcom.Connection = vcon;
    vcom.CommandType = CommandType.StoredProcedure;
    vcom.CommandText = "psearchrolemaster";
    vcom.Parameters.AddWithValue("@descrip", @desc);
    vcom.Parameters.AddWithValue("@entrydatetime", @datetime);
    vcom.Parameters.AddWithValue("@isactive", @active);
    vcom.ExecuteNonQuery();
    CloseConnection();
}

```

```

        isSuccess = new DataSet();
        da.Fill(isSuccess);
        return isSuccess;
    }
#endregion

#region MenuMaster

#region InsertmenuMaster
public string insertmenuMaster(string _navigationurl, string _description, int _parentid, bool _isactive)
{
    string isSuccess = "";
    try
    {

        OpenConnection();
        SqlCommand vcom = new SqlCommand();
        vcom.Connection = vcon;
        vcom.CommandType = CommandType.StoredProcedure;
        vcom.CommandText = "pinsertmenuMaster";
        vcom.Parameters.AddWithValue("@description", _description);
        vcom.Parameters.AddWithValue("@isactive", _isactive);
        vcom.Parameters.AddWithValue("@parentid", _parentid);
        vcom.Parameters.AddWithValue("@navigationurl", _navigationurl);
        vcom.Parameters.Add("@output", SqlDbType.VarChar, 100);
        vcom.Parameters["@output"].Direction = ParameterDirection.Output;
        vcom.ExecuteNonQuery();
        isSuccess = vcom.Parameters["@output"].Value.ToString();
        vcom.Parameters.Clear();
        vcom.Dispose();
        CloseConnection();
    }
    catch
    {
        isSuccess = "";
    }
    return isSuccess;
}
#endregion

#region UpdateMenuMaster

public string updateMenuMaster(string _navigationurl, string _description, int _parentid, bool
_isactive, int _menuid)
{
    string isSuccess = "";
    try
    {
        OpenConnection();
        SqlCommand vcom = new SqlCommand();
        vcom.Connection = vcon;
        vcom.CommandType = CommandType.StoredProcedure;
        vcom.CommandText = "pupdateMenuMaster";
        vcom.Parameters.AddWithValue("@menuid", _menuid);
    }
}

```

```

vcom.Parameters.AddWithValue("@description", _description);
vcom.Parameters.AddWithValue("@isactive", _isactive);
vcom.Parameters.AddWithValue("@parentid", _parentid);
vcom.Parameters.AddWithValue("@navigationurl", _navigationurl);
vcom.Parameters.Add("@output", SqlDbType.VarChar, 100);
vcom.Parameters["@output"].Direction = ParameterDirection.Output;
vcom.ExecuteNonQuery();
isSuccess = vcom.Parameters["@output"].Value.ToString();
vcom.Parameters.Clear();
vcom.Dispose();
CloseConnection();
}
catch
{
    isSuccess = "";
}
return isSuccess;
}
#endregion

#region SearchMenuMaster

public DataSet searchmenumaster(string _navigationurl, string _description, int _parentid, int
_isactive, string parentDescription)
{
    DataSet isSuccess;
    OpenConnection();
    SqlCommand vcom = new SqlCommand();
    SqlDataAdapter da1 = new SqlDataAdapter(vcom);
    DataSet ds1 = new DataSet();
    vcom.Connection = vcon;
    vcom.CommandType = CommandType.StoredProcedure;
    vcom.CommandText = "psearchmenu";
    if (_description != "" && _description != null)
        vcom.Parameters.AddWithValue("@description", _description);
    if (_isactive == 0 || _isactive == 1)
        vcom.Parameters.AddWithValue("@isactive", Convert.ToBoolean(_isactive));
    if (_parentid != 0 && _parentid != null)
        vcom.Parameters.AddWithValue("@parentid", _parentid);
    if (_navigationurl != "" && _navigationurl != null)
        vcom.Parameters.AddWithValue("@navigationurl", _navigationurl);
    if (parentDescription != "")
        vcom.Parameters.AddWithValue("@parentDescription", parentDescription);
    CloseConnection();
    isSuccess = new DataSet();
    da1.Fill(ds1);
    return ds1;
}
#endregion

#region UserMaster

#region InsertUsermaster
public string insertusermaster(int loginid, string name, bool isactive, string email, double contact,
string gender)

```

