DIU TROUBLE TICKETING SYSTEM

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Master of Science in Computer Science and Engineering.

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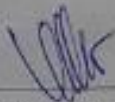

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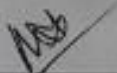**DHAKA, BANGLADESH**

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APPROVAL

This Project/Thesis titled **"DIU Trouble Ticketing System"**, submitted by Imam Hossain, ID No: 183-25-716 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of M.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06-12-2019.
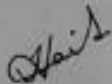
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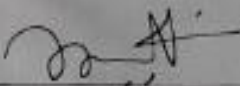Daffodil International University

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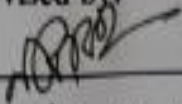Daffodil International University

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DECLARATION

I hereby declare that, this project has been done by us under the supervision of **Narayan Ranjan Chakraborty, Assistant Professor,** Department of CSE Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.
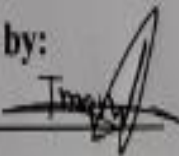
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I really grateful and wish my profound my indebtedness to **Narayan Ranjan Chakraborty**, **Assistant Professor**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of my supervisor in the field of "**DIU Trouble Ticketing System**" to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stage have made it possible to complete this project.

I would like to express my heartiest gratitude to prof. **Dr. Syed Akhter Hossain, Head, Department of CSE**, for his kind help to finish my project and also to other faculty member and the staff of CSE department of Daffodil International University.

Finally, I must acknowledge with due respect the constant support and patients of my parents.

ABSTRACT

This Application is on the "DIU Trouble Ticketing System" is a technically regulated procedure. There are three types of user in my application and each of the users can view a dashboard after login the system or application in this Dashboard there are five-section are available Assigned which represent how many tickets are assigned, Not assigned represents how many tickets are not assigned, Open means this tickets are assigned but still now it will not complete but task is running. Completed means how many tickets are completed already. And finally, the total number of tickets means total tickets are generated. An admin can login to this system using mobile application and admin can also log in from the web panel. Admin can create user and staff where the user creates tickets including proper documents and sends to the admin. When a user creates a tickets admin can receive a notification and admin can be assigned tickets to the staff based on the skills and experienced. When staff completes their task, staff press a button mark as complete after pressing this button both admin and a user who create this ticket gets a notification to complete their tasks. The design of this application uses UML and application are built using android studio and PHP (Laravel Framework)

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CHAPTER 1

INTRODUCTION

1.1 Introduction

A Trouble ticketing software, also known as an IT ticketing system, is a product item program that urges the relationship to decide their inside IT or any support request by supervising and streamlining the system of issue objectives. They direct particular segments considered tickets that give a lot of what gives the requester is standing up to, nearby other data, like an arrangement, need, etc. Tickets go about as a documentation of a specific issue, its present status, and other related information. Raised by the end-customers of a relationship at whatever point they experience an event that barges in on their work procedure, these tickets are coordinated to the ticketing programming where they are arranged, sorted out, and doled out to different experts or people according to the definitive benchmarks. Separating these tickets, the administrators propose fitting fixes and workarounds and, in this way, settle the issue. Issue Ticketing Software helps in giving the setting of the issue, history, and objectives since it fills in as a central vault of all of these tickets. In a little association, when any IT help is required, agents can basically ask the internal IT gathering to fix the issue. Be that as it may, as an affiliation creates in size, supervising laborer issues and inward IT organization requests will, when all is said in done, become massive. Messages are convincing only for more diminutive associations yet become inadequate when a gigantic number of sales are raised in a greater affiliation.

At its inside, inconvenience ticketing programming changes overall approaching help demands from various channels into tickets and goes about as a single motivation behind contact between the specialist co-op and the client. These systems of ticketing can be used to store and manage all IT support, HR, authentic, financial, and related requests

1.2 Motivation

Today a variety of IT Ticketing systems have been proposed. The majority of them are as of now utilized or a similar idea. Unfortunately, the majority of them don't ready to

satisfy the most fundamental security prerequisites, though different systems are provably secure yet irrational. Besides, a couple of Ticketing system smashed the individuals' trust in these Ticketing systems. There is a wide arrangement of Trouble ticketing programming open accessible today, both on-begin and cloud organizations. They may be packaged as an autonomous instrument or part of an inexorably sweeping helpdesk system or IT Service Management (ITSM) arrange.

