

PROJECT REPORT
ON

“IT Help Desk”

PRUDENCYS SOLUTION
BY
HARSHDEEP MARATHE

SAVITRIBAI PHULE PUNE UNIVERSITY
MASTER IN COMPUTER APPLICATION
(MCA)

PUNE-411033
2014-2016

ACKNOWLEDGEMENT

A successful project work is a result of an organized and well-coordinated teamwork. I, therefore, feel obliged to extend my gratitude towards all those who made a valuable contribution throughout my training period.

I am extremely thankful to Director **Dr. Priyanka Singh** for inspiring me to gather professional knowledge and material without which it would have been impossible to complete this work. I take this opportunity to express my deep sense of gratitude and thanks to our head of department **Prof. Shweta Padale** and my project guide **Prof. Kumar Pawar** for their inspiration and guide during course of project work.

I wish to accord deep sense of gratitude to **Mr. Nitin Badgujar** who helped me selflessly during my training period at **Prudencys Solution**.

Mr. Harshdeep Marathe
Roll No. - 36

INDEX

Sr.No.	DESCRIPTION	Page No.
1	INTRODUCTION	6
1.1	Company Profile	6
1.2	Existing System and Need For System	7
1.3	Scope of Work	8
1.4	Operating Environment – Hardware And Software	12
1.5	Detail Description of Technology Used	14
2	PROPOSED SYSTEM	15
2.1	Proposed System	15
2.2	Objectives of System	16
2.3	User Requirements	17
3	ANALYSIS AND DESIGN	18
3.1	Hierarchy Diagram	18
3.2	ER Diagram	19
3.3	Admin Use Case Diagram	20
3.4	Technical staff Use Case Diagram	21
3.5	User Use Case Diagram	22
3.6	Sequence Diagram for login	23
3.7	Admin Sequence Diagram	24
3.8	Technical staff Sequence Diagram	25
3.9	User Sequence Diagram	26
3.10	Activity Diagram For Login	27
3.11	Activity Diagram For Login for user and staff	28
3.12	Activity Diagram For Issue Assets To User	29
3.13	Activity Diagram For Ticket Generation	30
3.14	Activity Diagram For Ticket Solution	31
3.15	Component Diagram	32
3.16	Deployment Diagram	33
3.32	Table Specification	34
3.32.2	Table Admin Asset Problem Solution	33

3.32.3	Table Asset Details	33
3.32.4	Table Admin Asset	34
3.32.5	Table Asset Properties	34
3.32.6	Table Asset Type	35
3.32.7	Table Asset Problem	35
3.32.8	Table Asset Designation	36
3.32.9	Table Asset To User	36
3.32.10	Table Department	36
3.32.11	Table Designation	37
3.32.12	Table Technical Group	37
3.32.13	Table Staff Authentication	37
3.32.14	Table Staff Information	38
4	ANNEXURE	
4.1	Annexure 1 User Interface Screens	47
4.2	Annexure 2 Report Screens	67
5	IMPLEMENTATION PROCEDURE	
5.1	Test Procedure and Implementation	74
5.2	Test Cases	76
6	USER MAUAL	
6.1	USER MANUAL	83
6.1.1	Administrator	87
6.1.2	Technical Staff	88
6.1.3	User	89
6.2	Operational Manual	95
7	DRAWBACKS & LIMITATIONS	101
8.	PROPOSED ENHANCEMENT	102
9	CONCLUSION	103
10	BIBLOGRAPHY	104

Chapter - 1

INTRODUCTION

1.1 COMPANY PROFILE

Prudencys Solution is IT system integration, professional service and software development companies in Pune that works with Enterprise systems and companies. Prudencys Solution provides software design, and development, Training, Consultancy, as well as professional End-to-End Information Technology (IT) services.

As the global organization focused exclusively on reliability engineering, Prudencys Solution has developed an active and wide-reaching Research & Development program that offers a unique and powerful blend of subject matter expertise combined with the ability to effectively promote best practice reliability engineering methodologies via software-based solutions, training, consulting, publications, symposia, certification programs and other initiatives.

Intelligence, Innovation, Creativity, Culture, Consistence Performance these are principles that drive us. We are using these principles each day to create an inspiring workplace where inspiring ideas are rewarded.

Our technological focus and significant experience in software product development - designing and building has helped us in releasing products both for desktop and mobile platforms. This has also helped in reducing time-to-market, cutting costs, reduce business risk and improve overall business results for our customers.

1.2 EXISTING SYSTEM & NEED FOR SYSTEM

EXISTING SYSTEM

- ✓ The corporate group company with large number employees. Each employee needs some IT assets like computer, laptop, mobile, printer, Software etc.
- ✓ To tackle the various problems raised by users and maintaining the assets through out its life is the challenging part of IT department.
- ✓ In current system, IT department's technical person accepts the complaints by telephone calls. He tries his best to solve the problem; if the problem is not solved by the person, he transfers that problem to any other technical person. The next technical staff can also do the same so the problem just travel rounded through IT technical team and overall result is no time limit to solve problem.
- ✓ The malfunctioning of IT Department only because of support services are not organized by its rating category, type, technical person specialization etc.

NEED FOR THE SYSTEM

- ✓ By Using the Existing System The problem just travel rounded through IT technical team and overall result is no time limit to solve problem.
- ✓ It's difficult to get the status of the complaint generated by user. And also to get how much work done by Particular Technical Staff.
- ✓ The proposed System provides the problem solution in proper format. It will used to Access the Ticket Details by providing the User name or Technical Staff name.
- ✓ To maintain the accurate information about User, Technical Staff, Assets.
- ✓ The proposed system will help to reduce the manual work for maintaining the Detail Information about Ticket Log.
- ✓ Time saving.

1.3 SCOPE OF SYSTEM

Helpdesk allows managing support services more efficiently by treating each and every incoming request as a unique traceable ticket.

Get support requests sent by users into a help desk solution that both empowers support agents and reassures end-users of quick, efficient and quality support.

With the use of Help System we can create Users and issue Assets to users. Trace Assets issued to Users, Handel the user complaints through Ticket generated by the Users, Organize Technical Staff to tackle different types of complaints.

Using Knowledge Management user can self-diagnoses the problem for the solution. System can generate emails to users can get status of service he demanded. System can generate priority based SMS to Technical Staff persons for urgent service required by the user. System can generate analysis reports to improve the quality of service by the Technical staff.

System can assign priority to different complaints types as well as priority to users. System can generate various reports such as MIS Report, Performance analysis Report to meet user satisfaction.

The program is aimed at saving both the peoples time and the effort, at the same time giving them the professional results they want.

Scope for Administrator

Technical Staff Section

- ✓ Create New Technical Staff
- ✓ Edit/Delete Technical Staff
- ✓ Assign Shift and Working Day time to Tech. Staff
- ✓ Create Groups of Technical Staff
- ✓ Assign Service Role to Group
- ✓ Select Services regarding different assets that Particular Technical Staff Can Support
- ✓ Rank of Technical Staff

User Section

- ✓ Create User
- ✓ Create Department
- ✓ Create Designation
- ✓ Assign User to Department
- ✓ Assign Priority level to User/Designation

Assets Section

- ✓ Create Assets Type
- ✓ Create/Edit/Delete Assets
- ✓ Select Assets required for Designation
- ✓ Assign Priority Level to Asset Problem
- ✓ Set Time duration to Asset Problem
- ✓ Issue Assets to user
- ✓ Asset Tracking
- ✓ Transfer Assets to other User
- ✓ Create New Assets Problem
- ✓ Write solution to Assets Problem

Ticket Section

- ✓ View/Monitor Ticket Status
- ✓ View individual Technical Staffs work done on Tickets
- ✓ Transfer the assigned Ticket to other Particular Technical Staff
- ✓ Generate Assets problem (Ticket) Behalf of User
- ✓ Delete Ticket

Generate Report Section

- ✓ User Information
- ✓ Technical Staff Information
- ✓ Assets Report
- ✓ Assets provided to User
- ✓ Assets received by the user
- ✓ Assets Transferred to User
- ✓ Ticket Generated Report
- ✓ Ticket Pending Report
- ✓ Ticket Rejection Report
- ✓ Ticket Finished Report
- ✓ Group Work Report
- ✓ MIS REPORT
- ✓ Tickets / Discussion logs
- ✓ Technical staff performance analysis report
- ✓ Performance of IT Department
- ✓ Efficiency report

Scope for Technical Staff

- ✓ View his profile
- ✓ Change password
- ✓ Create Problem related to Assets
- ✓ Receive Ticket
- ✓ Change State of Ticket (Accept/On hold/Reject)
- ✓ Finish Ticket
- ✓ Write Solution to Problem

Scope for Client

- ✓ View his profile
- ✓ Change password
- ✓ View Assets provided to him with Details
- ✓ View Particular Asset Problem user logged
- ✓ Create/Raise/Update Ticket
- ✓ View the state of Ticket
- ✓ View Problem and Solution Related to Particular Asset Type
- ✓ Give Feedback to Solution

Scope for System

- ✓ Send SMS to Particular Technical Staff on bases of Ticket Priority
- ✓ Email Status of Ticket as feedback to User
- ✓ Share Ticket workload among Technical Staff
- ✓ Transfer Ticket to Head of Technical Staff Employee if not solved/Rejected
- ✓ Backup and Restore

1.4 OPERATING ENVIROMENT – HARDWARE AND SOFTWARE

Hardware and Software Requirement for Server:

Component	Required	
Operating system	Microsoft Windows server 2000	
Processor	Any Server Family processor	
RAM	1 gigabyte (GB)	
Free hard disk space	1 gigabyte (GB)	
Modem	1 megabits per second (Mbps)	
Internet connection	512 kilobits per second (Kbps)	
Video adapter and monitor	Super VGA (800 x 600) or higher resolution	
Internet browser	Microsoft Internet Explorer 6 or Netscape Navigator 7	
Microsoft Framework	3.5	
IIS	1.1	
Microsoft SQL Server	Microsoft SQL Server 2000	

Hardware and Software Requirement for User:

Component	Required
Operating system	Microsoft Windows® 98 Second Edition, Windows 2000, Windows Millennium Edition or Windows XP Professional, Windows Vista
Processor	A 233 megahertz (MHz) processor, such as an Intel Pentium II or Advanced Micro Devices (AMD) processor
RAM	64 megabytes (MB)
Free hard disk space	1 MB
Modem	28.8 kilobits per second (Kbps)
Internet connection	20 kilobits per second (Kbps)
Video adapter and monitor	Super VGA (800 x 600) or higher resolution
Internet browser	Microsoft Internet Explorer 6 or Netscape Navigator 7

1.5 DETAIL DESCRIPTION OF TECHNOLOGY USED

ASP.NET 3.5:

Introduction to .NET:

Visual Studio .NET is a complete set of development tools for building ASP Web applications, XML Web services, desktop applications, and mobile applications. Visual Basic .NET, Visual C++ .NET, and Visual C# .NET all use the same integrated development environment (IDE), which allows them to share tools and facilitates in the creation of mixed-language solutions. In addition, these languages leverage the functionality of the .NET Framework, which provides access to key technologies that simplify the development of ASP Web applications and XML Web services.

ASP.NET:

ASP .NET provides a unified web development model that includes the services necessary for developers to build enterprise-class Web Applications. It also provides a new programming model and infrastructure for more scalable and stable applications that help provides greater protection.

ASP .NET is a compiled .NET based environment.NET Framework is available to any ASP .NET application. Developers can easily access the benefits of these technologies, which include the managed common language runtime environment, type safety, inheritance, and so on.

SQL Server 2005:

SQL Server is a comprehensive database platform providing enterprise class data management with integrated business intelligence (BI) tools. The SQL Server 2005 database engines provides more secure, reliable storage for both relational and structured data enabling you to build and manage highly available, performing data applications that you and your people can use to take your business to next level.

The SQL data engine lies at the core of this enterprise data management solution. Additionally, SQL Server 2005 combines the best in analysis, reporting, integration and notification.

Chapter - 2

PROPOSED SYSTEM

2.1 PROPOSED SYSTEM

Proposed system will be fully computerized.

The proposed System will be able to handle the Following Things:-

- ✓ System to log complaints by user.
- ✓ Assign complaints with priority.
- ✓ Assigning complaints to appropriate technical staff.
- ✓ Provide acknowledgement of work as per user's demand.
- ✓ Managing & tracing Assets.
- ✓ Sharing the workload among technical staff.
- ✓ Analyzing performance of technical staff, & generate various reports
- ✓ Knowledge Sharing Wizard with troubleshooting.

2.2 OBJECTIVE OF SYSTEM

The main aim of system is to provide, manage & maintain various Assets of user. While using these assets the user may face any kind of problem regarding assets. The System will help user to generate ticket of complaint regarding provided asset, the System will analyze the ticket & it will assign the particular Technical Staff to solve that problem and generate the required reports.

2.3 USER REQUIREMENTS

Administration

- ✓ Administrator must be able to add new system users, modify details.
- ✓ Able to add and update technical staff details.
- ✓ Able to add and update assets details.
- ✓ Generate Reports as per requirement.

System Users

- ✓ View Self Asset details.
- ✓ Update personal details.
- ✓ Generate tickets.
- ✓ View Wizard for Demand/Supply.
- ✓ Update Profile.

Technical Staff

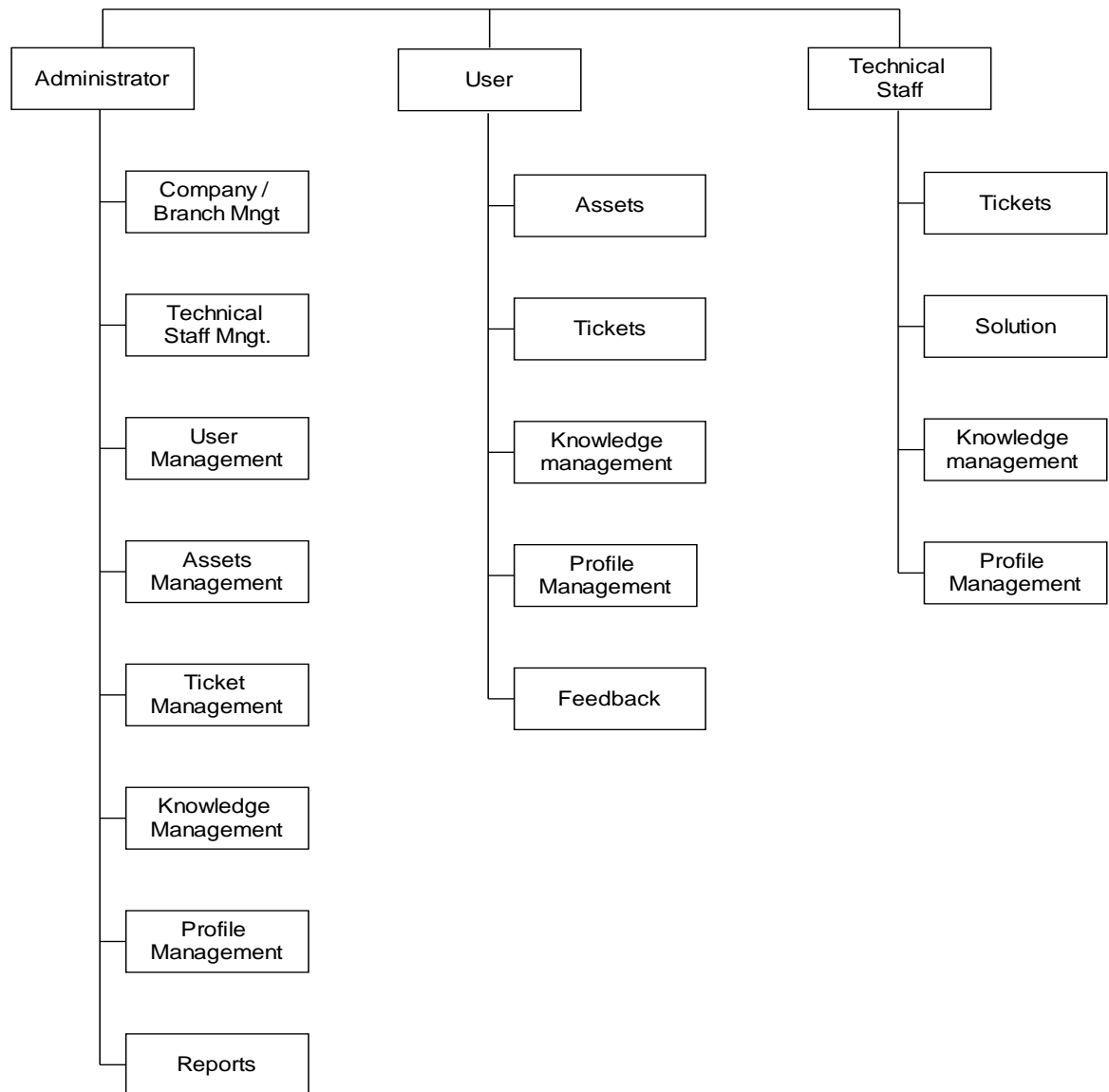
- ✓ View Ticket details
- ✓ Operations on Ticket.
- ✓ Write Solution to problems.
- ✓ Update Profile.