```

{
    string isSuccess = "";
    try
    {
        OpenConnection();
        SqlCommand vcom = new SqlCommand();
        vcom.Connection = vcon;
        vcom.CommandType = CommandType.StoredProcedure;
        vcom.CommandText = "pinsertusermaster";
        vcom.Parameters.AddWithValue("@loginid", loginid);
        vcom.Parameters.AddWithValue("@name", name);
        vcom.Parameters.AddWithValue("@isactive", isactive);
        vcom.Parameters.AddWithValue("@email", email);
        vcom.Parameters.AddWithValue("@contactno", contact);
        vcom.Parameters.AddWithValue("@gender", gender);
        vcom.Parameters.Add("@OutPut", SqlDbType.VarChar, 100);
        vcom.Parameters["@OutPut"].Direction = ParameterDirection.Output;
        vcom.ExecuteNonQuery();
        isSuccess = vcom.Parameters["@OutPut"].Value.ToString();
        vcom.Parameters.Clear();
        vcom.Dispose();
        CloseConnection();
    }
    catch
    {
        isSuccess = "";
    }
    return isSuccess;
}
#endregion

#region SearchUserMaster
public DataSet searchusermaster(int loginid, string name, int isactive, string email, double contact,
string fromdate, string todate, string gender)
{
    DataSet isSuccess;
    OpenConnection();
    SqlCommand vcom = new SqlCommand();
    SqlDataAdapter da = new SqlDataAdapter(vcom);
    DataSet ds = new DataSet();
    vcom.Connection = vcon;
    vcom.CommandType = CommandType.StoredProcedure;
    vcom.CommandText = "psearchusermaster";
    if (loginid != 0 && loginid != null)
        vcom.Parameters.AddWithValue("@loginid", loginid);
    if (name != "" && name != null)
        vcom.Parameters.AddWithValue("@name", name);
    if (isactive == 0 || isactive == 1)
        vcom.Parameters.AddWithValue("@isactive", Convert.ToBoolean(isactive));
    if (email != "" && email != null)
        vcom.Parameters.AddWithValue("@email", email);
    if (contact != 0 && contact != null)
        vcom.Parameters.AddWithValue("@contactno", contact);
    if (fromdate != "" && email != null)
        vcom.Parameters.AddWithValue("@fromDate", fromdate);
}

```

```

if (todate != "" && email != null)
    vcom.Parameters.AddWithValue("@toDate", todate);
if (gender != null && gender != "")
    vcom.Parameters.AddWithValue("@gender", gender);
vcom.ExecuteNonQuery();
CloseConnection();
isSuccess = new DataSet();
da.Fill(isSuccess);
return isSuccess;
}
#endregion

#region UpdateUserMaster
public bool updateusermaster(int userid, int loginid, string name, int isactive, string email, double
contact, string gender)
{
    bool isSuccess = false;
    try
    {
        OpenConnection();
        SqlCommand vcom = new SqlCommand();
        vcom.Connection = vcon;
        vcom.CommandType = CommandType.StoredProcedure;
        vcom.CommandText = "pupdateusermaster";
        vcom.Parameters.AddWithValue("@userid", userid);
        vcom.Parameters.AddWithValue("@loginid", loginid);
        vcom.Parameters.AddWithValue("@name", name);
        vcom.Parameters.AddWithValue("@isactive", isactive);
        vcom.Parameters.AddWithValue("@email", email);
        vcom.Parameters.AddWithValue("@contactno", contact);
        vcom.Parameters.AddWithValue("@gender", gender);
        vcom.ExecuteNonQuery();
        vcom.Parameters.Clear();
        vcom.Dispose();
        CloseConnection();
        isSuccess = true;
    }
    catch
    {
        isSuccess = false;
    }
    return isSuccess;
}
#endregion
#endregion

```

### 11.3 BUSSINESS LOGIC LAYER

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Data;

namespace bla
{
    public class BLAdminstration
    {
        public BLAdminstration()
        {

        }

        private string _navigationurl, _descrip, _password;
        private int _parentid, _entryby;
        private bool _isactive;
        public string _name, _gender, _email,_parentdescription;
        string _id,_key,_flag;

        public int parentid
        {
            get { return _parentid; }

            set { _parentid = value; }
        }

        public string navigationurl
        {
            get { return _navigationurl; }

            set { _navigationurl = value; }
        }
        public string id
        {
            get { return _id; }

            set { _id = value; }
        }
        public string key
        {
            get { return _key; }

            set { _key = value; }
        }
        public string flag
        {
            get { return _flag; }

            set { _flag = value; }
        }
        string _ip;
        public string ip
        {
    
```

```
get { return _ip; }

    set { _ip = value; }
}
public string descrip
{
    get { return _descrip; }

    set { _descrip = value; }
}
public bool isactive
{
    get { return _isactive; }

    set { _isactive = value; }
}

public int menuid
{
    get { return _menuid; }

    set { _menuid = value; }
}

public string LoginUserMaster()
{
    dba.DBAdminstration obj1 = new dba.DBAdminstration();
    return obj1.LoginUserMaster(id, key, ip);
}

public string updatemenumaster()
{
    dba.DBAdminstration obj = new dba.DBAdminstration();
    return obj.updatemenumaster(navigationurl, descrip, parentid, Convert.ToBoolean(act), menuid);
}

public string insertmenumaster()
{
    dba.DBAdminstration obj = new dba.DBAdminstration();
    return obj.insertmenumaster(navigationurl, descrip, parentid, Convert.ToBoolean(isactive));
}

public DataSet searchmenumaster()
{
    DataSet ds = new DataSet();
    dba.DBAdminstration objm = new dba.DBAdminstration();
    ds = objm.searchmenumaster(navigationurl, descrip, parentid, act, parentdescription);
    return ds;
}
```