Therefore, we have the grave requirement for another framework simple to utilize, secure, down to earth and straightforward web-based Ticketing System that cannot just persuade specialists and furthermore a resident.

In this paper, such another simple to utilize, secure and straightforward online Trouble Ticketing system is proposed.

As a result, we have the badly need for a new system easy to use, secure, practical and transparent online Ticketing System that can not only convince experts and also citizen. In this paper such a new easy to use, secure and transparent online Trouble Ticketing system is proposed.

- Trouble ticketing system contains for Web Panel.
- Admin, staff, client information in database
- View all tickets.
- Counting total number of generated tickets along with complete, Not Complete and open (Automatically).
- Only admin can use Web Panel.

Trouble ticketing system contains for Android application.

- Registration Staff and Client.
- Clients can generate Tickets and tickets will be Not Assigned.
- Admin can Assigned ticket to appropriate Staff
- Staff gets notification when ticket assigned against him or her and tickets will be assigned.
- When solved the problem staff close the ticket and clients received notification and tickets will be complete.

- When tickets will be assigned and tickets will not be complete or close this time tickets will be Open
- Counting total number generated tickets, complete, Incomplete and open tickets

1.3 Objectives

Objective of Trouble Ticketing Management System given the below:

- Counting total number generated tickets, complete, Incomplete and open tickets.
- Prepare a database of all types of User.
- It is accessible and easy to use.
- It is useable through multiple platforms.
- It can track a ticket's history.
- It comes with a dynamic and an extensive notification alerts system.
- Everything is centralized in one place.
- Multiple user registration and access.
- Reliability.
- Accuracy and precision.
- Clients Satisfaction.
- Self Service adoption.
- Minimizing the Cost

Now I am discussing those Objectives briefly

Prepare a database of all types of User

Preparing a database of all admin, staff and clients with their relevant information such as name, age, username, Password, Image, Mobile Number etc.

It is accessible and easy to use

My application will be easily accessible and easy to use all kinds of user. User can use my application via mobile and for the better performance and reduce the complexity only admin can use Web panel.

It is useable through multiple platforms

Now a day's most of the people or user are love to use Smartphones. People cannot things their existence without a smartphone. After analyzing lots of application, I am finding maximum IT Trouble Ticketing application area Desktop-based so I am thinking that I can make some unique features for our university and with this thinking, I am trying to build an application which is supported multiple platforms.

It can track a ticket's history

In my application when generates a ticket it will be sent under tracking system and current situation of those ticket will also observed or knowing the current Situation like as ticket will be assigned or not assigned, complete or not and open or close.

It comes with a dynamic and an extensive notification alerts system

Alert messaging is a system that is very important to communicate with machine-to-person, as well as proper time. When a new message will come to our phone an alert will be generated and it may be a calendar reminder or notification for those messages. In my Application when a new task assigned or done a notification will send to the User or clients and Staff. So, he or she cannot need to wait to know or get some task when a task will be assigned, he or she will be notified. *Everything is centralized in one place*

A centralized database is a place where data is accessible from lots of points but one place where data are collected, and maintained in a single place, but. As a rule, my application has also a central led database because I am storing all the data in a database which helps me to finds data easily.

In my application everything is centralized means all kinds of information, Tickets are visible in applications dashboard and all kinds of user and their types are visible in my application dashboard. And also, all kinds of tickets current status are visible in the dashboard.

Accuracy and precision

I want my application handling to accurately report the ticketing Status. Most other systems cannot properly count total number of raised ticket or current status, I am also wanting pure precision and I am thinking that every Tickets information must be documented in my database and it will be occurred accurately. I think that a single ticket

can change an entire industry financial statements or inventory status so I am trying to highly provide this application accuracy and precision.

Reliability

When you create an application, it must be reliable for the people if people cannot trust your application, people cannot want to use your application. So, I will be trying to developing one application which is reliable for the people.

Clients Satisfaction

Nowadays in a software industry client satisfaction is an important thing. Using DIU trouble ticketing system application, I am trying to build up satisfaction level all of the user. Recent time if any problem occurs in any lab or any place needs lots of time and loss of energy to solve that problem in this case or situation student are demotivated by those things and using my application, I can increase the satisfaction level all of the users [9].