Chapter - 3

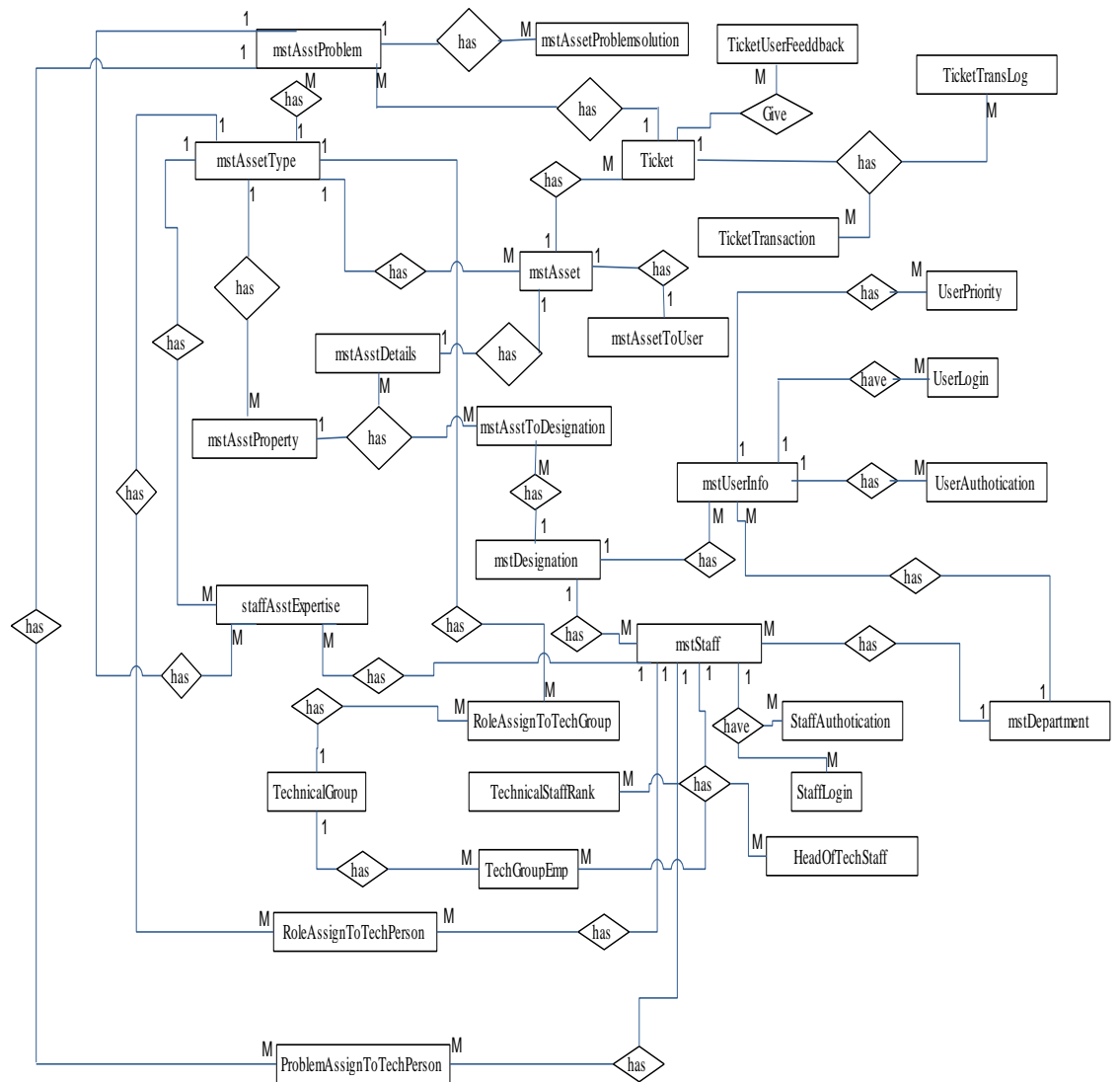
ANALYSIS & DESIGN

3.1 MODULE HIERARCHY DIAGRAM

3.1Module Hierarchy Diagram For IT Help Desk System

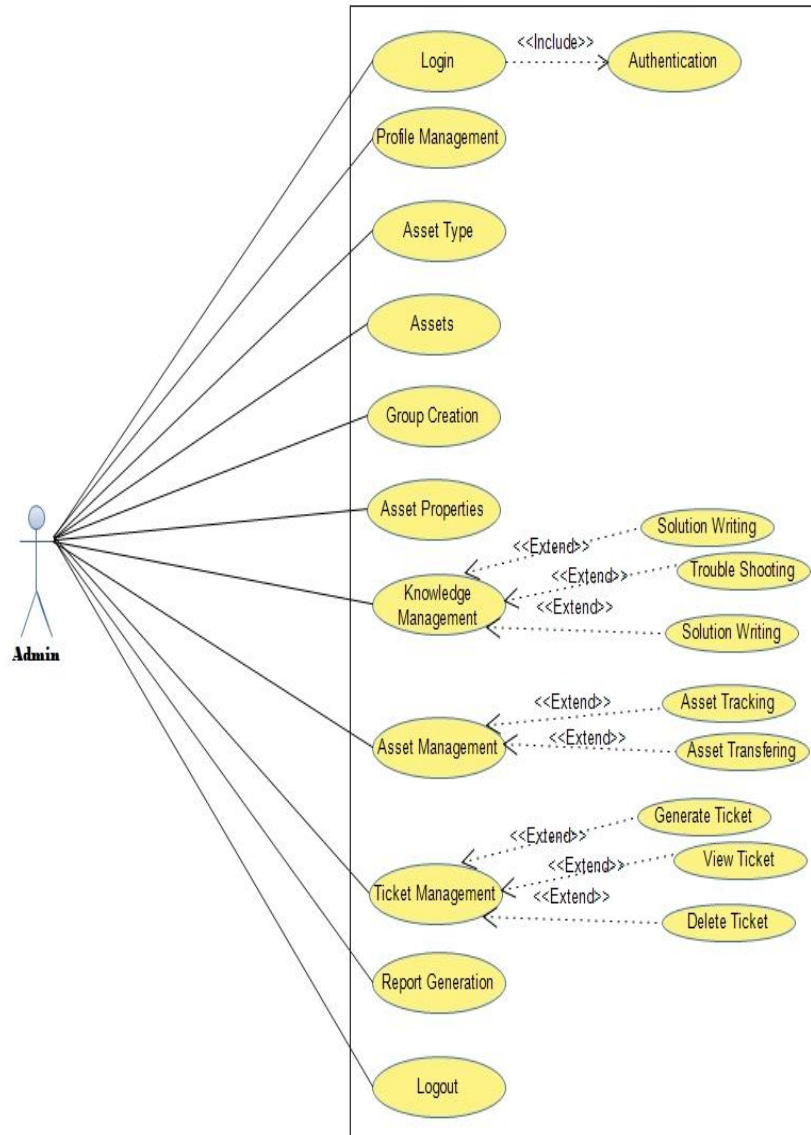


3.2 ENTITY RELATIONSHIP DIAGRAM

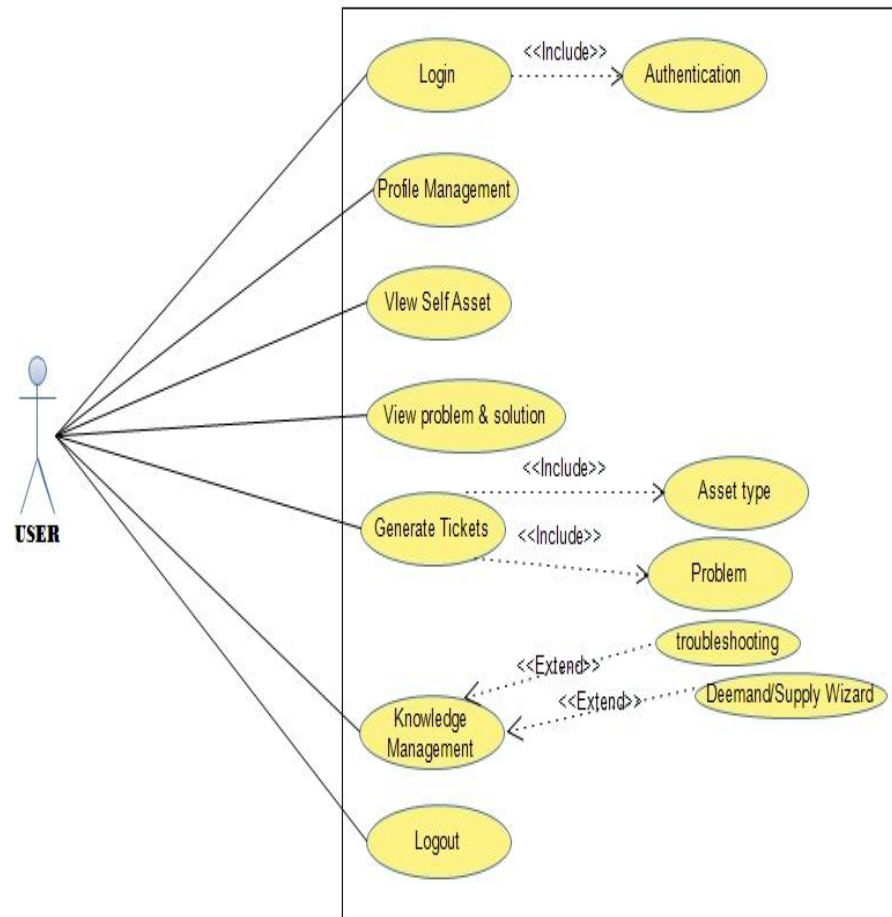


3.3 USE CASE DIAGRAM

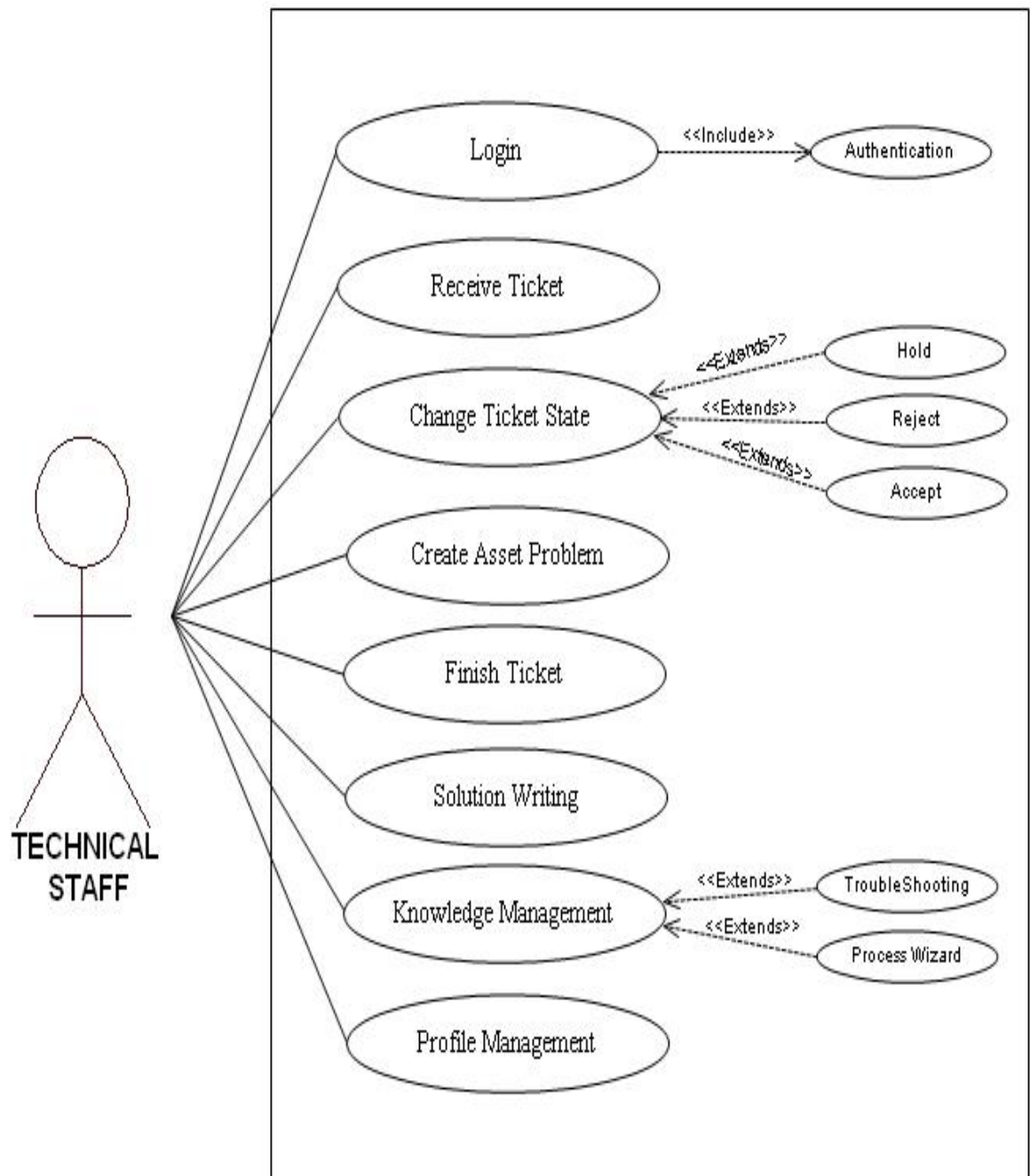
3.3.1 Use Case Diagram for Administrator