## 11.4 APPLICATION LAYER

(Application Layer/Front-End Source Code of (Login Page))

```

using System;
using System.Collections;
using System.Configuration;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
public partial class Demo2 : System.Web.UI.Page
{
    bla.BLAdministration objbla = new bla.BLAdministration();
    protected void Page_Load(object sender, EventArgs e)
    {
    }

    string ip;
    protected void btnEnter_Click(object sender, EventArgs e)
    {
        ip = HttpContext.Current.Request.UserHostAddress + '(' +
System.Net.Dns.GetHostEntry(System.Net.Dns.GetHostName()).AddressList.GetValue(0).ToString() + ')';
        objbla.id = Convert.ToString(txtId.Text);
        objbla.key = Convert.ToString(txtkey.Text);
        objbla.ip = ip.ToString();
        string returnmessage = objbla.LoginUserMaster();
        if (returnmessage == null)
        {
            Response.Write("<script> alert('Login Failed'); </script>");
        }
        else
        {
            TextBox t = (TextBox)this.FindControl("txtId");
            Application["txtid"] = t.Text;
            Response.Redirect(returnmessage);
        }
    }
    protected void btnBlue_Click(object sender, EventArgs e)
    {
        this.form1.Attributes.Add("style", "background-image:url('images/3.jpg');");
    }
    protected void btnOrange_Click(object sender, EventArgs e)
    {
        this.form1.Attributes.Add("style", "background-image:url('images/1.jpg');");
    }
    protected void btnGreen_Click(object sender, EventArgs e)
    {
        this.form1.Attributes.Add("style", "background-image:url('images/2.jpg');");
    }
}

```

## 12. DOCUMENTATION ACCORDING TO STANDARDS

### 1. Author:

This document is prepared **by the team (E-StuCare)**. Most of the information in this document is compiled from the coding standards and best practices published in various articles in world wide. Also, we referred to the guidelines published by Microsoft and various other sources.

### 2. License, Copyrights and Disclaimer:

This document is design by **fully team support for project E-StuCare**. We have fully permission to use and distribute this document for any Commercial/Non-Commercial purpose as long. This document is provided on "As-Is" basis.

### 3. Revision History:

According to Standards, revision history review the tasks done by team for project.

Sl#	Date	Changed By	Description
1.	23-Apr-2013	Rahul Sharma	From Initial Stage of Project

### 4. Introduction:

Anybody means any team member can write code. With a few months of programming experience, we can write working applications'. Making it work is easy, but doing it the right way requires more work, than just making it work.

Believe it, majority of the programmers write 'working code', but not 'good code'. **Writing 'good code' is an art and our team must learn and practice it.**

Everyone may have different definitions for the term 'good code'. In my definition, the following are the characteristics of good code.