1.4 Expected Outcomes

There are three expected outcomes in my Trouble Ticketing application

- Multiple user registration and access.
- Track a ticket's history.
- Notification Alerts.

1.5 Report Layout

DIU Trouble Ticketing application is cover-up with six chapters. In this report, the layout Section is trying to summarize that five chapters. I discuss summarized those five chapters below**:**

In chapter one gives an introduction to the Trouble Ticketing System and its motivation. I will be also discussing the Aim of my expected outcomes and objectives of this application. In chapter two covers an extensive literature reviews of similar works of the Trouble Ticketing System and discussed with the problem and challenges of Diu trouble ticketing application.

In chapter three I am trying to highlight the project requirements. Details on communication service and software both are used. In chapter number four on the application details about my proposal by flow diagram, design and implantation with practical details or my project design and implementation for the testing the project and comparison between proposed and existing system. In chapter five I will be trying to discuss about the testing, implementation and testing report of the project work. In chapter number six the conclusion and future scope or possible development of my project work are discussed.

CHAPTER 2

RATIONALITY AND RELATED WORKS

2.1 Introduction

The inside limit of a ticketing framework is to manage every moving toward requesting from various divisions in an association. Since IT divisions will when all is said in done have a high volume of sales for which they need a structure to deal with the lifecycle of every requesting, from convenience to objectives. A few online projects give administrations to achieve this, from straightforward consumption programming to progressively refined apparatuses that triage and track issues. We'll investigate the assortment of these capacities later on.

A ticketing framework is expected to keep awake with the most recent on its status tickets. Each ticket will contain a specific issue or course of action of issues, and the IT bunch needs to decide these issues speedily. Using a ticketing system diminishes the IT office's concern by keeping all information dealt with in a central focus.

A portion of the time, the IT division furthermore fills in as a customer care center or help work zone, and may be staffed by specialists who help people outside the association - normally customers or other thing customers - to deal with their particular issues. Notwithstanding whether the ticketing framework will manage external or internal requesting, the program should perform equivalently. We should investigate the absolute best highlights to think about when picking which IT ticketing framework to execute.

IT bunches require different sorts of programming depending upon the riches and criticalness of their moving toward requesting. In any case, paying little personality to these specifics, the target of an IT ticketing framework proceeds as in the past: to improve the affiliation and capability of IT ticket response.

A ticketing structure should be anything but difficult to use and focused on correspondence and buyer faithfulness. This is because the basic objective of presenting a ticketing framework is ensuring better, speedier correspondence between the ticket sender and issue resolver. It isn't adequate for a system to encourage the confirmation

strategy; the structure must benefit the IT bunch in quickly grasping the issues. Ideally, each related assembling will have the alternative to pursue issue progress - this envisions pointless email chains just as collections. Cloud-based ticketing plans give additional straightforwardness customized revives, and thusly various associations are heading off to these frameworks to grow capability.

2.2 Related Works

To solve this problem there are lots of applications have been proposed. In recent work, I have found some Desktop based applications and Mobile applications in the Google play store.

IT HelpDesk - ServiceDesk Plus: IT HelpDesk - ServiceDesk Plus is an Android app where u can only raise or generate tickets via Email. And the admin can view the request or tickets generated by the user [1].

Zoho Desk: Zoho desk is also an android app where u can generate tickets via email and assigned tickets, View tickets [2].

Web Help desk: Automate incident management through ticket system software. In this software, you can generate tickets and check the current status of tickets. Only the admin panel and user generate tickets via email [3].

Smart Sheet: Smart Sheet is web application where company's employees can generate a ticket via forms and admin can view the tickets and admin can generate report monthly how many tickets generates and how many issues have been solved.

2.3 Comparative Studies

Why Thinking

Now a day is the time of updated technology people cannot love to work physically they want they can do any work remotely so if we thinking our university, For Example: In Lab room sometimes a mouse, keyboard or any things of the lab room can be damaged so what can we do?

Very few students who love their educational institute serious about a study they can complain or provide information in the department and department send it to the IT Support or respected person. If we doing this via Mobile Phone students take a picture and with some details, he or she can generate a ticket easily and admin can be notified

very quickly and they can take an action within a minute and they can assign appropriate persona immediately.