3.3.2 Use Case Diagram for User

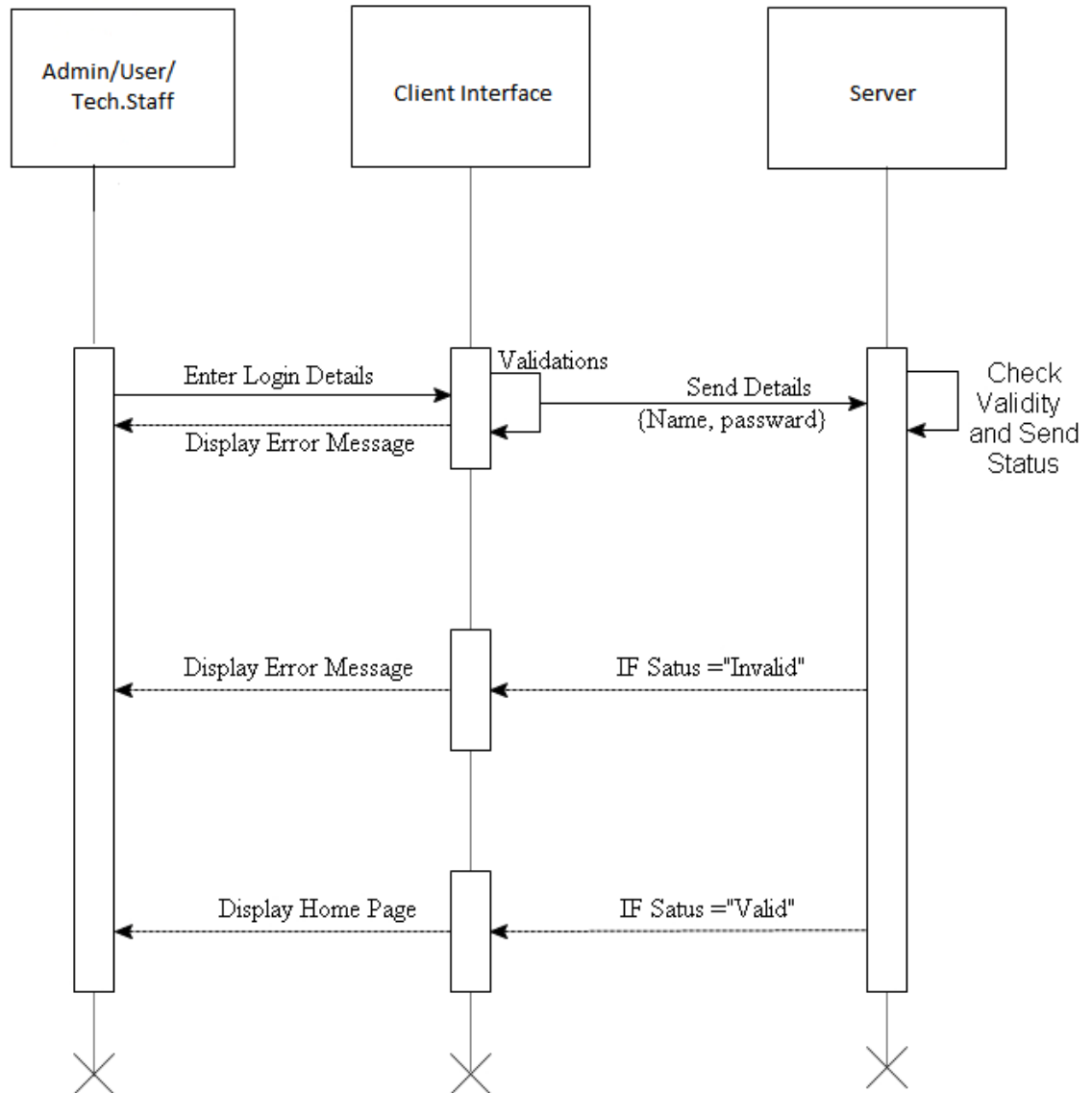


3.3.3 Use Case Diagram for Technical Staff

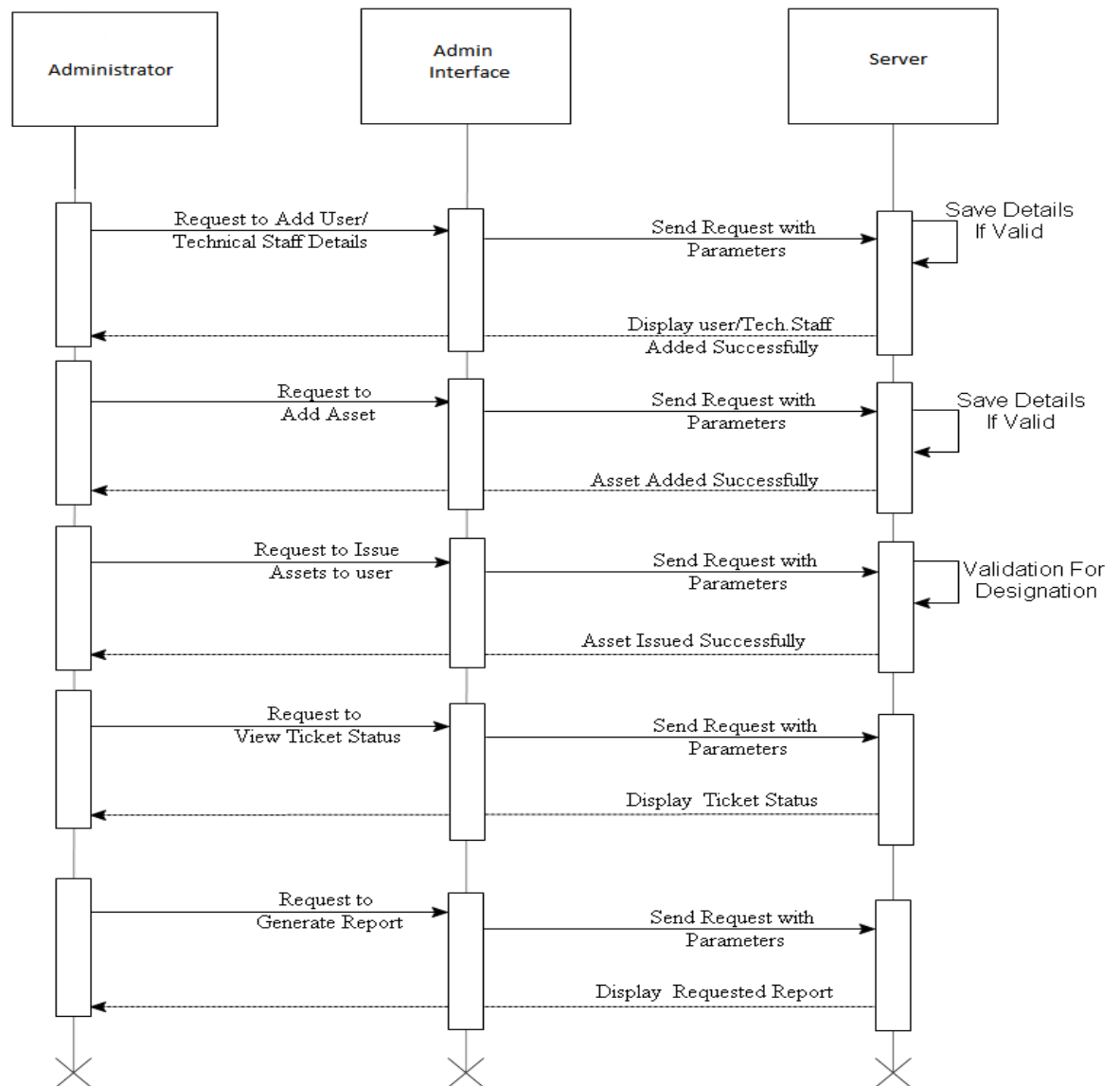


3.4 SEQUENCE DIAGRAM

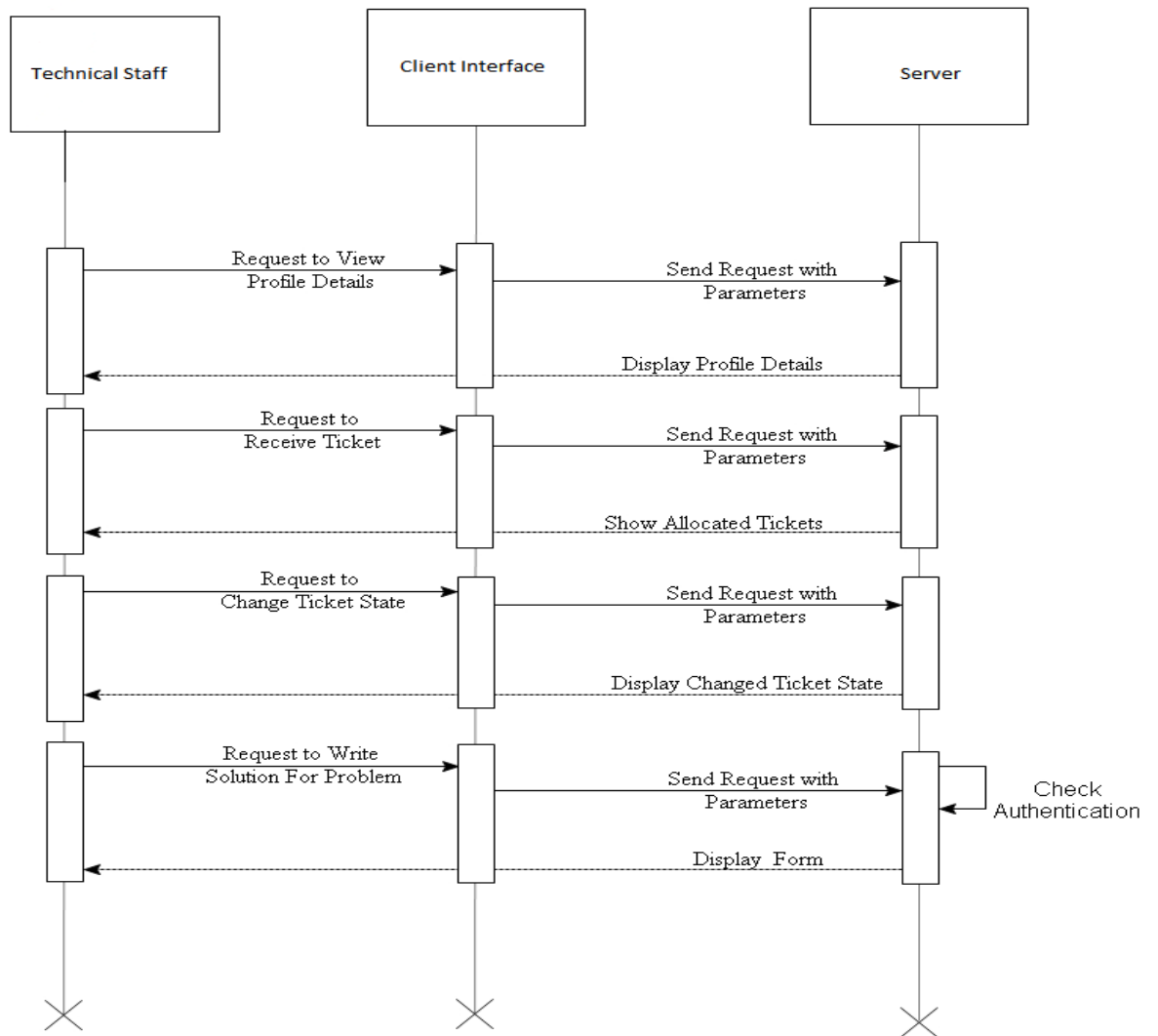
3.4.1 Sequence Diagram for Login



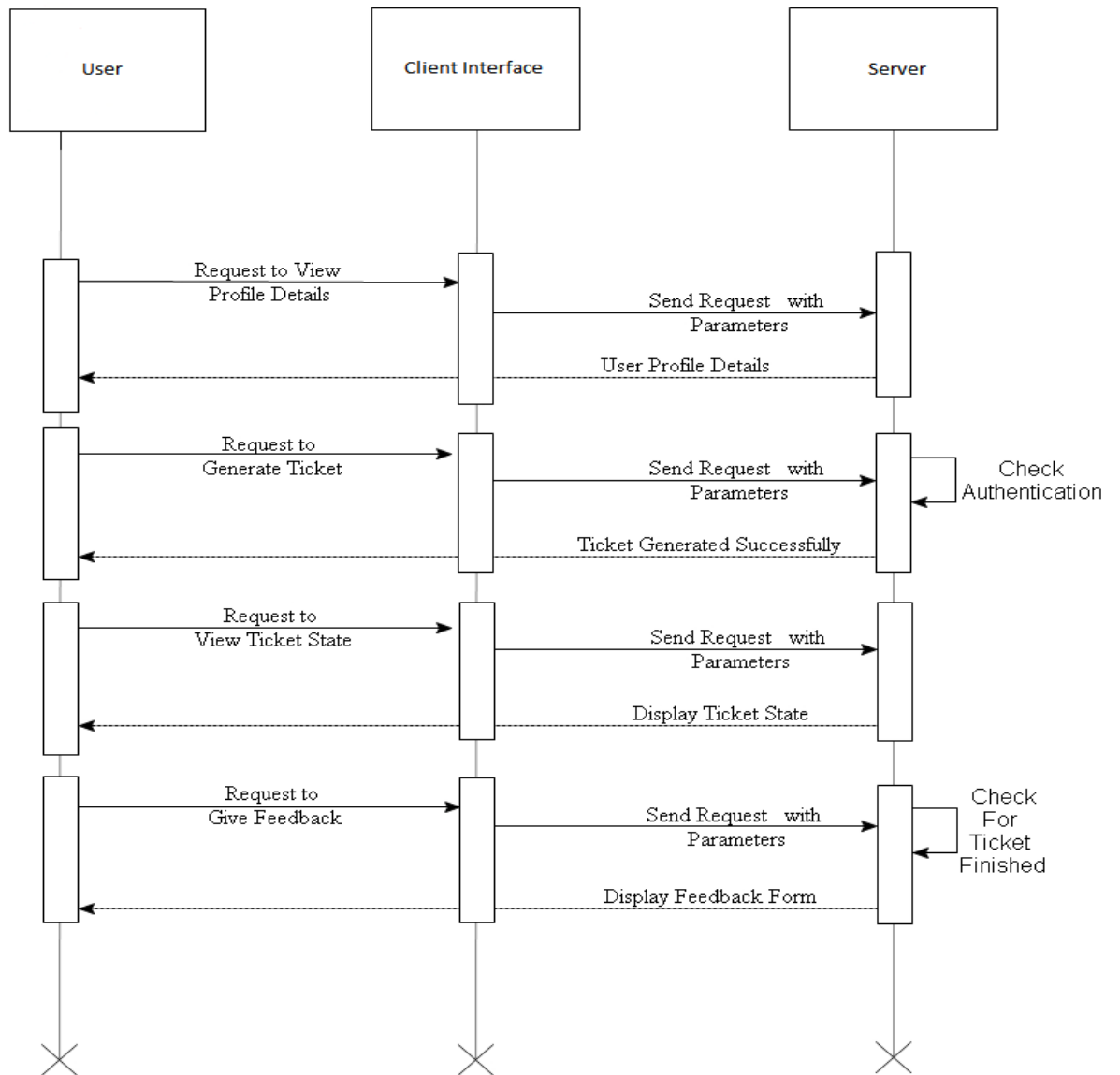
3.4.2 Sequence Diagram for Administrator



3.4.3 Sequence Diagram for Technical Staff

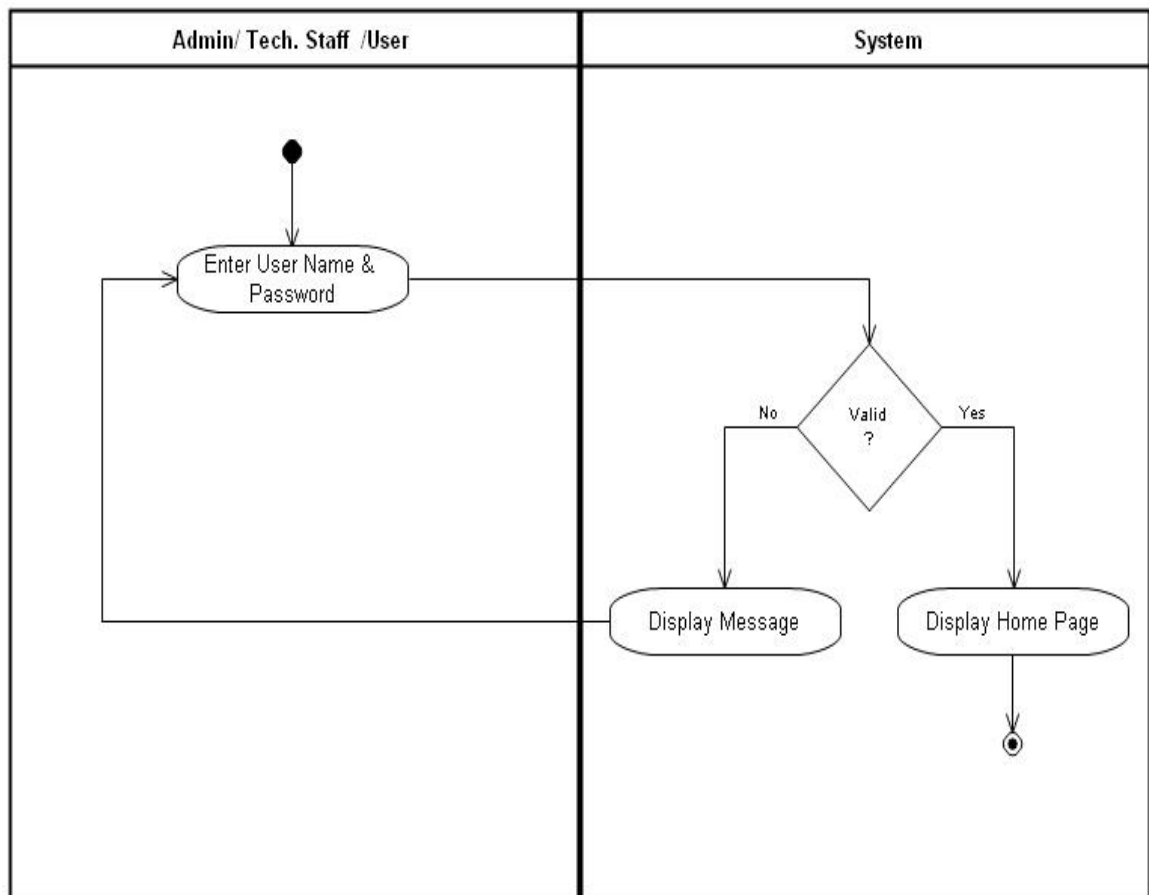


3.4.4 Sequence Diagram for user

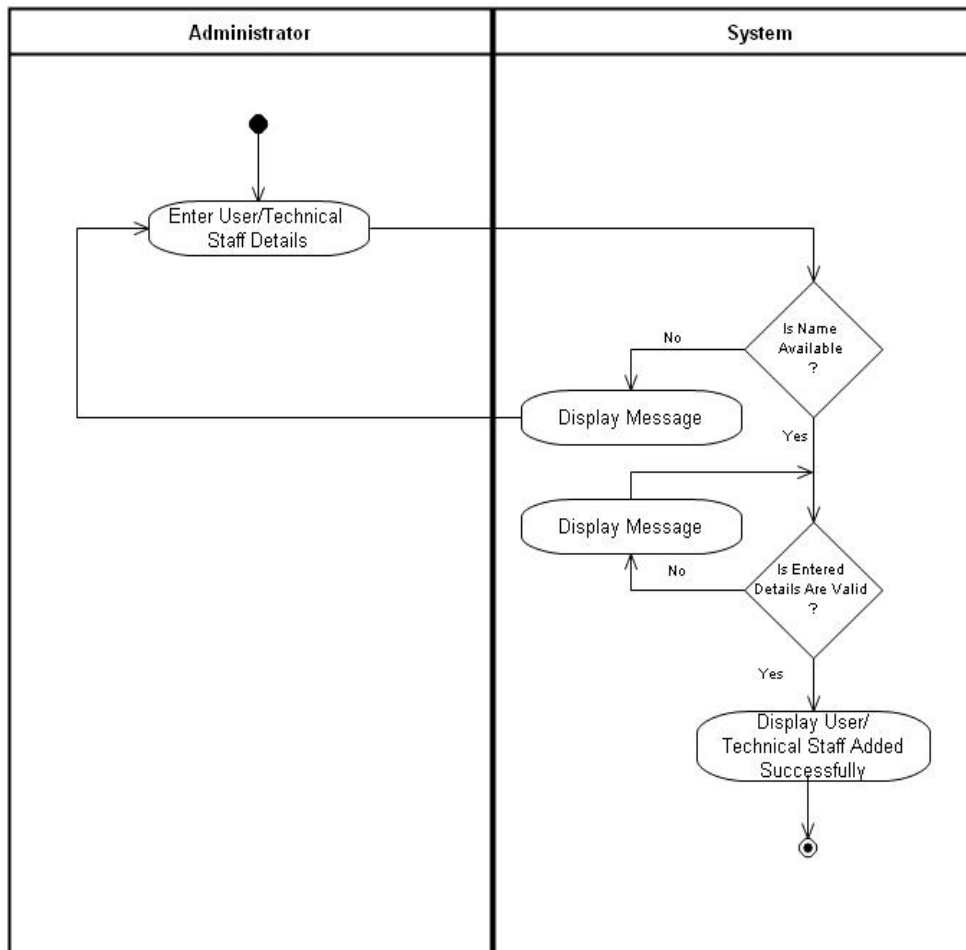


3.5 ACTIVITY DIAGRAM

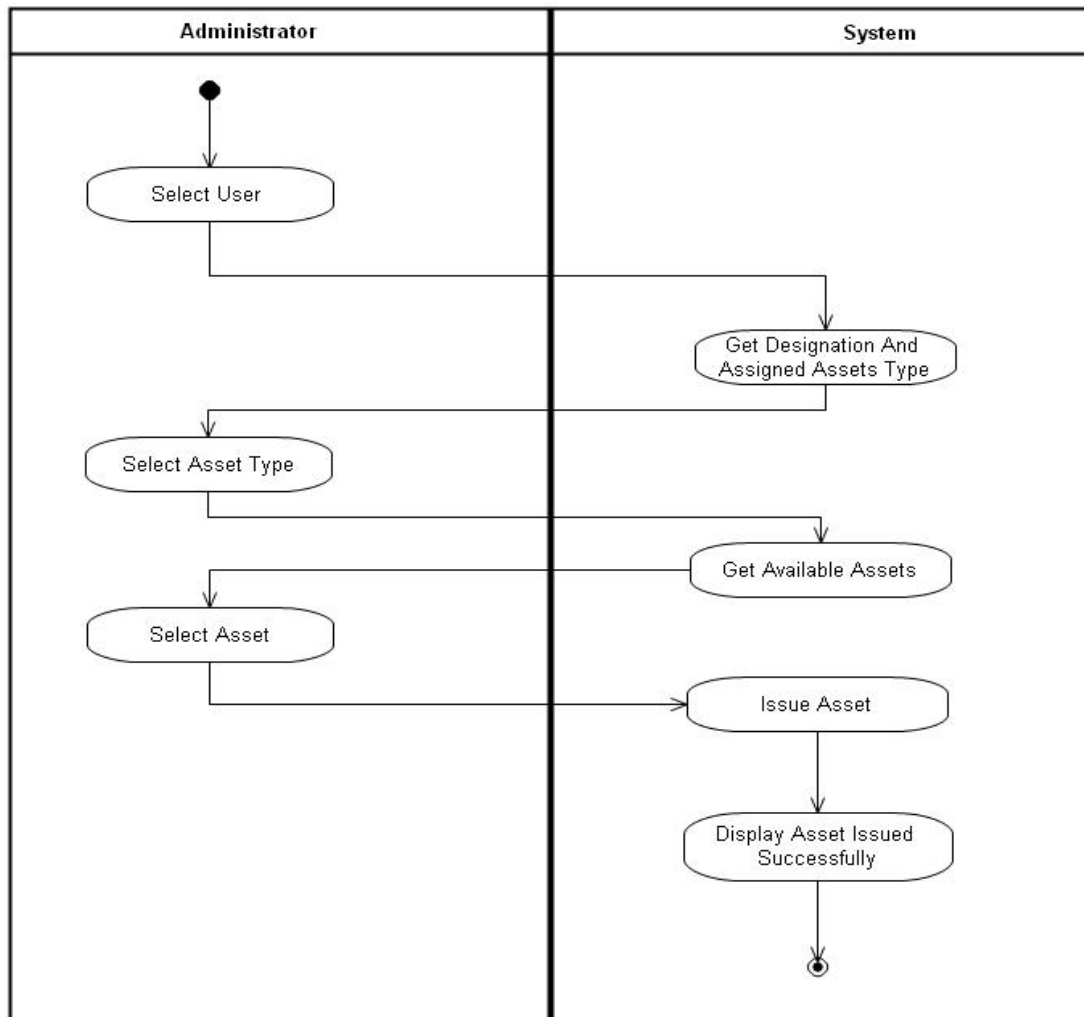
3.5.1 Activity Diagram for Login



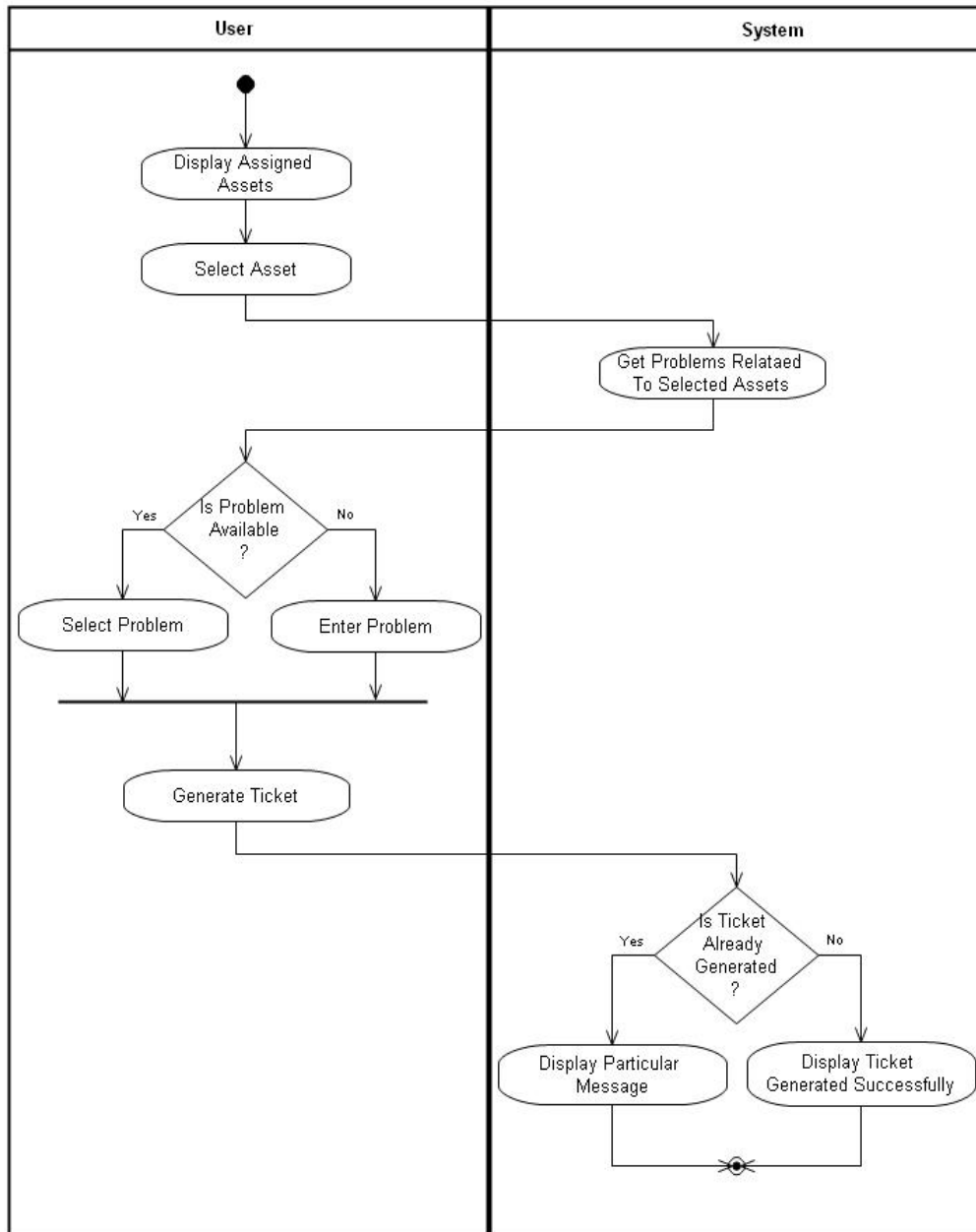
3.5.2 Activity Diagram for Add User/Technical Staff



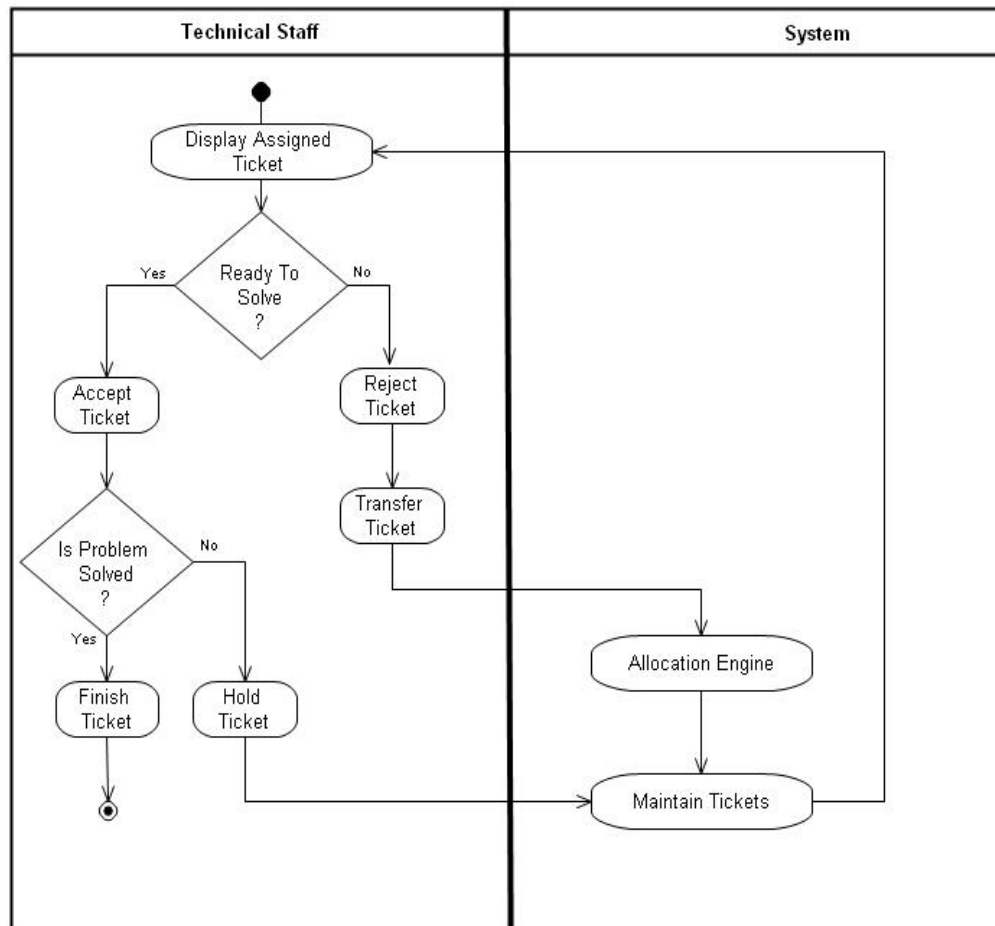
3.5.3 Activity Diagram for Issue Assets To User