- Reliable
- Maintainable
- Efficient

Most of the developers are inclined towards writing code for higher performance, compromising reliability and maintainability. But considering the long term ROI (Return On Investment), efficiency and performance comes below reliability and maintainability. If our code is not reliable and maintainable, **we will be spending lot of time to identify issues, trying to understand code etc throughout the life of your application.**

### 5. Purpose of coding standards and best practices:

To develop reliable and maintainable applications, our team must follow coding standards and best practices. The naming conventions, coding standards and best practices described in this document are compiled from our own experience and by referring to various Microsoft and non Microsoft guidelines. There are several standards exists in the programming industry. None of them are wrong or bad and you may follow any of them. What is more important is, selecting one standard approach and ensuring that everyone is following it.

## 6. Naming Conventions and Standards:

- Use Pascal casing for Class names

```
public class Staff_Role
{
    ...
}
```

- Use Pascal casing for Method names

```
void TaskTrack(string hits)
{
    ...
}
```

- Use Camel casing for variables and method parameters

```
int totalHits = 0;
void TaskTrack(string hits)
{
    string fullMessage = "Total Hits " + hits;
    ...
}
```

However, in .NET coding standards, this is not recommended. Usage of data type and m\_ to represent member variables should not be used. All variables should use camel casing.

**Within E-StuCare Project, Our Team follow the Main 10 Steps according to Naming Conventions and Standards are:**

1. We use Meaningful, descriptive words to name variables. Do not use abbreviations.

Good:

```
string address
int salary
```

Not Good:

```
string addr
int sal
```

2. According to Standards, We not used single character variable names like i, n, s etc. Use names like index, temp

One exception in this case would be variables used for iterations in loops:

```
for ( int i = 0; i < count; i++ )
{
    ...
}
```

If the variable is used only as a counter for iteration and is not used anywhere else in the loop, many people still like to use a single char variable (i) instead of inventing a different suitable name.

3. According to Standards, We not use underscores (\_) for local variable names.
4. All member variables must be prefixed with underscore (\_) so that they can be identified from other local variables.
5. According to Standards, We not use variable names that resemble keywords.
6. Prefix **boolean** variables, properties and methods with “**is**” or similar prefixes.  
Ex: `private bool _isFinished`
7. **Our Project Namespace names** should follow the standard **pattern**
  - <E-StuCare>.<Admin>.<top level module>.<bottom level module>
  - <E-StuCare>.<Staff/Faculty>.<top level module>.<bottom level module>
  - <E-StuCare>.<Study Centre>.<top level module>.<bottom level module>
8. Use appropriate prefix for the UI elements so that you can identify them from the rest of the variables. There are 2 different approaches recommended here.
  - a. Use a common prefix ( ui\_ ) for all UI elements. This will help you group all of the UI elements together and easy to access all of them from the intelligence.
  - b. Use appropriate prefix for each of the ui element. A brief list is given below. Since .NET has given several controls, you may have to arrive at a complete list of standard prefixes for each of the controls (including third party controls) you are using.

Our Project Naming Conventions	
Standard Control	Prefix
Label	lbl
Textbox	txt
Button	btn
ImageButton	imb
Hyperlink	hlk
DropDownList	ddl
ListBox	lst
Checkbox	chk
CheckBoxList	cbl
RadioButton	rdb
RadioButtonList	rdl
Image	img

<b>Panel</b>	pnl
<b>PlaceHolder</b>	phd
<b>Table</b>	tbl
<b>Hidden Field</b>	hdf
<b>LinkButton</b>	Inkbtn
<b>Validators</b>	val
<b>Data Control</b>	
<b>GridView</b>	dtg
<b>DataList</b>	ctl
<b>Repeater</b>	rep
<b>GridView</b>	grd

**9.** File name should match with class name.

For example, for the class StuCare\_Security, the file name should be StuCare\_Security.cs.

**10.** Use Pascal Case for file names.

### 13. BIBLIOGRAPHY

Below is the list of website that we have gone through for the development of the website:

#### Internet:

- <http://www.ptudep.org/>
- <http://www.ipude.in/>
- <http://www.amity.edu/asodl/>

#### Various Books Followed:

- Professional ASP.Net 3.5(SP1) in C# and VB ASP.NET 3.5
- Website Programming Problem-Design-Solution
- Sams ASP.Net 4.0 Unleashed