How it helps us

Diu ticketing application is the centralization of all kinds of information. All tickets are stored in one application or server for future required that can be searched and information can be used. Not only had this application help with user's service analytics but also used to solve the current situation which can be tough for all kinds of users.

2.4 Scope of the Problem

In my application I am trying to make this application user-friendly and very simple with as well as sign in and sign up system. And the features are also very simple. Admin can only access my web panel and when admin can log into web panel admin can generate any types of user like as Staffs, clients and admin can view all the tickets and present tickets status and admin can generate a report monthly wise.

In my app, all types of users can sign in but admin can only register any type of user. Admin can view the tickets, assigned tickets, view the current status of tickets. How many tickets are generating in a particular month, how many assigned tickets? Numbers of tickets are not assigned, how in my application, I am trying to make my application user-many tickets are open or closed. Admin can view off all of those in the admin dashboard. Users can generate a ticket, check his or her current ticket status and received a notification when his or her tickets will be closed. The staff gets a notification when a new task assigned against him or her and after completing his or her task, he or she closes the tickets.

Time-consuming

Using DIU Trouble ticketing application Clients or students are able to save their valuable time because now a day's people cannot waste their time so they don't need to go to the department to give application for any kind of support, they can generate a ticket and easily told their specific issue. Admin can save their times because when they heard any problems first of all they visit this place and try to find out what is the reason

or which support needed but when then gets information through this application and they can easily decide which task assigned which employee and they can be managed or informing all of the IT-related issues . In this application, the staff saves their time because when a new task assigned against him or her, he or she will be received notification until received notification he or she will be free.

Any time Anywhere & Any device

We are using DIU Trouble ticketing application any device and any time anywhere. Suppose when Students generate a ticket admin is outside of the office but it will be important admin can assign a task to the employees who are perfect for this task there will be not needed to attend the office.

2.5 Challenges

- To collect appropriate data.
- Ensure the user Type and their activities.
- To processing Data, I need to find out algorithm.
- I am Ensuring Security for the admin panel.
- Ensured that tickets are counted automatically.
- Ensure that without admin no can log in into web panel.
- Ensure that Staffs or clients cannot assigned tickets.
- Ensure that only clients or user can generate tickets.
- Ensure that admin can log in both mobile and web panel.
- Ensure that Staff gets notification when they have assigned for a new task.
- Ensure that when ticked will be closed or work will be complete user gets notification.
- Ensure that tickets will increment as appropriate type.
- Ensure that all types of password will be encrypted.
- Ensure that only admin can register staff and clients.
- Ensure that clients able to see their current ticket status.

CHAPTER 3

REQUIREMENTS SPECIFICATION

3.1 Business Process Modeling

The Business Process model always helps us to achieve my final goal and provide a clear and understanding point of view about any application that has been developed. BPM is a technique for representing the workflow of an application or system. The diagram base as a "flow diagram", is the main characteristic of the methodology. Here I define my business model using Data Flow Diagram. When any user needs to update their system or application, they can easily update their application via this model and it will be also time consecutive for the developers for updating the system.

Here I am using a Data Flow Diagram to define my business model. Data Flow Diagram describes the way of data processing through a system. I am trying to draw a - DFD for my system. Figure 3.1 shows the DFD of the system. An admin can perform CRUD operation means to create, read, delete, update, search and view Staff and User, admin can also assign a task to the staff which is generated by the User. A user can update his or her profile, Create Tickets, view the status of the Tickets all tickets generated by him or her. And received a notification when Ticket will be generated and when the ticket will be closed. A Staff can view a profile, Dashboard (Assigned, Not Assigned, Open, Complete, all tickets) and staff get a notification when a new task will be assigned against him or her by admin.
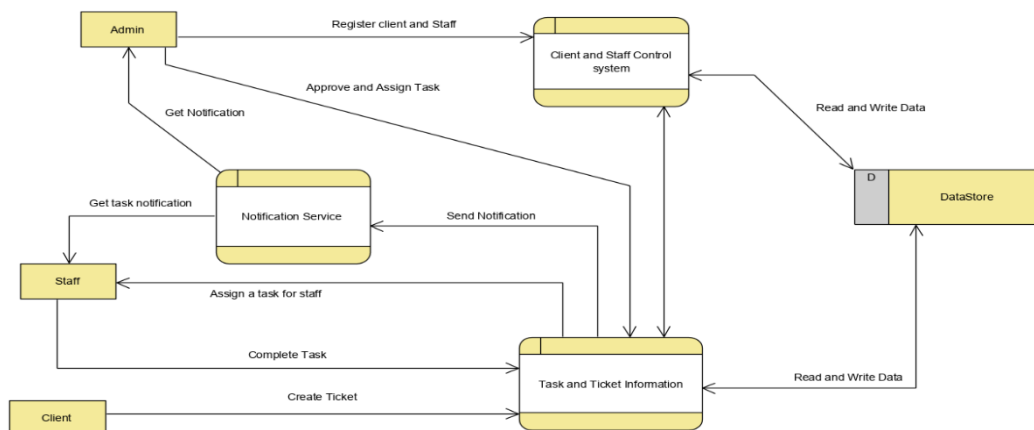