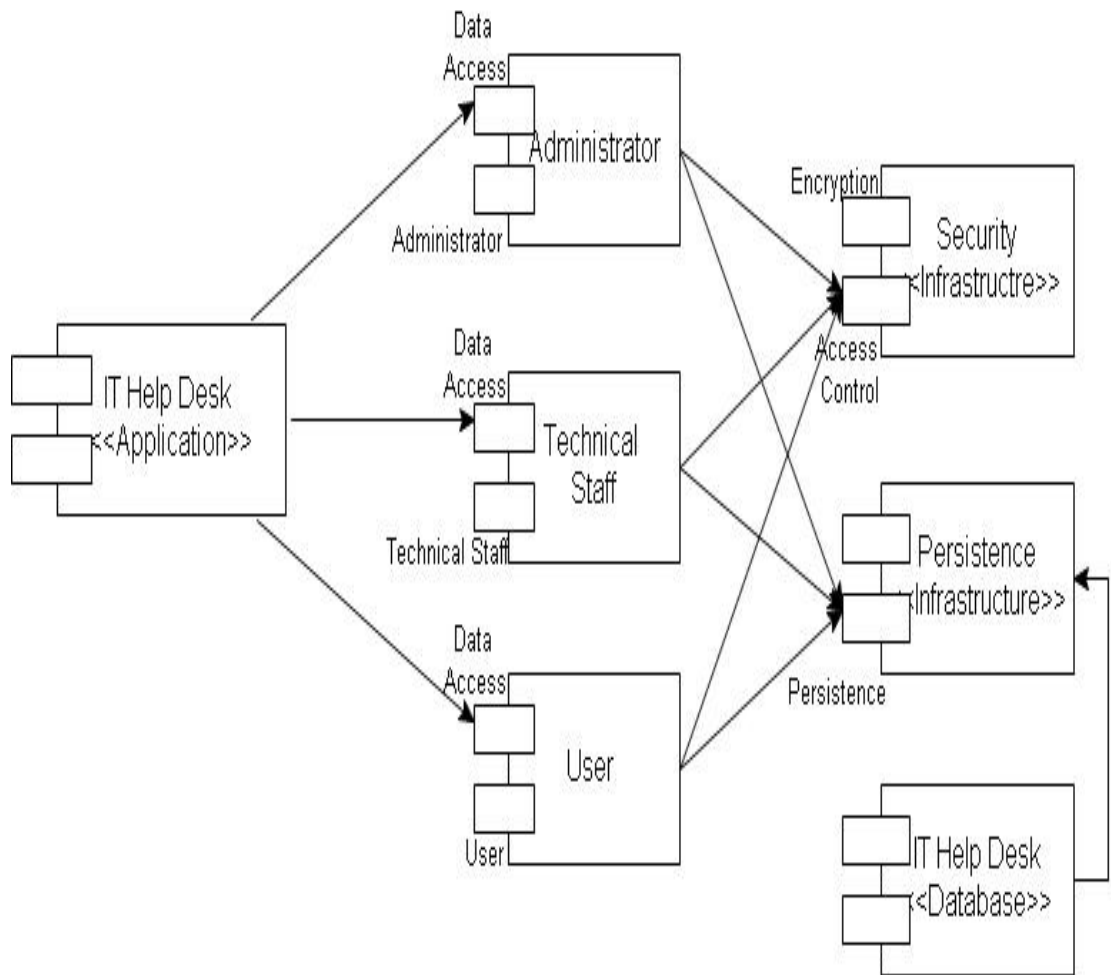
3.5.4 Activity Diagram for Ticket Generation



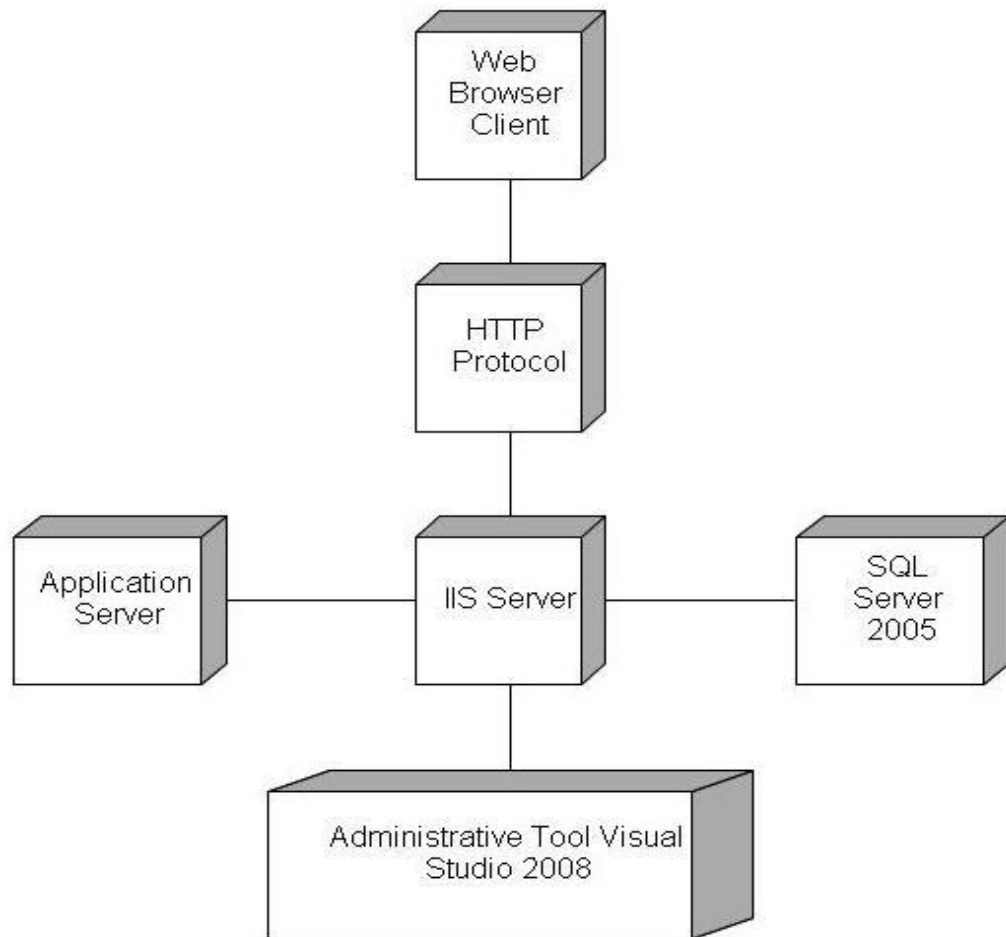
3.5.5 Activity Diagram for Ticket Solution



3.6 COMPONENT DIAGRAM



3.7 DEPLOYMENT DIAGRAM



3.8 TABLE SPECIFICATIONS

1] Table Name: mstAssetProblemSolution

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAssetProblemSolution_Id	bigint	-	PK
2	numAssetproblem_Id	bigint	-	FK
3	nvcharAssetProblemSolution	nvarchar	50	Not null
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	Bit	-	-

2] Table Name: mstAsset_Details

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAsset_Details_Id	bigint	-	PK
2	numAsset_Id	bigint	-	FK
3	numAsset_Property_Id	bigint	-	FK
4	nvcharAsset_Info	nvarchar	50	Not null
5	nvcharDescription	nvarchar	MAX	-
6	ynDeleted	Bit	-	-

3] Table Name: mstAsset

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAsset_Id	bigint	-	PK
2	numAsset_Type_Id	bigint	-	FK
3	nvcharAsset_Name	nvarchar	50	Not null
4	nvcharAsset_Tag_Id	nvarchar	50	Not null
5	nvcharAsset_Serial_Number	nvarchar	50	Not null
6	dtDateofManufacturing	datetime	-	Not null
7	nvcharAssetStatus	nvarchar	50	Not null
8	nvcharDescription	nvarchar	MAX	-
9	ynDeleted	Bit	-	-

4] Table Name: mstAsset_Properties

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAsset_Property_Id	bigint	-	PK
2	numAsset_Type_Id	bigint	-	FK
3	nvcharProperty_Name	nvarchar	50	Not null
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	Bit	-	-

5] Table Name: mstAsset_Type

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAsset_Type_Id	bigint	-	PK
2	nvcharAsset_Type_Name	nvarchar	50	Not null
3	nvcharAsset_Descreption	nvarchar	MAX	Not null
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	Bit	-	-

6] Table Name: mstAssetProblem

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAssetproblem_Id	bigint	-	PK
2	numAsset_Type_Id	bigint	-	FK
3	nvcharAsset_Problem_Name	nvarchar	50	Not null
4	nvcharAsset_Problem_detail	nvarchar	MAX	Not null
5	dtDurationToSolveProblem	datetime	-	Not null
6	numAssetProblemPriorityLevel	bigint	-	Not null
7	nvcharDescription	bvarchar	MAX	-
8	ynDeleted	Bit	-	-

7] Table Name: mstAssetstoDesignation

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAssetstoDesignation_Id	bigint	-	PK
2	numDesignation_Id	bigint		FK
3	numAsset_Id	bgint	-	FK
4	numAsset_Property_Id	bigint	-	FK
5	nvcharAsset_Info	nvarchar	MAX	Not null
6	nvcharDescription	nvarchar	MAX	-
7	ynDeleted	Bit	-	-

8] Table Name: mstAssetsToUser

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numAssetsToUser_Id	bigint	-	PK
2	numUser_Id	bgint	-	FK
3	numAsset_Id	bgint	-	FK
4	dtDateofIssued	datetime	-	Not null
5	nvcharDescription	nvarchar	MAX	-
6	ynDeleted	Bit		-

9] Table Name: mstDepartment

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numDepartment_Id	bgint	-	PK
2	nvcharDepartment_Name	nvarchar	50	Not null
3	nvcharDescription	nvarchar	MAX	-
4	ynDeleted	Bit	-	-

10] Table Name: mstDesignation

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numDesignation_Id	bigint	-	PK
2	nvcharDesignation_Name	nvarchar	50	Not null
3	numDesignation_Priority_Level	bigint	-	Not null
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	Bit	-	-

11] Table Name: mstTechnicalGroup

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numTechnicalGroupId	bigint	-	PK
2	nvcharGroupName	nvarchar	50	Not null
3	nvcharDescription	nvarchar	MAX	-
4	ynDeleted	Bit	-	-

12] Table Name: mstStaff_Authondication

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numStaff_Auth_Id	Bigint	-	PK
2	numStaff_Id	Bigint	-	FK
3	bitEditProfile	Bit	-	-
4	bitGenerate_Ticket	Bit	-	-
5	bitIssue_Assets	Bit	-	-
6	nvcharDescription	nvarchar	MAX	-
7	ynDeleted	Bit	-	-

13] Table Name: mstStaff_Information

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numStaff_Id	bigint	-	PK
2	numDepartment_Id	bigint	-	FK
3	numDesignation_Id	Bigint	-	FK
4	nvcharStaff_Name	nvarchar	-	Not null
5	nvcharStaff_Parmant_Address	nvarchar	MAX	Not null
6	nvcharStaff_Temperory_Address	nvarchar	MAX	-
7	numStaff_Phone_Number	Bigint	-	-
8	numStaff_Fax_Number	Bigint	-	-
9	nvcharStaff_Email_Id	nvarchar	50	-
10	imgStaff_Photo	image	-	-
11	nvcharDescription	nvarchar	50	-
12	ynDeleted	Bit	-	-

14] Table Name: mstStaff_Login

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numStaff_Login_Id	bigint	-	PK
2	numStaff_Id	bigint	-	FK
3	nvcharStaffLoginName	nvarchar	50	Not null
4	nvcharStaffPassword	nvarchar	50	Not null
5	nvcharDescription	nvarchar	MAX	-
6	ynDeleted	Bit	-	-

15] Table Name: mstStaffAssetsExperties

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numStaffAssetsExperties_Id	bigint	100	PK
2	numStaff_Id	bigint	50	FK
3	numAsset_Type_Id	bigint	30	FK
4	numAssetproblem_Id	bigint	30	FK
5	nvcharDescription	nvarchar	MAX	-
6	ynDeleted	Bit		-

16] Table Name: mstUser_Authondication

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numUser_Auth_Id	bigint	-	PK
2	numUser_Id	bigint	-	FK
3	bitEditProfile	Bit	-	-
4	bitGenerate_Ticket	Bit	-	-
5	bitIssue_Assets	Bit	-	-
6	nvcharDescription	nvarchar	MAX	-
7	ynDeleted	Bit	-	-

17] Table Name: mstUser_Information

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numUser_Id	bigint	-	PK
2	numDepartment_Id	bigint	-	FK
3	numDesignation_Id	bigint	-	FK
4	nvcharUser_Name	nvarchar	50	Not null
5	nvcharUser_Parmant_Address	nvarchar	MAX	Not null
6	nvcharUser_Temperory_Address	nvarchar	MAX	-
7	numUser_Phone_Number	bigint		-
8	numUser_Fax_Number	bigint		-
9	nvcharUser_Email_Id	nvarchar	50	Not null
10	numUserPriorityLevel	bigint		Not null
11	imgUser_Photo	image		-
12	nvcharDescription	nvarchar	MAX	-
13	ynDeleted	bit		-

18] Table Name: mstUser_Login

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numUser_Login_Id	bigint	-	PK
2	numUser_Id	bigint	-	FK
3	nvcharUserLoginName	nvarchar	50	Unique Key
4	nvcharUserPassword	nvarchar	50	Not null
5	nvcharDescription	nvarchar	MAX	-
6	ynDeleted	bit	-	-

19] Table Name: mstUserPriority

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numUserPriority_Id	bigint	-	PK
2	numUser_Id	bigint	-	FK
3	numUserPriority_Level	bigint	-	Not null

20] Table Name: tblGroupHeads

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numGroupHeadsId	bigint	-	PK
2	numHeadOfGroup	bigint	-	FK
3	nvarcharDescription	nvarchar	MAX	-
4	ynDeleted	bit	-	-

21] Table Name: tblHeadOfTechStaff

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numHeadOfTechStaffId	bigint	-	PK
2	numStaff_Id	bigint	-	FK
3	nvarcharDescription	nvarchar	MAX	-
4	ynDeleted	bit	-	-

22] Table Name: tblProblemassignmetToTechPerson

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numProblemassignmetToTechPersonId	bigint	-	PK
2	numStaff_Id	bigint	-	FK
3	numAssetproblem_Id	bigint	-	FK
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	bit	-	-

23] Table Name: tblRoleAssignToTechPerson

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numRoleAssignToTechPerson	bigint	-	PK
2	numStaff_Id	bigint	-	FK
3	numAsset_Type_Id	bigint	-	FK
4	nvcharDescription	nvarchar	-	-
5	ynDeleted	bit	-	-

24] Table Name: tblRoleAssignmentTOGroup

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numRoleAssignmentTOGroupId	bigint	-	PK
2	numTechnicalGroupId	bigint	-	FK
3	numAsset_Type_Id	bigint	-	FK
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	bit	-	-

25] Table Name: tblTechStaffRank

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numTechStaffRankId	bigint	-	PK
2	numStaff_Id	bigint	-	FK
3	numRank	bigint	-	Not null
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	bit	-	-

26] Table Name: tblTicket

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numTicket_Id	bigint	-	PK
2	numAsset_Id	bigint	-	FK
3	numUser_Id	bigint	-	FK
4	numAssetproblem_Id	bigint	-	-
5	nvcharOhterProblem	nvarchar	50	-
6	dtDateOfTicketCreation	datetime		Not null
7	nvcharStatusOfTicket	nvarchar	50	Not null
8	numUserPriority	bigint		Not null
9	nvcharDescription	nvarchar	MAX	-
10	ynDeleted	bit		-

27] Table Name: tblTicketUserFeedBack

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numTicketUserFeedBack_Id	bigint	-	PK
2	numTicket_Id	bigint	-	FK
3	nvcharFeedBack	nvarchar	MAX	Not null
4	nvcharDescription	nvarchar	MAX	-
5	ynDeleted	bit		-

28] Table Name: tblTicketTransLog

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numTicketTransLog_Id	bigint	-	PK
2	numTicket_Id	bigint	-	FK
3	numTicketAssignedTo	bigint	-	Not null
4	nvcharStatusOfTicket	nvarchar	50	Not null
5	nvcharStaffReport	nvarchar	50	Not null
6	ynDeleted	bit	-	-

29] Table Name: tblTicketTrans

Sr. No.	Fields Name	Data Type	Size	Constraints
1	numTicketTrans_Id	bigint	-	PK
2	numTicket_Id	bigint	-	FK
3	numTicketAssignedTo	bigint	-	FK
4	dtTicketRecivedTime	datetime	-	Not null
5	dtTicketAssetpedTime	datetime	-	Not null
6	dtTicketRejectedTime	datetime	-	Not null
7	dtTicketSolvedTime	datetime	-	Not null
8	nvcharRemarkOfTechnicalStaff	nvarchar	50	Not null
9	nvcharDescription	nvarchar	50	-
10	ynDeleted	bit	-	-

Chapter - 4

ANNEXURE

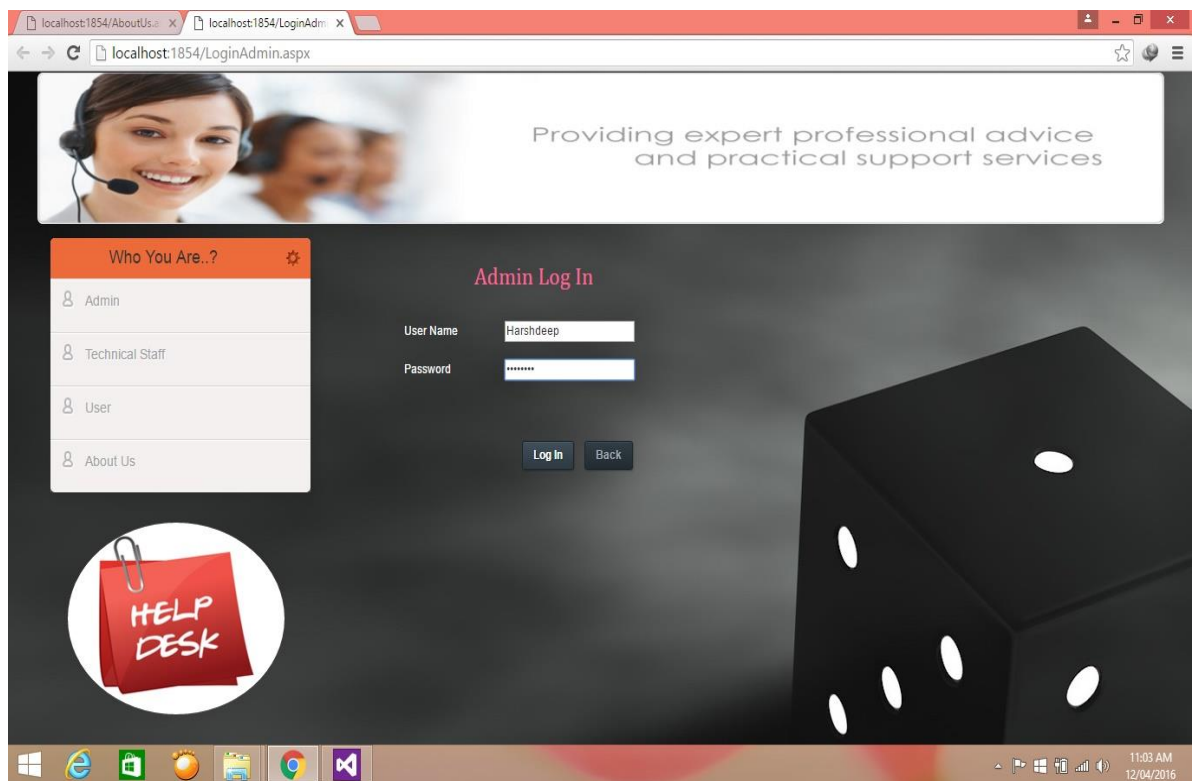
4.1 INPUT SCREEN

Home Page-

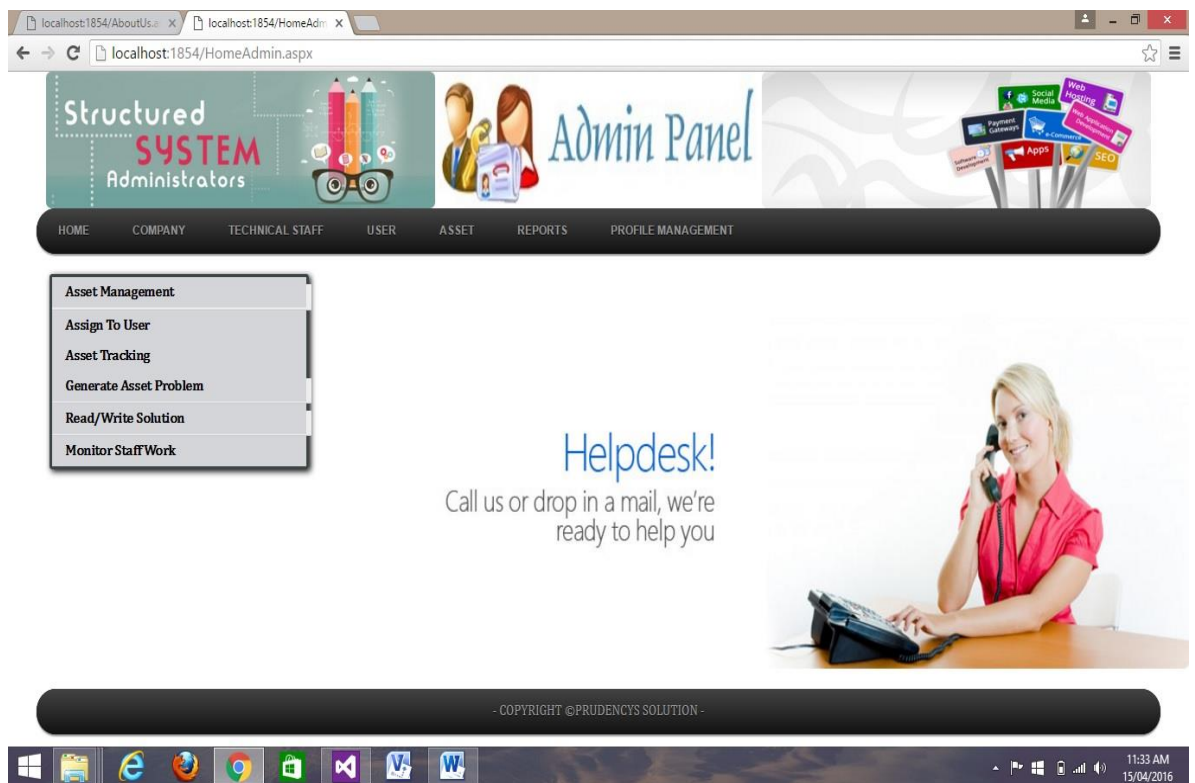


Administrator Module

- Admin Home



- **Admin Home**



- To add new asset:

localhost:1854/AddNewAsset.aspx

Structured SYSTEM Administrators Admin Panel

HOME COMPANY TECHNICAL STAFF USER ASSET REPORTS PROFILE MANAGEMENT

Asset Management
Assign To User
Asset Tracking
Generate Asset Problem
Read/Write Solution
Monitor Staff Work

Add New Asset

Asset Type Name : Desktop PC

Asset Description : Dell G1

Description : With All Parts

Save Clear

COPYRIGHT ©PRUDENCY SOLUTION

12:04 PM 15/04/2016

- To add new asset by selecting predefined asset type:

The screenshot shows a web browser window with the URL `localhost:1854/PridefineAssetType.aspx`. The page features a header with the logo "Structured SYSTEM Administrators" and a navigation menu with links: HOME, COMPANY, TECHNICAL STAFF, USER, ASSET, REPORTS, and PROFILE MANAGEMENT. A sidebar on the left contains a menu with options: Asset Management, Assign To User, Asset Tracking, Generate Asset Problem, Read/Write Solution, and Monitor Staff Work. The main content area is titled "Add New Asset By Selecting Predefine Asset Type" and contains a form with the following fields:

- Asset Type:
- Asset Name:
- Tag ID:
- Serial Number:
- Date Of Manufacturing:
- Asset Status:
- Description:

At the bottom of the form are three buttons: Save, Clear, and Cancel. A small dialog box in the top right corner displays the message "Data Save Sucessfully" with an OK button. The Windows taskbar at the bottom shows the system clock as 10:42 PM on 12/04/2016.

- To add new asset problem:

The screenshot displays a web application interface for 'Structured SYSTEM Administrators'. The top navigation bar includes links for HOME, COMPANY, TECHNICAL STAFF, USER, ASSET, REPORTS, and PROFILE MANAGEMENT. A sidebar menu on the left lists options: Asset Management, Assign To User, Asset Tracking, Generate Asset Problem, Read/Write Solution, and Monitor Staff Work. The main content area is titled 'Add New Asset Problem' and contains the following form fields:

- Asset Type : Desktop PC
- Problem Name : UG Cable
- Problem Detail : Not Working
- Duration To Solve Problem : 5 Days
- Problem Priority : 01
- Description : Minor Problem

At the bottom of the form are three buttons: Save, Clear, and Cancel. The footer of the application states '- COPYRIGHT ©PRUDENCY SOLUTION -'. The Windows taskbar at the bottom shows the date as 15/04/2016 and the time as 12:09 PM.

- To write solutions to predefined asset problems:

Structured SYSTEM Administrators Admin Panel

HOME COMPANY TECHNICAL STAFF USER ASSET REPORTS PROFILE MANAGEMENT

Asset Management
Assign To User
Asset Tracking
Generate Asset Problem
Read/Write Solution
Monitor Staff Work

Write Solution To Predefine Asset Problem

Asset Problem: Power Cable Damage

Problem Solution: Replace

Description: Minor

Save Clear Cancel

- COPYRIGHT ©PRUDENCY SOLUTION -

Windows taskbar: 12:11 PM 15/04/2016

- To add new user in the system:

The screenshot displays a web browser window with the URL `localhost:1854/AddNewUser.aspx`. The page features a header with the title "Structured SYSTEM Administrators" and "Admin Panel". A navigation menu includes links for HOME, COMPANY, TECHNICAL STAFF, USER, ASSET, REPORTS, and PROFILE MANAGEMENT. The "USER" menu is expanded, showing options like "Add New User" (highlighted), "Edit/Delete User", "Asset Management", "Assign To User", "Asset Tracking", "Generate Asset Problem", "Read/Write Solution", and "Monitor Staff Work".

The "Add New User" form contains the following fields:

- Department Name:
- Designation:
- User Name:
- Permanent Address:
- Temporary Address:
- Phone No:
- Pan No:
- Email ID:
- Selection Priority:
- Description:
- Photo:

At the bottom of the form are buttons for "Save", "Clear", and "Cancel". A footer bar contains the text "- COPYRIGHT ©PRUDENCY SOLUTION -". The Windows taskbar at the bottom shows the time as 12:03 PM on 15/04/2016.

- To add new technical staff:

localhost:1854/AddNewTechnicalStaff.aspx

Structured SYSTEM Administrators Admin Panel

HOME COMPANY TECHNICAL STAFF USER ASSET REPORTS PROFILE MANAGEMENT

Asset Management
Assign To User
Asset Tracking
Generate Asset Problem
Read/Write Solution
Monitor Staff Work

Add New Staff
Add New Staff Group
Assign Employee To Group

Add New Technical Staff

Department Name Pan No

Designation Email ID

Staff Name Selection Priority

Permanent Address Description

Temporary Address Photo

Phone No

- COPYRIGHT ©PRUDENCY SOLUTION -

localhost:1854/AddNewTechnicalStaff.aspx

11:57 AM 15/04/2016

- To add new technical staff group:

The screenshot displays a web browser window at the URL `localhost:1854/AddNewTechStaffGroup.aspx`. The application header includes a logo for 'Structured SYSTEM Administrators', a navigation menu with items like HOME, COMPANY, TECHNICAL STAFF, USER, ASSET, REPORTS, and PROFILE MANAGEMENT, and a secondary menu with icons for various services. A dropdown menu is open under 'TECHNICAL STAFF', showing options: 'Add New Staff', 'Add New Staff Group' (highlighted), and 'Assign Employee To Group'. The main content area is titled 'Add New Technical Staff Group' and contains two input fields: 'Group Name' with the value 'Group-A' and 'Description' with the value 'Technical'. Below these fields are 'Save', 'Clear', and 'Cancel' buttons. A footer bar at the bottom of the application area reads '- COPYRIGHT ©PRUDENCY SOLUTION -'. The Windows taskbar at the bottom of the screen shows the time as 11:58 AM on 15/04/2016.

- To assign employees to group:

The screenshot displays a web application interface for 'Structured SYSTEM Administrators'. The main header includes the text 'Admin Panel' and a navigation bar with links: HOME, COMPANY, TECHNICAL STAFF, USER, ASSET, REPORTS, and PROFILE MANAGEMENT. A sidebar menu on the left is open, showing options under 'Asset Management': 'Assign To User', 'Asset Tracking', 'Generate Asset Problem', 'Read/Write Solution', and 'Monitor Staff Work'. The 'Assign Employee To Group' option is highlighted. The main content area is titled 'To Assign Employees To Group' and contains the following form fields:

- Technical Group Name :
- Staff Name :
- Description :

An 'Assign' button is located below the form fields. At the bottom of the page, a copyright notice reads '- COPYRIGHT ©PRUDENCY'S SOLUTION -'. The browser's address bar shows 'localhost:1854/AssignEmpToGroup.aspx'. The Windows taskbar at the bottom indicates the time is 11:59 AM on 15/04/2016.

- **Assigning Asset to user:**

The screenshot displays a web browser window with the URL `localhost:1854/AssignAssetToUser.aspx`. The application header features a navigation menu with links: HOME, COMPANY, TECHNICAL STAFF, USER, ASSET, REPORTS, and PROFILE MANAGEMENT. A sidebar on the left contains a menu with options: Asset Management, Assign To User (highlighted), Asset Tracking, Generate Asset Problem, Read/Write Solution, and Monitor Staff Work. The main content area is titled 'Assign Asset To User' and includes the following form fields:

- Designation:** A dropdown menu currently showing 'Select'.
- Asset_Type:** A text input field containing 'Desktop PC'.
- Isshue_Date:** A date picker field showing '11/03/2016'.
- Description:** A text input field containing 'All Parts Involve'.

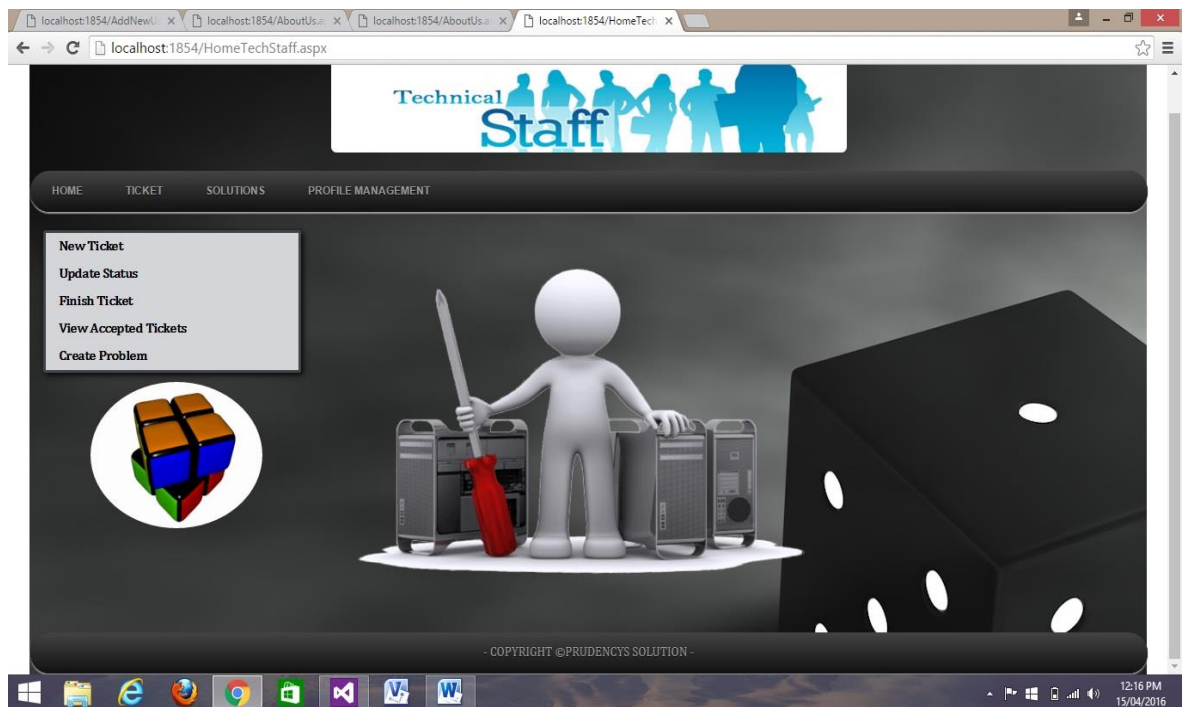
At the bottom of the form are three buttons: 'Isshue', 'Clear', and 'Cancel'. A footer bar at the bottom of the application area reads '- COPYRIGHT ©PRUDENCY'S SOLUTION -'. The Windows taskbar at the bottom of the screen shows the time as 12:07 PM on 15/04/2016.

- **Change Password:**

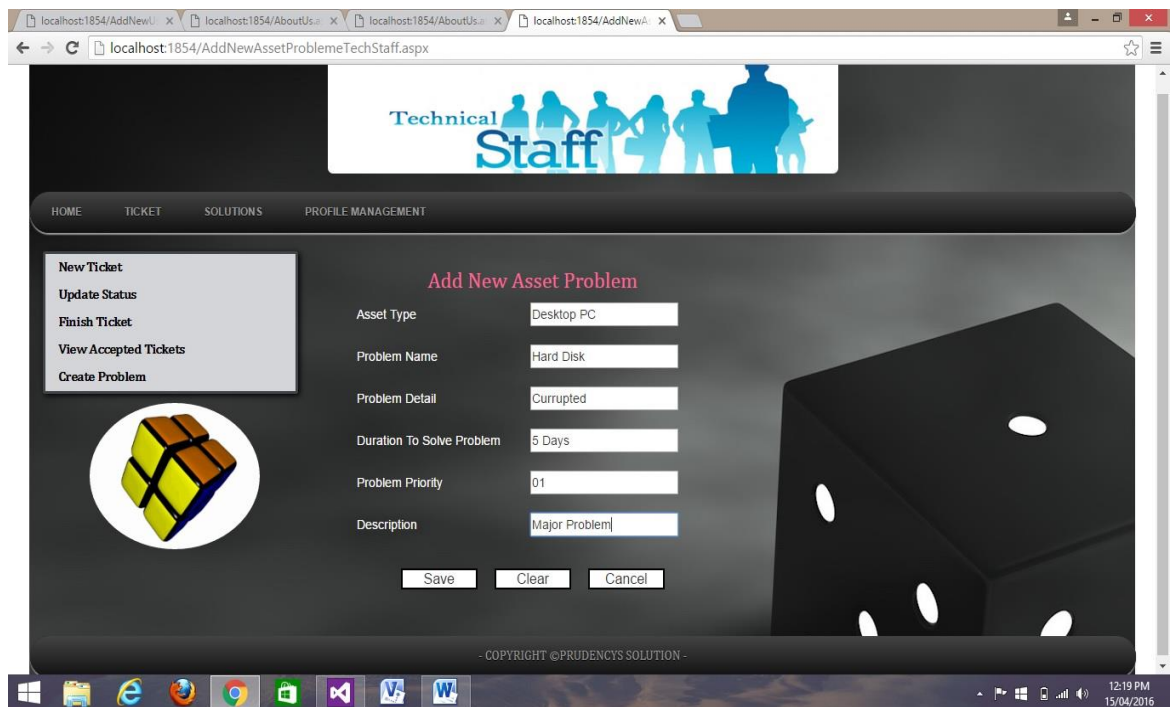
The screenshot shows a web browser window with the address bar displaying 'localhost:1854/ChangePasswordAdmin.aspx'. The page features a header with the text 'Structured SYSTEM Administrators' and 'Admin Panel'. Below the header is a navigation bar with links: HOME, COMPANY, TECHNICAL STAFF, USER, ASSET, REPORTS, and PROFILE MANAGEMENT. On the left side, there is a sidebar menu with the following items: Asset Management, Assign To User, Asset Tracking, Generate Asset Problem, Read/Write Solution, and Monitor Staff Work. The main content area is titled 'Change Password' and contains three input fields for 'Current Password', 'New Password', and 'Re-Enter New Password', each followed by a password strength indicator (a series of dots). Below the input fields are two buttons: 'Change' and 'Clear'. At the bottom of the page, there is a footer that reads '- COPYRIGHT ©PRUDENCY SOLUTION -'. The Windows taskbar at the bottom of the screen shows various application icons and the system clock indicating 12:05 PM on 15/04/2016.

Technical staff Module

- **Technical Staff Home**



- **Add New Asset Problem:**

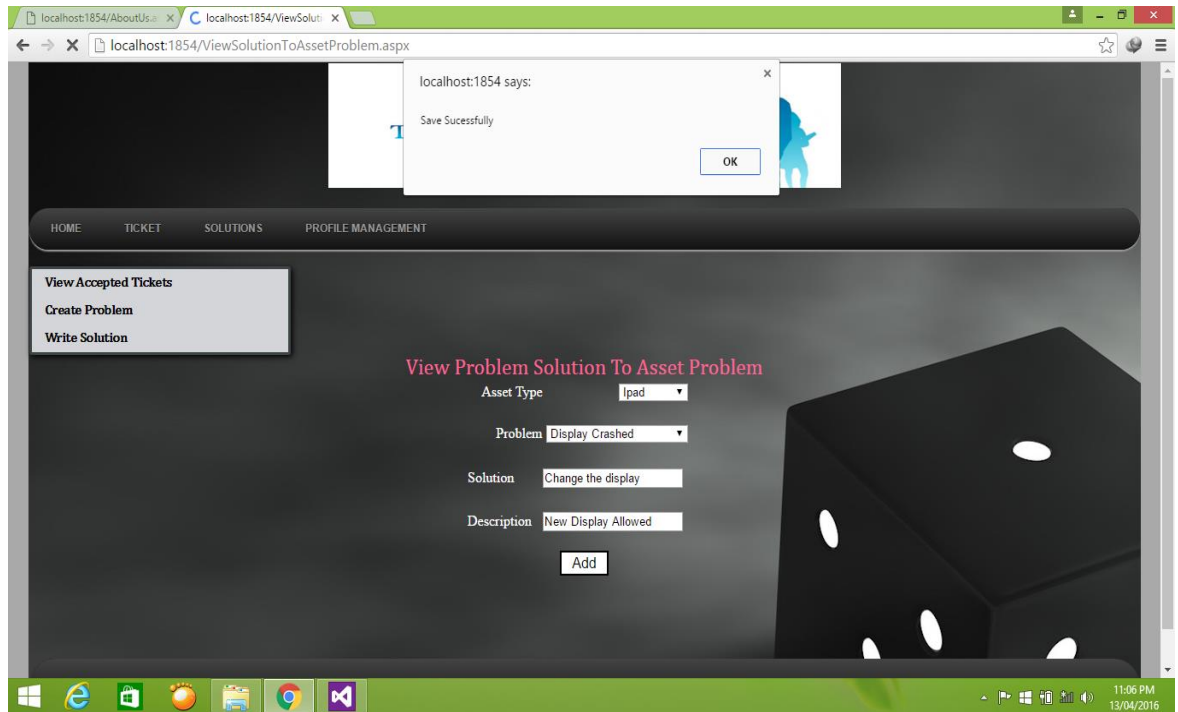


The screenshot shows a web browser window with the URL `localhost:1854/AddNewAssetProblemTechStaff.aspx`. The page has a dark theme with a header banner for 'Technical Staff' featuring silhouettes of people. A navigation bar includes links for HOME, TICKET, SOLUTIONS, and PROFILE MANAGEMENT. On the left, a sidebar menu lists: New Ticket, Update Status, Finish Ticket, View Accepted Tickets, and Create Problem, with a Rubik's cube icon below. The main content area is titled 'Add New Asset Problem' and contains the following form fields:

Asset Type	Desktop PC
Problem Name	Hard Disk
Problem Detail	Corrupted
Duration To Solve Problem	5 Days
Problem Priority	01
Description	Major Problem

At the bottom of the form are three buttons: Save, Clear, and Cancel. The footer of the page reads '- COPYRIGHT ©PRUDENCYS SOLUTION -'. The Windows taskbar at the bottom shows the time as 12:19 PM on 15/04/2016.