Figure 3.1 DFD of my Application
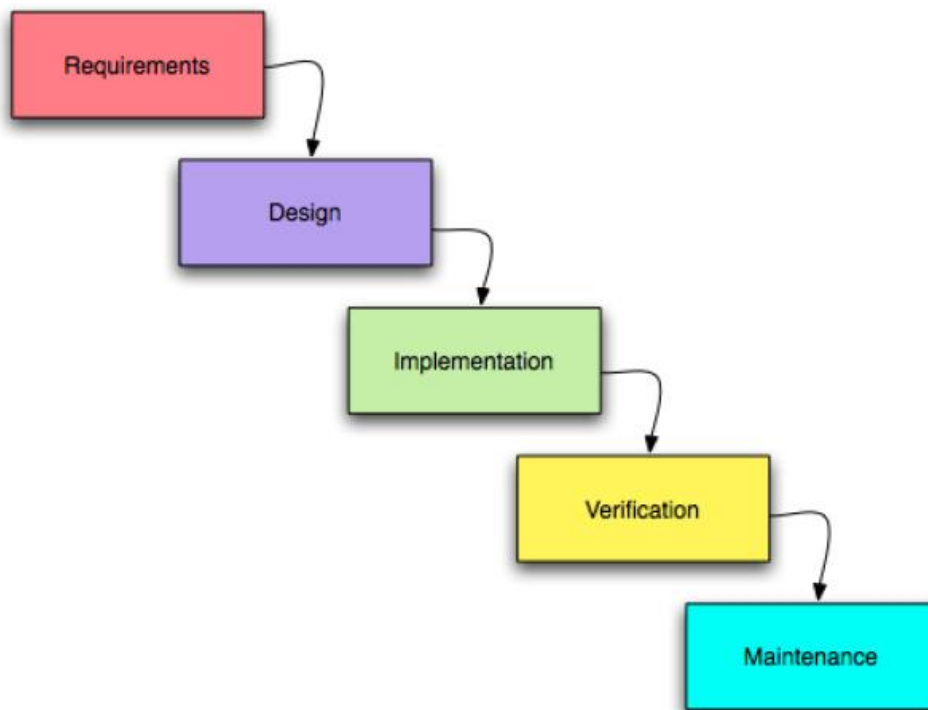
The SDLC Waterfall Model:

Figure 3.2 SDLC Waterfall model Diagram

Why choosing Waterfall Model for this application

This waterfall model is all of the stages are following an arrangement and are one stage-dependent with another stage, therefore it cannot start a phase until the previous stage is completed or done and recorded. This method is the most perfect for the application to be developed because all of the goals of the application or software are very clear and understandable which you want. Next is it easier to do any work using the waterfall model and this model provides an approach in any application? And the most important thing in this model when developers find any error of the problem they easily find out and solve it easily so that it is a very popular model in the present world.

3.2 Requirement Collection and Analysis

Requirements analysis is an important phase of the system development life cycle which provides all the specifications of the system in detail which is very essential to

build the system and also provides the knowledge about the nature of the system. The collection of system requirements is a very important point because the whole system is based on this knowledge and it also provides input to the next following stages of the system developing life cycle (SDLC). The requirement of the system can be classified into two categories as follows;

3.2.1 Functional Requirement

There are lots of functional requirements of this application like, a section for registration, a section for login where you can log in via appropriate user name and password. In this application authenticate person can only access, maintaining user profile with a dashboard.

3.3 Use Case Modeling and Description

Use case scenario of log-in

Need to provide Email address along with the password for any type of user to entire DIU trouble ticketing application. Without appropriate Email and password, a user cannot login into this application this is the use case for login into the system.
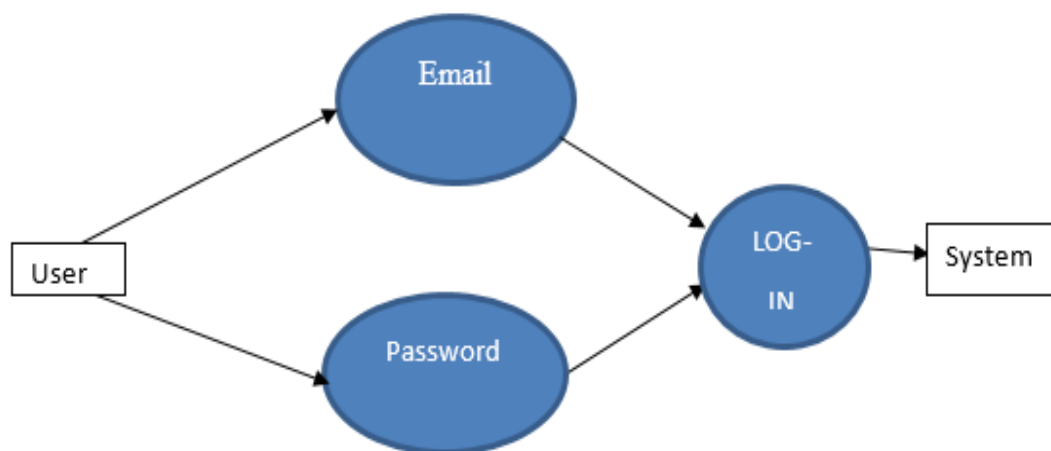
Figure 3.3 Use Case for Log- in

Sequential / Work flow *for Admin panel*

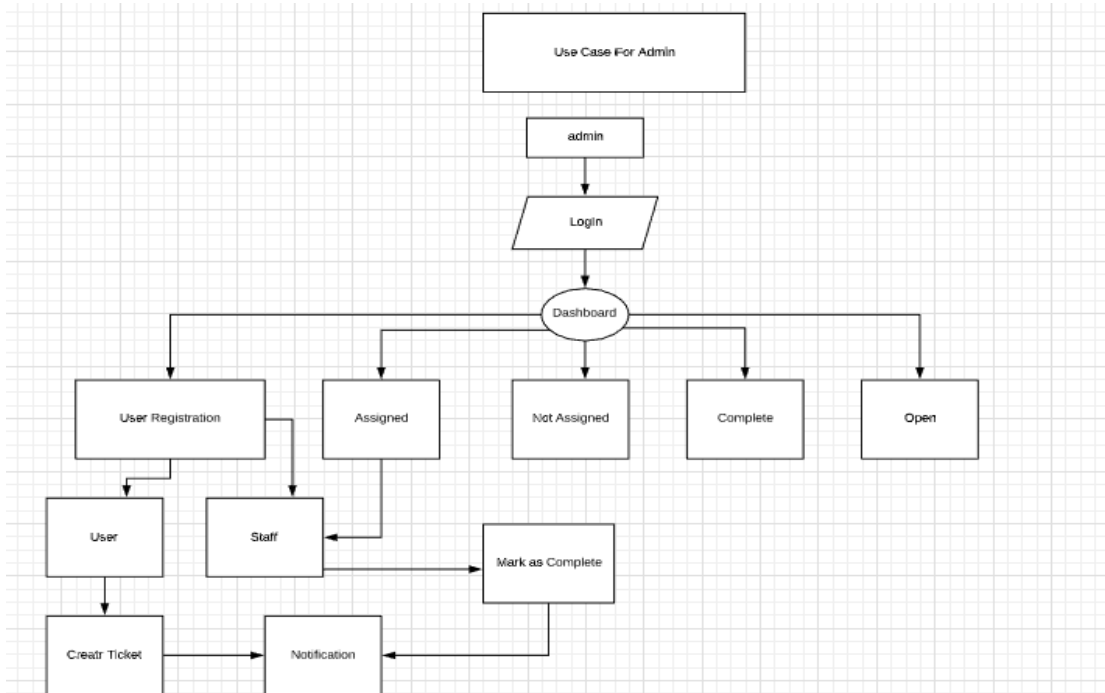Figure 3.4 shows the Sequential / Work flow of admin panel.