- To write solution to asset problem:

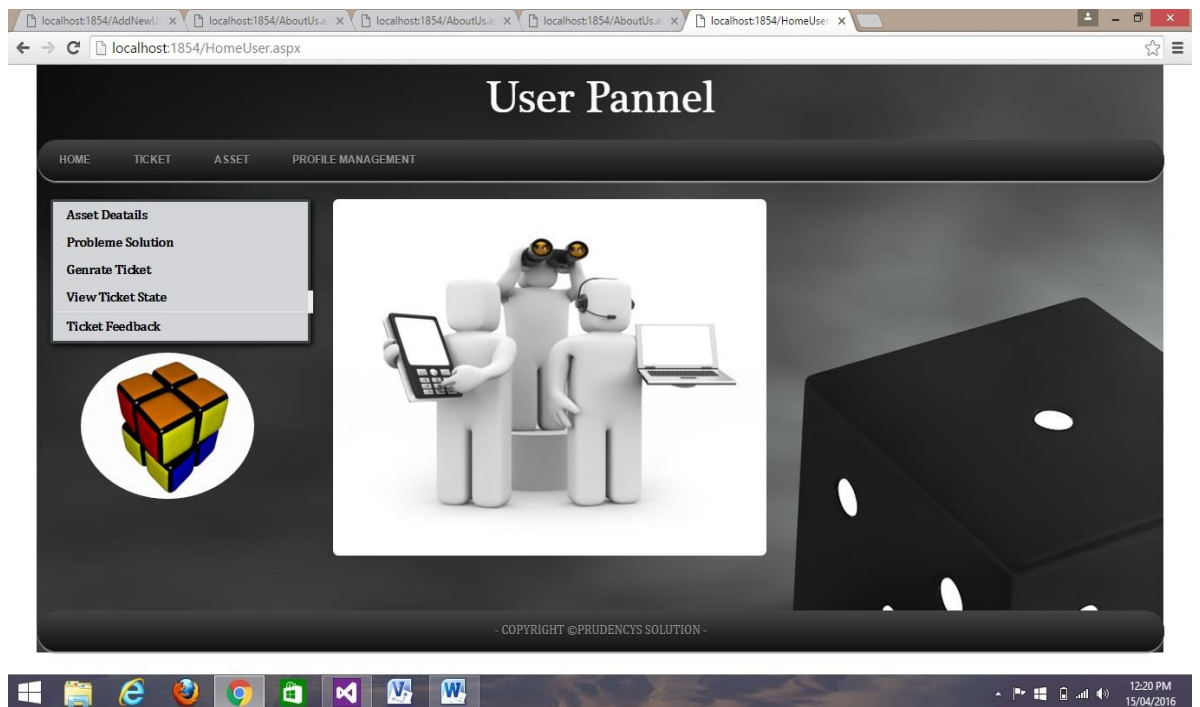


- **Ticket Process:**

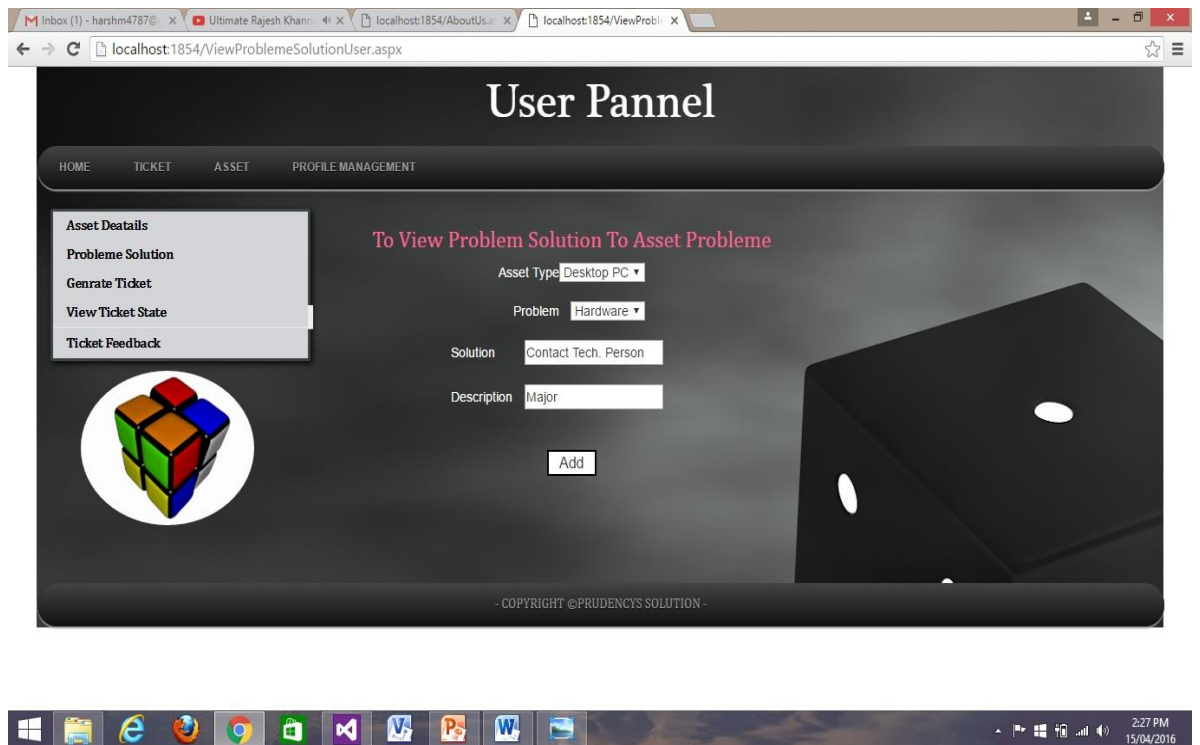


User Module

- **User Home:**



- To view problem & solution:



- **Generate ticket:**


localhost:1854/AddNewU x localhost:1854/AboutUs.a x localhost:1854/AboutUs.a x localhost:1854/AboutUs.a x localhost:1854/GenrateTic x

localhost:1854/GenrateTicket.aspx

User Pannel

HOME TICKET ASSET PROFILE MANAGEMENT

Asset Details
Probleme Solution
Genrate Ticket
View Ticket State
Ticket Feedback



Genrate Ticket

Asset Name

Asset Problem

Other Problem

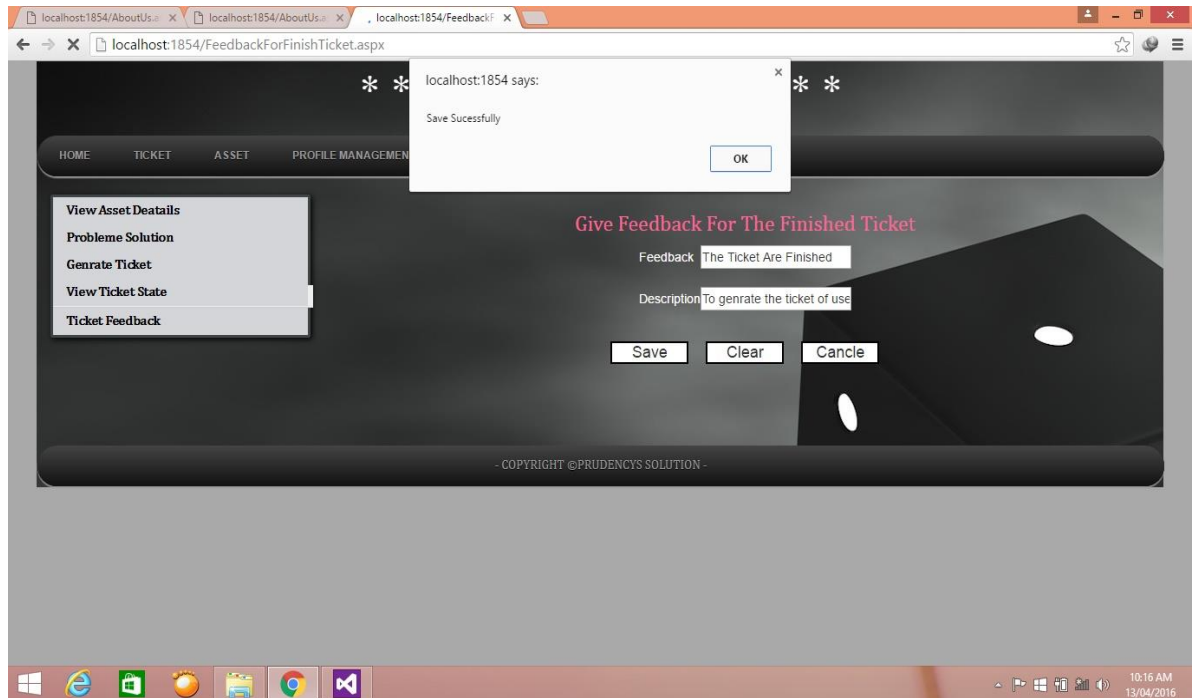
Ticket Priority

Description

- COPYRIGHT ©PRUDENCY'S SOLUTION -

Windows taskbar: 12:22 PM 15/04/2016

- To give feedback for the finished ticket:

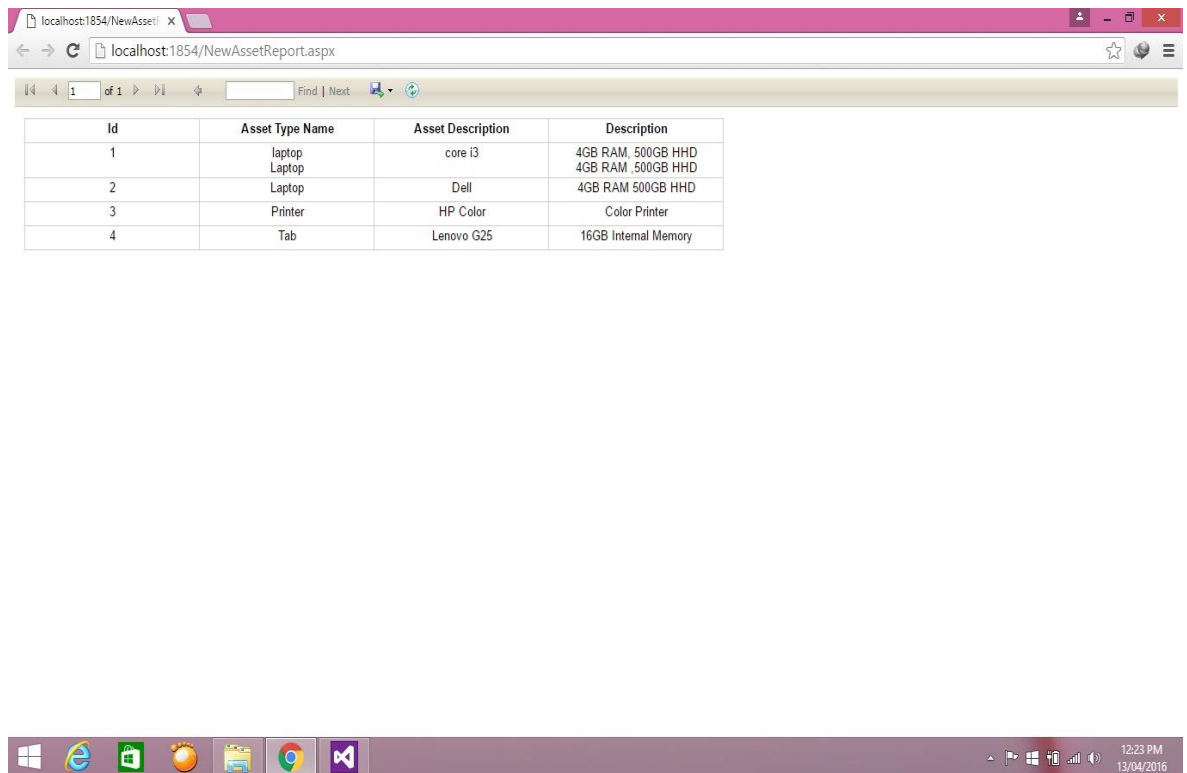


4.2 REPORT SCREENS

- **All asset details:**

This report will show all the assets in the system.

Asset status can be as Issued, Available, maintenance etc.



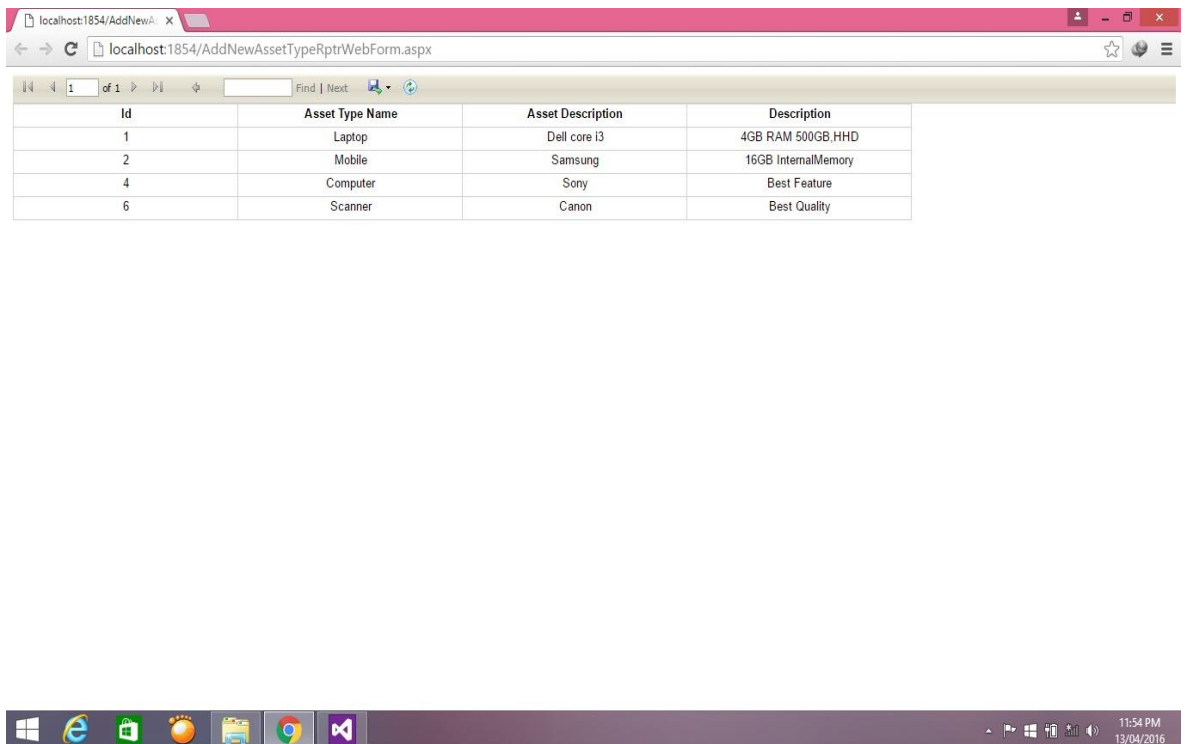
The screenshot shows a web browser window with the address bar displaying 'localhost:1854/NewAssetReport.aspx'. Below the browser window is a table with 4 columns: Id, Asset Type Name, Asset Description, and Description. The table contains 4 rows of data. The bottom of the screenshot shows a Windows taskbar with various application icons and a system clock indicating 12:23 PM on 13/04/2016.

Id	Asset Type Name	Asset Description	Description
1	Laptop	core i3	4GB RAM, 500GB HDD
2	Laptop	Dell	4GB RAM, 500GB HDD
3	Printer	HP Color	Color Printer
4	Tab	Lenovo G25	16GB Internal Memory

- **Asset details by selecting asset type:**

This report will show all the asset details under the mentioned asset type.

Here the users have to select the asset type from the dropdown box & resultant report will generate as per selected asset type.

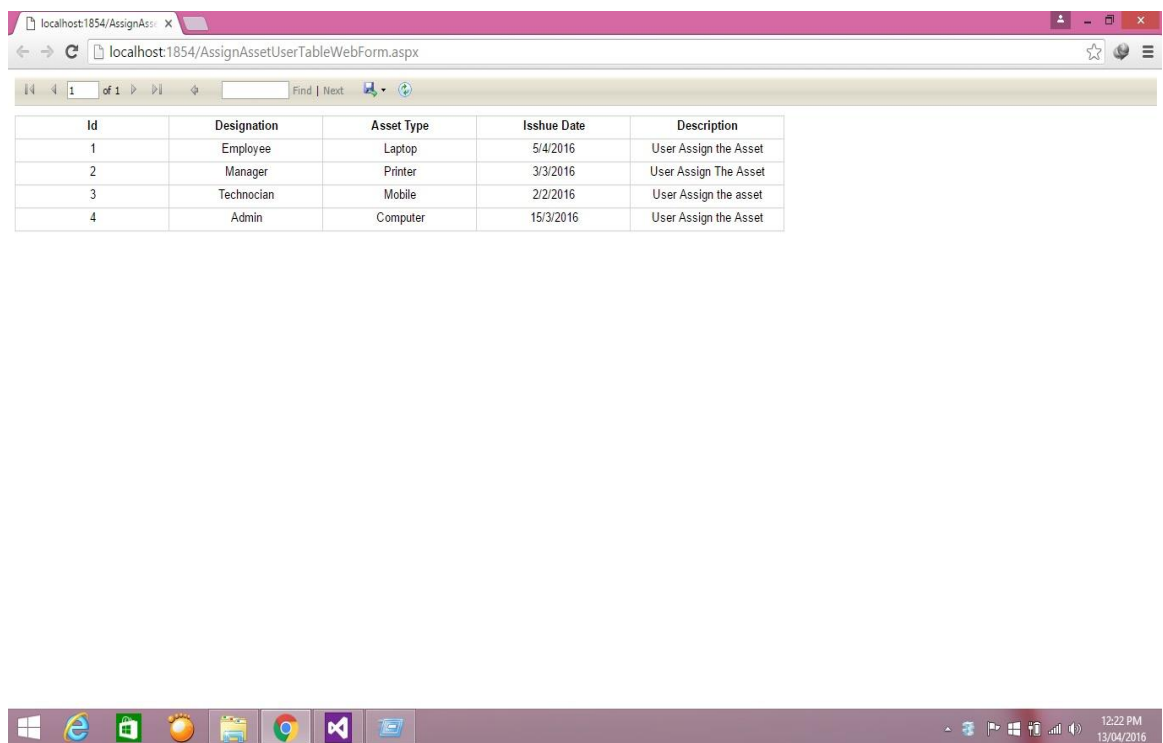


Id	Asset Type Name	Asset Description	Description
1	Laptop	Dell core i3	4GB RAM 500GB,HHD
2	Mobile	Samsung	16GB InternalMemory
4	Computer	Sony	Best Feature
6	Scanner	Canon	Best Quality

- **Asset to user:**

This report will show all the assets assigned to particular user.

For this, department name & user name have to select from the dropdown box & then the resultant report will generate as per assets assigned to particular user.

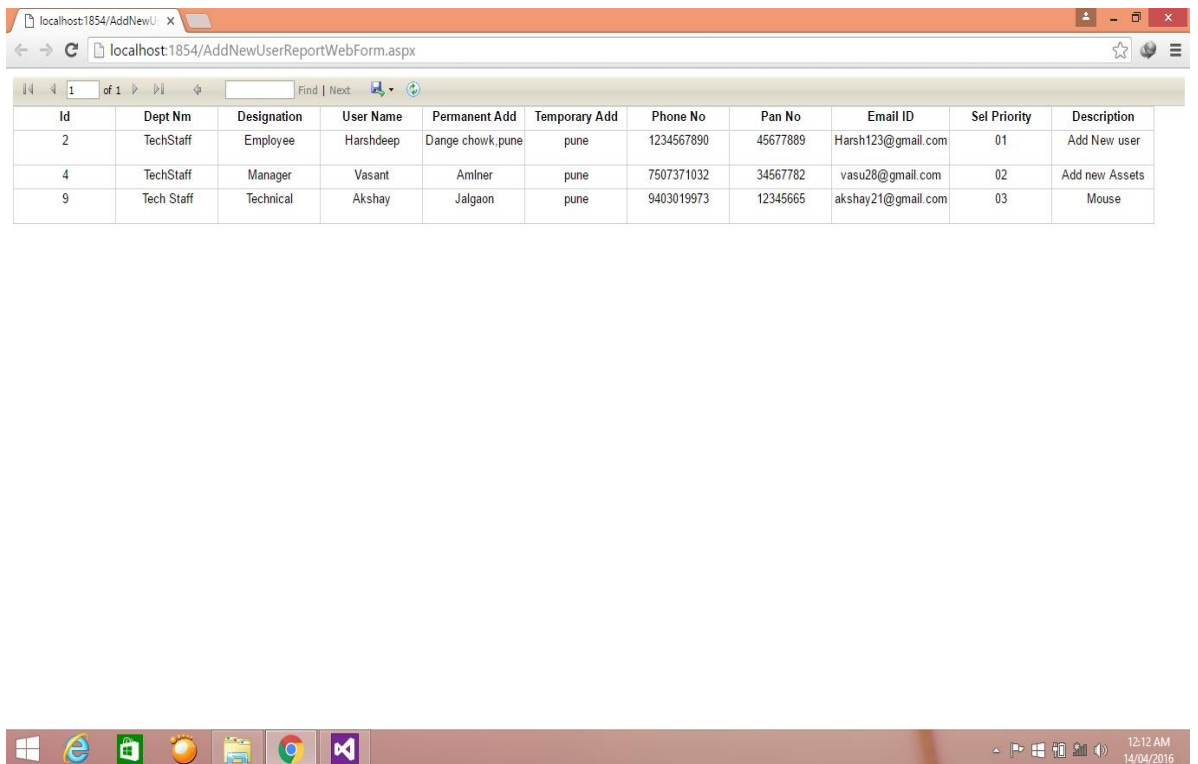


The screenshot shows a web browser window with the address bar displaying 'localhost:1854/AssignAssetUserTableWebForm.aspx'. Below the browser window, a table is displayed with the following data:

Id	Designation	Asset Type	Isshue Date	Description
1	Employee	Laptop	5/4/2016	User Assign the Asset
2	Manager	Printer	3/3/2016	User Assign The Asset
3	Technocian	Mobile	2/2/2016	User Assign the asset
4	Admin	Computer	15/3/2016	User Assign the Asset

- **User & login details:**

This report will show details of the user along with his login name & password.

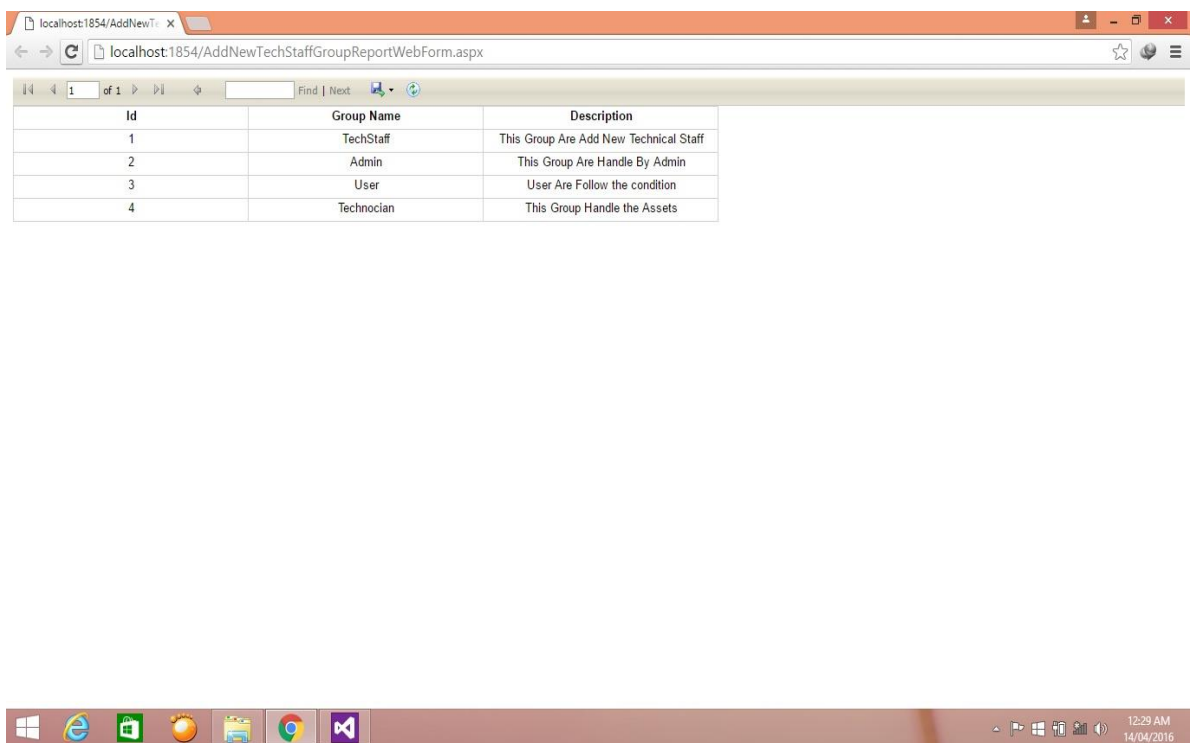


The screenshot shows a web browser window with the address bar displaying 'localhost:1854/AddNewUserReportWebForm.aspx'. Below the browser window is a table with 11 columns: Id, Dept Nm, Designation, User Name, Permanent Add, Temporary Add, Phone No, Pan No, Email ID, Sel Priority, and Description. The table contains three rows of data. The Windows taskbar is visible at the bottom of the screen.