Figure 3.4 Sequential / Work flow for Admin Panel

Sequential / Work flow *of Staff*

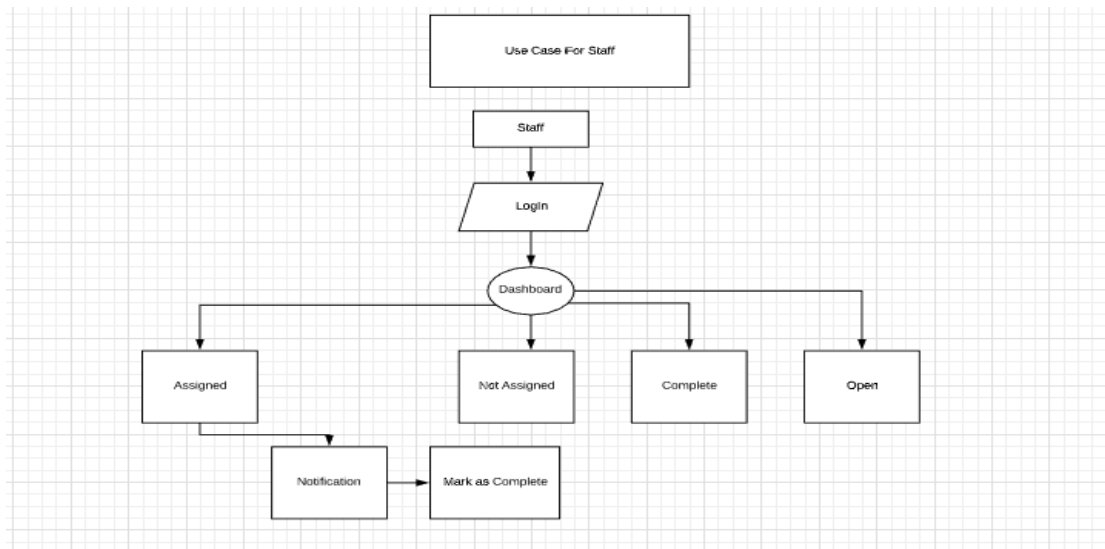Figure 3.5 shows the Sequential / Work flow of staff panel.

Figure 3.5 Sequential / Work flow for Staff Panel

Sequential / Work flow *of User*

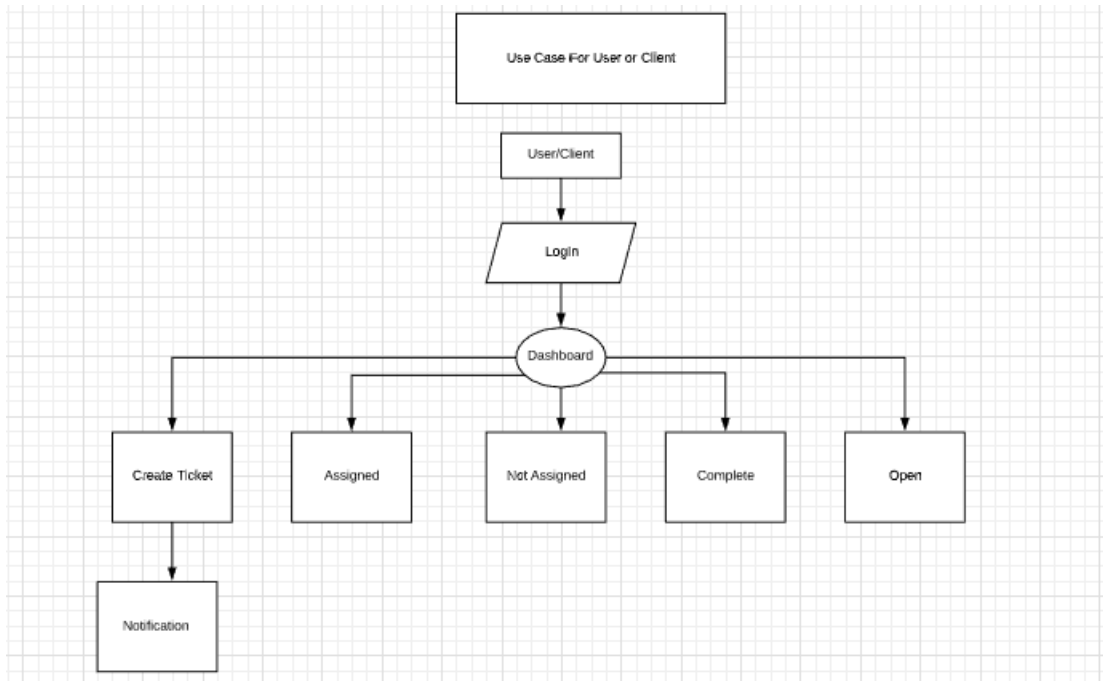Figure 3.6 shows the Sequential / Work flow of User/ Client panel.