Id	Dept Nm	Designation	User Name	Permanent Add	Temporary Add	Phone No	Pan No	Email ID	Sel Priority	Description
2	TechStaff	Employee	Harshdeep	Dange chovk.pune	pune	1234567890	45677889	Harsh123@gmail.com	01	Add New user
4	TechStaff	Manager	Vasant	Aminar	pune	7507371032	34567782	vasu28@gmail.com	02	Add new Assets
9	Tech Staff	Technical	Akshay	Jalgaon	pune	9403019973	12345665	akshay21@gmail.com	03	Mouse

- **Technical group details:**

This report will show the details of technical staff under the selected group.



The screenshot shows a web browser window with the address bar displaying 'localhost:1854/AddNewTechStaffGroupReportWebForm.aspx'. Below the browser window, a table displays the details of technical staff groups. The table has three columns: 'Id', 'Group Name', and 'Description'. It contains four rows of data.

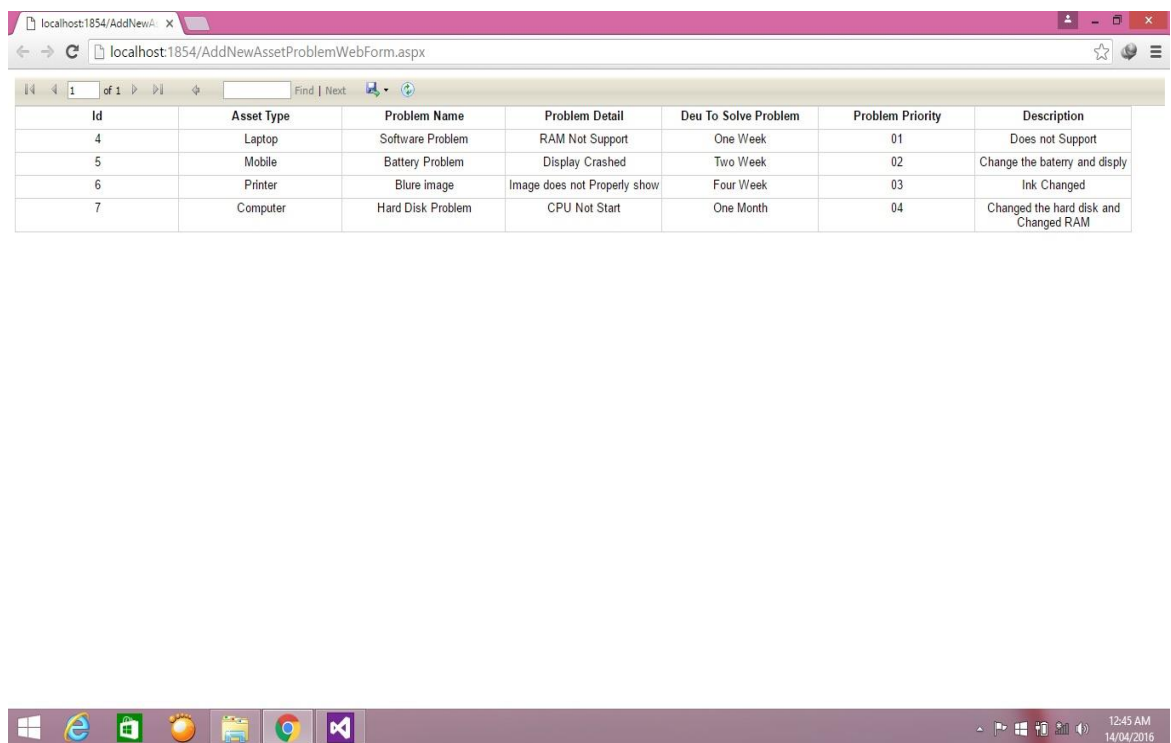
Id	Group Name	Description
1	TechStaff	This Group Are Add New Technical Staff
2	Admin	This Group Are Handle By Admin
3	User	User Are Follow the condition
4	Technocian	This Group Handle the Assets

- **Asset type & generated problems:**

This report will show asset type & total problems generated by user of these assets.

By this we can analyze which asset is generating more problems for the users.

Here the graph shows that people using printers are facing more problems than others.




Id	Asset Type	Problem Name	Problem Detail	Deu To Solve Problem	Problem Priority	Description
4	Laptop	Software Problem	RAM Not Support	One Week	01	Does not Support
5	Mobile	Battery Problem	Display Crashed	Two Week	02	Change the battery and disply
6	Printer	Blure image	Image does not Properly show	Four Week	03	Ink Changed
7	Computer	Hard Disk Problem	CPU Not Start	One Month	04	Changed the hard disk and Changed RAM

- **Ticket generated by user:**

This report will show all the tickets generated by particular user.

For this, have to select user name from the dropdown box.

The details of ticket will show asset details along with problem, ticket generation date, technical staff name, status of ticket and finish date of ticket.



Id	Asset Type Name	Problem Name	Other Problem	Ticket Priority	Description
1	laptop	Software Does not install	RAM does not Support	01	Genrate ticket
2	Scanner	Electricity Problem	Electricity problem	02	Genrate ticket
3	Computer	Hard Disk Not Support	CPU Exost	03	Genrate ticket
4	Mobile	Baterry problem	display Problem	04	Genrate Ticket

Chapter - 5

IMPLEMENTATION PROCEDURE

5.1 TEST PROCEDURE AND IMPLIMENTATION

Test Plan

The company has outgrown its current Help Desk system and is developing a new system that will allow for further growth and provide additional features.

The new system will do the following:

1. Provide the users with menus, directions and error messages to direct him on the various options.
2. Handle the add/update/delete of user and Tech. Staff information.
3. Handle the add/update/delete of masters like Assets Management, Ticket Management, and Knowledge Management etc.
4. Generate various reports.

1) Test plan Objectives

This test plan for the new IT Help Desk system supports the following activities:

1. Define the activities required to prepare Beta and User Acceptance testing.
2. Define the Activities required to prepare Unit Testing, Integration Testing, Equivalence Testing, Boundary value Analysis and System Testing.

2) Test Strategy

The test strategy consists of a series of different tests that will fully exercise the IT Help Desk System. The primary purpose of these tests is to uncover the systems limitations and measure its full capabilities. A list of the various planned tests and a brief explanation follows below.

1. Unit Test

The Unit Testing is a lowest level of testing. The Unit Testing Objective is to test a Help Desk software unit for its Primary Attributes and behavior.

A Unit Can Be Any Smallest Component Of System Like Page, Menu, and Module etc.

2. Equivalence Partitioning

The Equivalence Partitioning is a systematic Process that identifies a set of classes input conditions to be tested in the IT Help Desk System.

An equivalence class represents a set of valid or invalid states of input conditions. Typically, an input condition is either a specific numeric value, range of values, a set of related values or Boolean conditions.

3. Integration Test

The Integration Test will focuses on the Functional Requirements of the IT Help Desk system. The Integration Testing Will Be Perform the complete program structure according to the design requirements of compete system.

4. Boundary Value Analysis

The Boundary Value analysis is refinement of equivalence Partitioning. A grater no of errors occurs at the boundaries of the input domain rather in the center therefore, boundary value analysis has been used in IT Help Desk System as a testing technique to check that occur in boundaries.

5. System Test

The system tests will focus on the behavior of the IT Help Desk system. User scenarios will be executed against the system as well as screen mapping and error message testing. Overall, the system tests will test the integrated system and verify that it meets the requirements defined in the requirements document.

5.2 Test Cases -

We are Using here both Valid and invalid data for Testing. The Units this indicates that we are using equivalence class for testing.

Test Cases

Test case 1: Login

Test Case ID: 01

Test Case Name: Login form

Test Procedure:-

Input Attributes	Valid	Invalid
User Name	a-z, A-Z, 0-9	Blank space, Special characters.
Password	a-z, A-Z, 0-9	Blank space, Special characters.

Test Procedure:-

Sr No	Execution Step	Test Data	Expected Result	Actual Result	Pass /Fail	Remark
1	Enter correct username, Password & Click Login	Valid User name & Valid Password	Display Appropriate Home page	Main Page should Open.	Pass	Nil
2	Enter incorrect username, Password & Click Login	Invalid User name & Invalid Password	Error Message	Msg “ Username or Password is incorrect”	Pass	Nil

Test Cases 2: Add New User

Test Case Name: **New User**

Test case ID: 02

Test Data Analysis:-

Input Attributes	Valid	Invalid
User Name	a-z, A-Z, spaces,	Special characters and 0-9
Permanent Address	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
Temporary Address	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
Phone Number	0-9,+,-,spaces	Special characters other than +,-. a-z, A-Z
Fax Number	0-9,+,-,spaces	Special characters other than +,-. a-z, A-Z
Email ID	a-z, A-Z, 0-9,@,.,_	Blank space, Special characters. Other than @,.,_
Set Priority	0-3	Special characters and a-z, A-Z,
Description	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
Photo	JPG,JPEG	Other Image Format

Test Procedure:-

Sr No	Execution Step	Test Data	Actual Result	Pass /Fail	Remark
1	Enter User Name , Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Set Priority, Description, Photo & click save	Valid User Name, Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Set Priority, Description, Photo	Save Properly	Pass	Nil
2	Enter incorrect User Name , Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Set Priority, Description, Photo & click save	Invalid User Name ,Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Set Priority, Description, Photo	Msg “Please fill Required fields and Enter Valid Data”	Pass	Nil

Test Cases 3: Add New Technical Staff

Test Case Name: Technical Staff

Test case ID: 03

Test Data Analysis:-

Input Attributes	Valid	Invalid
Staff Name	a-z, A-Z, spaces,	Special characters and 0-9
Permanent Address	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
Temporary Address	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
Phone Number	0-9,+,-,spaces	Special characters other than +,-. a-z, A-Z
Fax Number	0-9,+,-,spaces	Special characters other than +,-. a-z, A-Z
Email ID	a-z, A-Z, 0-9,@,.,_	Blank space, Special characters. Other than @,.,_
Description	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
Photo	JPG,JPEG	Other Image Format

Test Procedure:-

Sr No	Execution Step	Test Data	Expected Result	Actual Result	Pass /Fail	Remark
1	Enter Staff Name , Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Description, Photo & click save	Valid Staff Name , Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Description, Photo	Save properly And do not display the error message	Save Properly	Pass	Nil
2	Enter incorrect Staff Name , Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Description, Photo & click save	Invalid Staff Name , Permanent Address , Temporary Address, Phone Number, Fax Number , Email ID, Description, Photo	Error Message	Msg "Please fill Required fields and Enter Valid Data"	Pass	Nil

Test Cases 4: Add new Asset

Test Case Name: Add new Asset

Test case ID: 04

Test Data Analysis:-

Test	Input Attributes	Valid	Invalid
	Asset Name	a-z, A-Z, spaces,	Special characters and 0-9
	Tag id	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
	Serial No	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
	Asset Status	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
	Description	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.

Procedure:-

Sr No	Execution Step	Test Data	Expected Result	Actual Result	Pass /Fail	Remark
1	Enter Asset Name, Tag id, Serial No Asset Status Description & click save	Valid Asset Name, Tag id, Serial No Asset Status Description	Save properly And do not display the error message	Save Properly	Pass	Nil
2	Enter incorrect Asset Name, Tag id, Serial No Asset Status Description & click save	Enter incorrect Asset Name, Tag id, Serial No Asset Status Description & click save	Error Message	Msg “Please fill Required fields and Enter Valid Data”	Pass	Nil

Test Cases 5: Add New Asset Problem

Test Case Name: **New Asset Problem**

Test case ID: 05

Test Data Analysis:-

Test	Input Attributes	Valid	Invalid
	Problem Name	a-z, A-Z, spaces,	Special characters and 0-9
	Problem Details	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
	Duration to Solve Problem	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.
	Description	a-z, A-Z, 0-9, Spaces, “,”, “.”, “-”.	Special characters other than “,”, “.”, “-”.

Procedure:-

Sr No	Execution Step	Test Data	Expected Result	Actual Result	Pass /Fail	Remark
1	Enter Problem Name, Problem Details, Duration to Solve Problem, Description & click save	Valid Problem Name, Problem Details, Duration to Solve Problem, Description	Save properly And do not display the error message	Save Properly	Pass	Nil
2	Enter incorrect Problem Name, Problem Details, Duration to Solve Problem, Description & click save	Invalid Problem Name, Problem Details, Duration to Solve Problem, Description & click save	Error Message	Msg “Please fill Required fields and Enter Valid Data”	Pass	Nil

Chapter - 6

USER MANNUAL

6.1 USER MANUAL

Introduction

This manual shows how to run the system & provides step by step instructions through various screens.

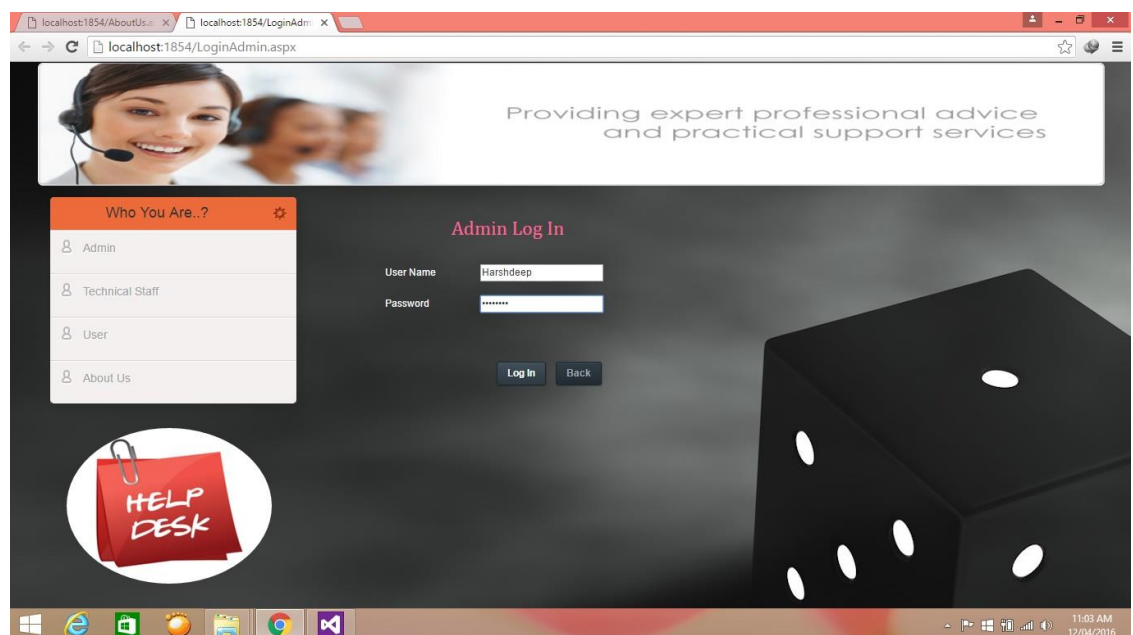
Getting Started

The major functions of the system “IT help Desk System” are as follows:–

- 1) Administrator Login:
- 2) Technical Staff Login:
- 3) User Login:

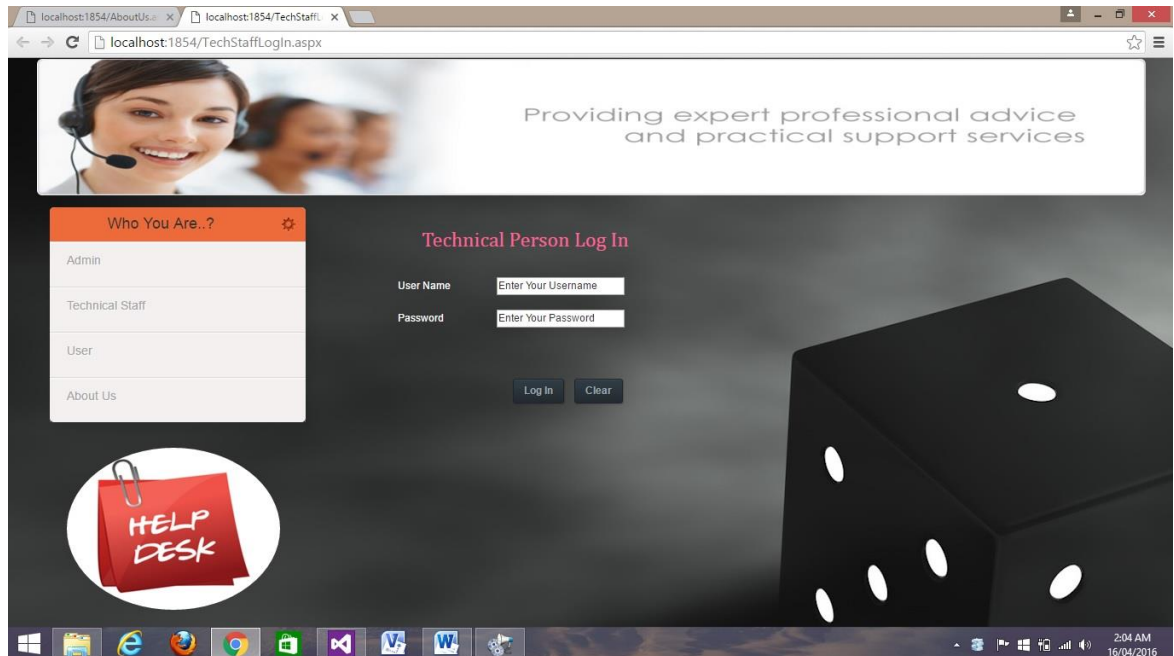
- 1) Administrator Login:

- ✓ Administrator can enter the User, Technical Staff and Assets Details.
- ✓ Administrator can able to assigns Assets to Designation and User.
- ✓ Administrator can able to Change the State of Ticket.
- ✓ Administrator can able to generate the reports.



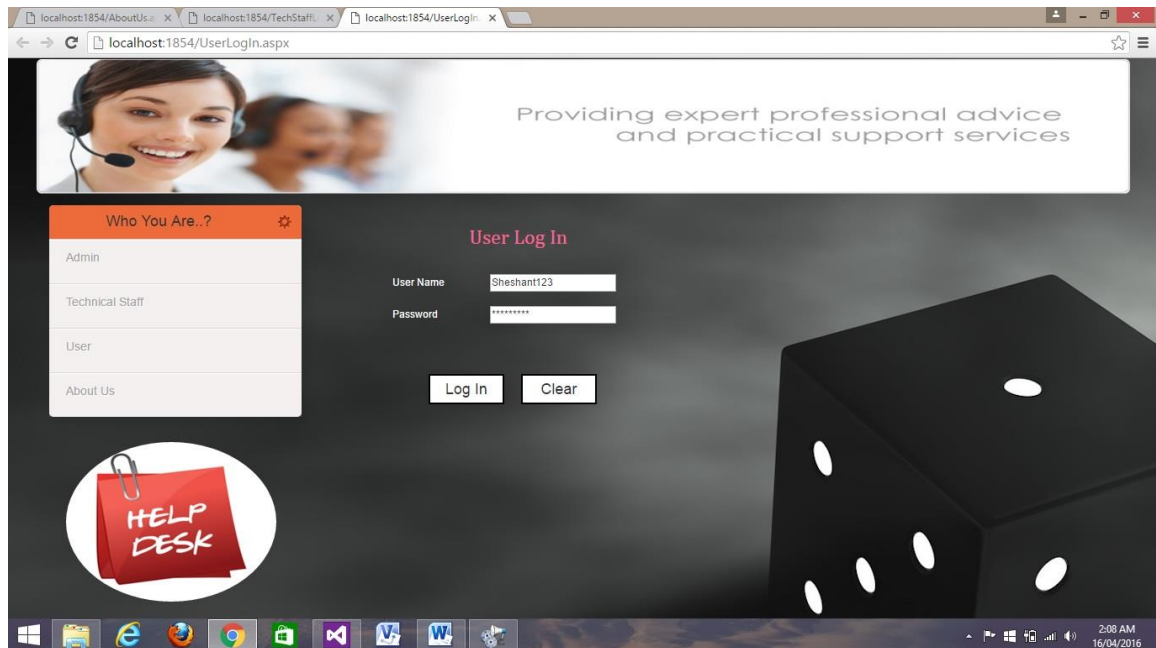
2) Technical Staff Login:

- ✓ Technical Staff Should Login with their own login id and password.
- ✓ Technical Staff can Manage His Own Profile.
- ✓ Technical Staff can Finish ticket or Hold the Ticket.
- ✓ Technical Staff can Write Solution To Related Problem.



3) User Login:

- ✓ Users Should Login with their own user id and password.
- ✓ Users can manage his own Profile.
- ✓ Users can Generate New Ticket or Modify Self Generated Ticket.
- ✓ Users can Refer Knowledge management part.
- ✓ User can give Feedback.



Command Buttons used for Systems

- 1) Add – Used to add data.
- 2) Edit – Used to modify data.
- 3) Save – Used to save data.
- 4) Delete – Used to delete the record.
- 5) Cancel – Used to clear the data
- 6) Details–Used to show the saved record.

Login Page:



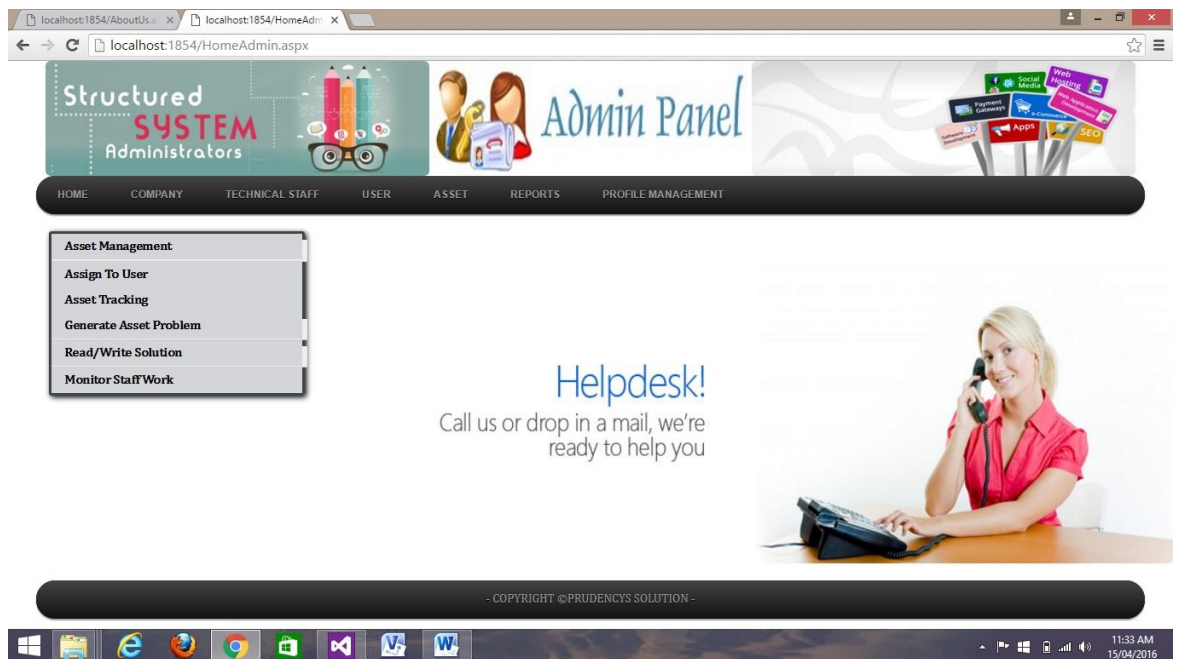
Step1: Enter User Name.

Step2: Enter Password.

Step3: Select User Type

Step4: Click On Login Button.

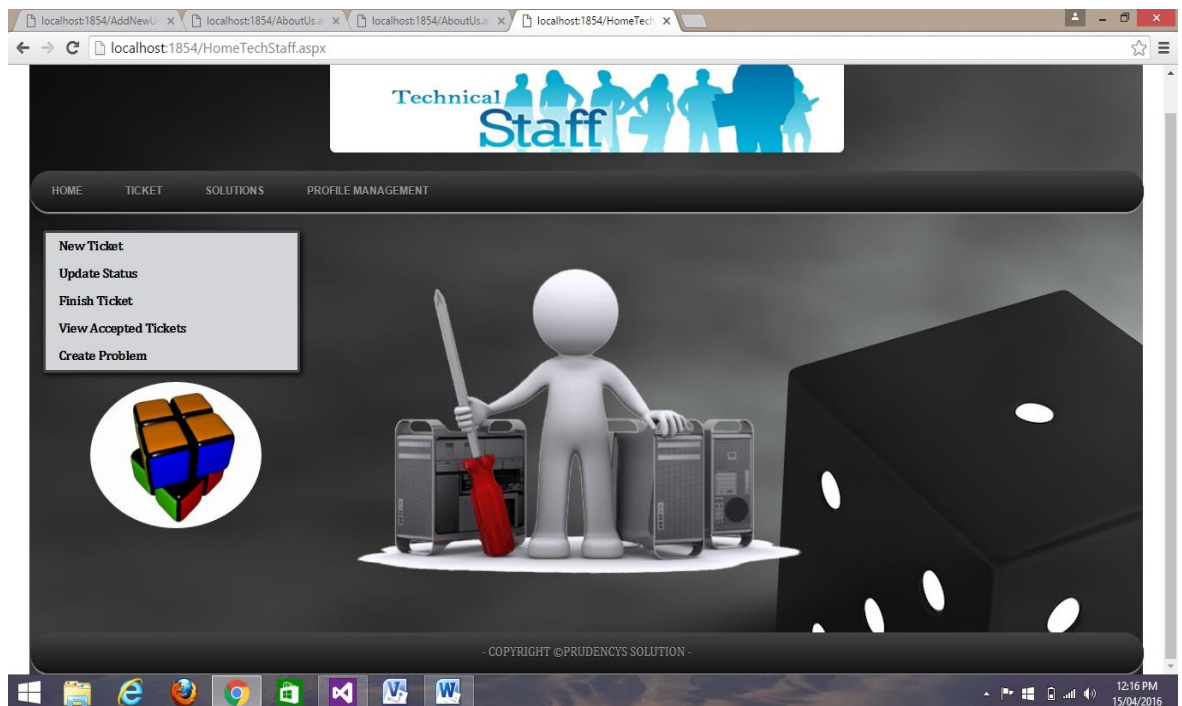
6.1.1 Administrator Home Page:



If System User can Login as Administrator The Administrator Home Page Will Appear.

Here Administrator Can Have Menus and Shortcuts to Use The System.

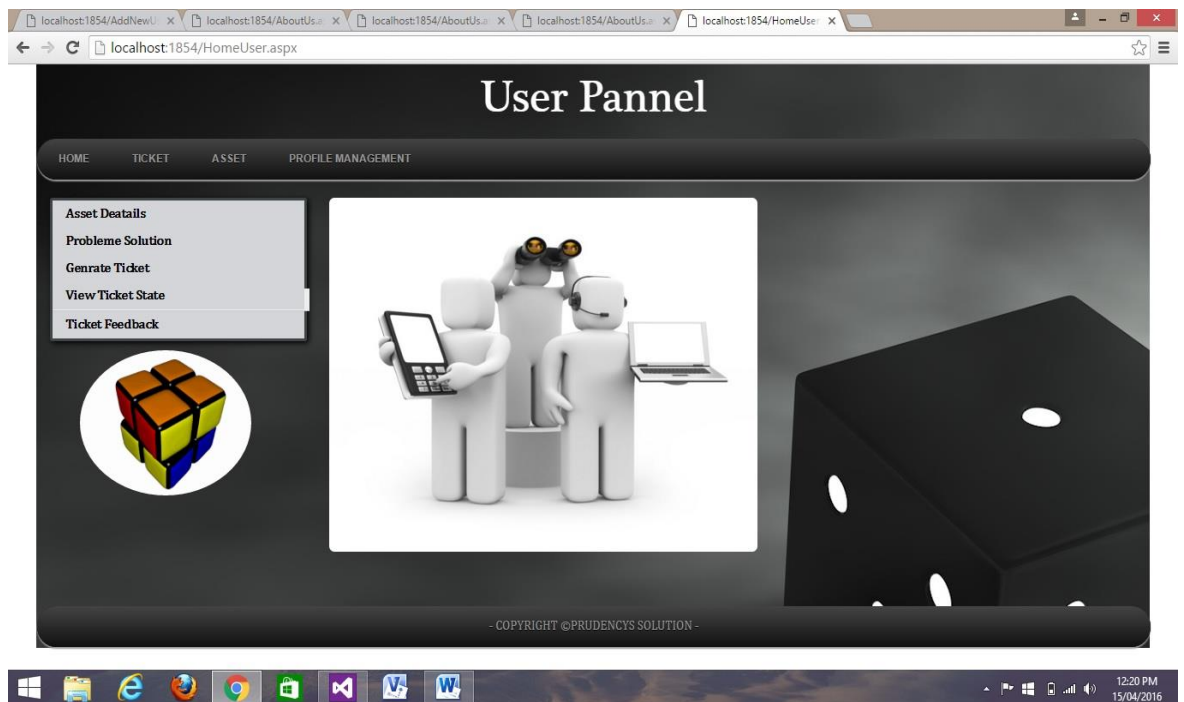
6.1.2 Technical Staff Home Page:



If System User can Login as Technical Staff The Technical Staff Home Page Will Appear.

Here Technical Staff Can Have Menus and Shortcuts to Use The System.

6.1.3 User Home Page:



If System User can Login as User The User Home Page Will Appear.
Here User Can Have Menus and Shortcuts to Use The System.

Administrator User Interface Design

- **Add New Asset :**

Step1: Select Asset Type.

Step2: Enter Asset Name.

Step3: Enter Tag ID.

Step4: Enter Serial Number.

Step5: Enter Date Of manufacturing.

Step6: Click On Save Button.

- **Add New Asset Problem :**

Step1: Select Asset Type.

Step2: Enter Problem Name.

Step3: Enter Problem Details.

Step4: Enter Duration To Solve Problem.

Step5: Select Problem Priority.

Step6: Click On Save Button.

- **Add New Asset Problem solution:**

Step1: Select Asset Problem.

Step2: Enter Problem Solution.

Step3: Click On Save Button.

- **Add New User:**

Step1: Select Department Name.

Step2: Select Designation.

Step3: Enter user Name.

Step4: Enter Permanent Address.

Step5: Enter Temporary Address.

Step6: Enter Phone Number.

Step7: Enter Email Id.

Step8: Select User Priority.

Step9: Click On Save Button.

- **Add New Technical Staff:**

Step1: Select Department Name.

Step2: Select Designation.

Step3: Enter Staff Name.

Step4: Enter Permanent Address.

Step5: Enter Temporary Address.

Step6: Enter Phone Number.

Step7: Enter Email Id.

Step9: Click On Save Button.

- **Add New Technical Group:**

Step1: Enter Technical Group Name.

Step2: Enter Description.

Step3: Click On Save Button.

- **Authentication For User:**

Step1: Select Desingation.

Step2: Select User Name.

Step3: Click on Checkboxes to Give Authorites to user.

Step4: Click on Save Button.

Technical Staff Interface Design

- **Add New Asset Problem:**

Step1: Select Asset Type.

Step2: Enter Problem Name.

Step3: Enter Problem Details.

Step4: Enter Duration To Solve Problem.

Step5: Select Problem Priority.

Step6: Click On Save Button.

- **Add New Asset Problem Solution:**

Step1: Select Asset Type.

Step2: Select Asset Problem.

Step3: Enter Problem Solution.

Step4: Click On Save Button.

- **Manage Profile:**

Step1: Click “Change User name” Link to Change user name.

Step2: Click “Change Password” Link to Change Password

Step3: Enter Old Password.

Step4: Enter New Password.

Step5: Enter Conform Password.

Step6: Click Save Button.

User Interface Design

- **Generate New Ticket:**

Step1: Select Asset Name.

Step2: Select Asset Problem If Problem Type not found Click on “Not Found” Button and enter new Problem.

Step3: Set Ticket Priority.

Step4: Click on generate Ticket.

- **Give Feedback Related to Ticket:**

Step1: Click on Feedback Link to Give Feedback related to particular ticket.

Step2: Enter Feedback Details.

Step3: Click On Save Button.

6.2 Operational Manual

Administrator Menu:

Branch: Using This Menu We Can Add New Branch or Delete Existing Branch. In this we can have the following Options.

1. Add: This is used to Add New Branch.
2. Display: By using this link we can show the items which are stored in the database. Also we can perform the Edit and Delete Operation By using this link.
3. Department: Using This Menu We Can Add New Department or Delete Existing Department. In this we can have the following Options.

3.1. Add: This is used to Add New Department.

3.2. Display: By using this link we can show the Items which are stored in the database. Also we can perform the Edit and Delete Operation by using this link.

3.3 Designation: Using This Menu We Can Add New Designation or Delete Existing Designation. In this we can have the following Options.

3.3.1. Add: This is used to Add New Designation

3.3.2. Display: By using this link we can show the items which are stored in the database. Also we can perform the Edit and delete Operation By using this Link.

Technical Staff: Using This Menu We can manage & monitor Technical Staff Details. In this we can have the following Options.

1. Account Management: This is used to Manage account details of Technical Staff.

1.1 Add: This is used to Add New Technical Staff.

1.2 Display: By using this link we can show the items which Are stored in the database. Also we can perform the Edit and Delete Operations by using these links.

1.3 User Name & Password: This is used to set user security Settings

- 1.3.1 Add: This is used to set user name & password.
 - 1.3.2 Display: By using this link we can show the items Which are stored in the database. Also we can perform the Edit and Delete Operation By using this link.
- 2. Shift: This is used to Manage shift details of Technical Staff.
 - 2.1. Add: This is used to Add New Shift.
 - 2.2 Display: By using this link we can show the items which are stored in the database. Also we can perform the Edit and Delete Operation By using this link.
 - 2.3 Assign Shift: This is used to Assign Shift to Technical staff.
 - 2.4 Day wise Display: This used to display Day wise Shift Details.
- 3. Group: This is used to manage group details of Technical Staff.
 - 3.1 Create: This is used to create new group.
 - 3.2 Set Group Head: This used to set head of group.
 - 3.3 Add Member to group: This used to add member to group.
 - 3.4 Assign services to group: This used to assign services to group.
- 4. Expertise: This used to set Expertise staff.
 - 4.1. Add: This is used to Add New Asset Expertise.
 - 4.2 Display: By using this link we can show the items which are stored in the database. Also we can perform the Edit and Delete Operation By using this link.
- 5. Staff Rank: This used to set Staff Rank.
 - 5.1. Add: This is used to set Staff Rank.
 - 5.2 Display: By using this link we can show the items which Are Stored in the database. Also we can perform the Edit and Delete Operation By using this link.
- 6. View Staff Tickets: This used to display particular staff tickets details.

7. Head: This used to Mange staff head.

7.1. Add: This is used to Add New staff head.

7.2 Display: By using this link we can show the items which are stored in the database. Also we can perform the Edit and Delete Operation by using this link.

8. Staff Authentication: This used to give various features and authority to staff.

9. Work Analysis: This used to see the work done by each individual staff & Technical group.

User: Using This Menu We can manage & monitor Technical Staff Details. In this we can have the following Options.

1. Account Management: This used to Manage account details of User.

1.1. Add: This is used to Add New user.

1.2 Display: By using this link we can show the items Which are stored in the database. Also we can perform the Edit and Delete Operation by using this links.

1.3 User Name & Password: This is used to set user Security settings.

1.3.1 Add: This is used to set user name & Password.

1.3.2 Display: By using this link we can show the Items which are stored in the database. Also we can Perform the Edit and Delete Operation By using this link.

1.3.3 User Priority: This used to maintain user Priority.

1.3.3.1 Add: This is used to set user name & password.

1.3.3.2 Display: By using this link we can Show the items which are stored in the database. Also we can perform the Edit and Delete Operation by using this link.

2. View Assets: This used to see the issued asset to the user.
3. Ticket: This used to manage the Tickets.
 - 3.1 Add: This is used to create new Ticket on behalf of user.
 - 3.2 Display: By using this link we can show the items which are Stored in the database. Also we can perform the Edit and Delete Operation By using this link.
4. User Authentication: This used to give various features and authority to user.

Asset:

1. Asset Management: This used to manage asset details.
 - 1.1 Asset Type: This used to manage asset type.
 - 1.1.1 Add: This is used to create new asset type.
 - 1.1.2 Display: By using this link we can show the items which are stored in the database. Also we can perform the Edit and Delete Operation by using this link.
 - 1.2 Asset Property: This used to manage asset properties.
 - 1.2.1 Add: This is used to create new asset properties.
 - 1.2.2 Display: By using this link we can show the items which are stored in the database. Also we can perform the Edit and Delete Operation By using this link.
 - 1.3 Asset: This used to manage asset details.
 - 1.3.1 Add: This is used to create new asset details.
 - 1.3.2 Display : By using this link we can show the items which are stored in the database. Also we can perform the Edit and Delete Operation By using this link.
 - 1.4 Asset Specification: This used to manage asset specification.
 - 1.4.1 Add: This is used to create new asset specification.
 - 1.4.2 Display: By using this link we can show the items Which are stored in the database. Also we can perform the Edit and Delete Operation By using this link.

2. Issue Asset: This used to issue the asset.

3. Asset Problem: This used to Manage the asset problem.

3.1 Add: This is used to create new asset problem.

3.2 Display: By using this link we can show the items which are Stored in the database. Also we can perform the Edit and Delete Operation By using this link.

4. Asset Tracking: This is used to Track the asset.

Tickets: This is used to manage the Ticket Details.

1. Create: This used to create new Ticket.

2. Display: This used to Display the Ticket Details.

3. Update: This used to update the Ticket Details.

4. Transfer: This used to Transfer the Ticket.

5. Delete: This used to delete the Ticket.

Logs: This used to keep watch on transaction going in system.

Logs: This used maintain each transaction details going on in the system.

Profile Management: This used to manage the admin personal settings.

Username Password: This is used to Change admin Login Name & Password.

Log Out: This is used to Log Out from the system.

Technical Menu:

Ticket: This used to see all details about the Tickets.

1. View Accepted Ticket: This link used to see all details of accepted tickets.

2. Get New Ticket: This link used for accepting new tickets.

3. Update Status: This used to update status of tickets.

4. Finish Ticket: This used to finish ticket & write remark on it.

Problem & Solutions:

1. Create Problem: This link used for creating new problem.
2. Write Solution: This link used to write solution for asset type problem.
3. View Self Solution: This link shows all types of self written solution.
4. Display Solution: This link shows all types of solution.

Profile Management: This used to manage account settings.

1. Personal Setting: This used to manage information of technical Staff.
2. Security Settings: This is used to Change Login Name & Password.

Logout: This used to Log out from system.

User Menu:**Ticket:**

1. Generate: This link used to generate ticket for assigned asset.
2. View State: This used to see the state of self generated tickets.
3. Feedback: This used to give feedback for the finish tickets.

Asset:

1. View Details: This used to see self assigned asset.
2. Wizard for Getting Asset: This used to see steps for getting asset from admin.
3. Problem Solution: This link used to see all problem solution for each asset type.

Profile Management: This used to Manage account settings.

1. Personal setting: This is used to manage self information of user.
2. Security setting: This is used to Change Login Name & Password.

Logout: This used to Log out from system.

Chapter - 7

DRAWBACKS AND LIMITATIONS

DRAWBACKS AND LIMITATIONS

No Software is perfect in all respects. Every Time Certain Things are remains to be implementing. Same is for this system we are getting reports as they are designed. As we know everything made on this earth has some limitation. In same way in spite of putting the best of our efforts we still find some limitation in our project.

- ✓ The Reports in the system are not customized.
- ✓ Modifications are always necessary as to make system more users friendly
- ✓ There is need to add or develop more tools to the system if requires.

Chapter - 8

PROPOSED ENHANCEMENTS

PROPOSED ENHANCEMENTS

- ✓ We will try to generate the Customized Reports.
- ✓ We will do some modification which requires making the system more users friendly.

Chapter - 9

CONCLUSION

The quality of the system depends on number of factors such as design, development, testing and implementation. One vital aspects of the system quality is reliability. A system is said to reliable when used it doesn't produce failure that is dangerous and costly.

I have strived to prevent occurrence of errors using different methods and techniques that include error detection, correction and tolerance (e.g. Exception handling).

The system has been designed so as to ensure maximum reliability in operation with maximum errors. I have tried to achieve maximum goal given in objective.

The system is able to achieve the objective and provide the ultimate result called **"CUSTOMER SATISFACTION"**.

Developing the project has helped me to gain some experience on real-time development Procedures.

Chapter - 10

REFERENCES

Following books were helpful to us in building and understanding the concepts. Also these books proved to be of great importance during the actual development i.e. Design & Coding of the system:-

1) ASP.NET (Beginners)

⇒ By WROX Publications.

2) ASP.NET (Professionals)

⇒ By WROX Publications.

3) ASP.NET 3.5 with C#

⇒ CHRIS HART, JOHN KAUFFMAN, DAVID SUSSMAN.

Websites:

<http://www.wrox.com>

<http://www.asp.net>

<http://msdn.microsoft.com>

<http://www.codeproject.com>

<http://www.sourcecode.com>