Figure 3.6 Sequential / Work flow for User/Client Panel

3.4 Logical Data Model

As a database I am using MySQL. The structure for MySQL Database is produce in Figure number 3.4.

Figure 3.7: Logical Model

3.5 Design Requirements

 The design requirements of my application will make us different from the other application because in this application working with a specific problem. I designed this application with a specific segment that is Trouble Ticketing Solution and I am trying to operate my application easily by providing all things to my application which is necessary for the end-user.

Design requirements for the Admin:

- Login

- Create Staff and Client/User.

- View Staff and Client/ User Information

- View All Tickets.

- Assigned task to the Staff.

- View Tickets Status.

- Received Notification when Task will be done.

- Logout

Design Requirements for the User/Client:

- Login

- Generate Ticket with sending all documents.

- View all Ticket Status

- Received Notification when Task will be done.

- Logout

Design Requirements for the Staff:

- Login

- View all Ticket Status

- View All tickets Details he/she has been done

- Received Notification when Task will be assigned by admin.

- Logout

Design requirements for the Admin (Web Panel):

- Login

- Create, Read, Update and Delete and also Search Staff and Client/User.
- View Staff and Client/ User Information
- View All Tickets.
- Assigned task to the Staff.
- View Tickets Status.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

Design is one of the most important parts of an application, the most essential segment for application development is Front-end. It is essential to build up a simple and effectively understanding **Graphical user interface** for the end user of any application. Front-end part design and development is a proper practice that enables the invention of an application which is important for web applications or website. It defines business success by improving web performance. It takes 0.05 seconds for an average user to form an opinion of a B2B company by looking at their website. Therefore, I tried to keep my design as simple as possible and easily useable for the user & the process to build such an application is not that easy

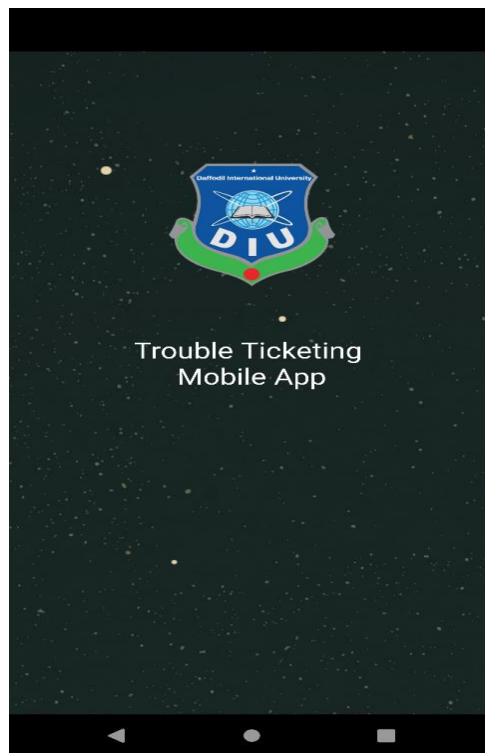In figure 4.1 it shows the splash screen:

Figure 4.1: Splash UI.

In Figure 4.2 describe the login panel of this application, there are three kinds of users in this application those are Admin, Staff, and Normal user. Everyone must have to give their right information for login.
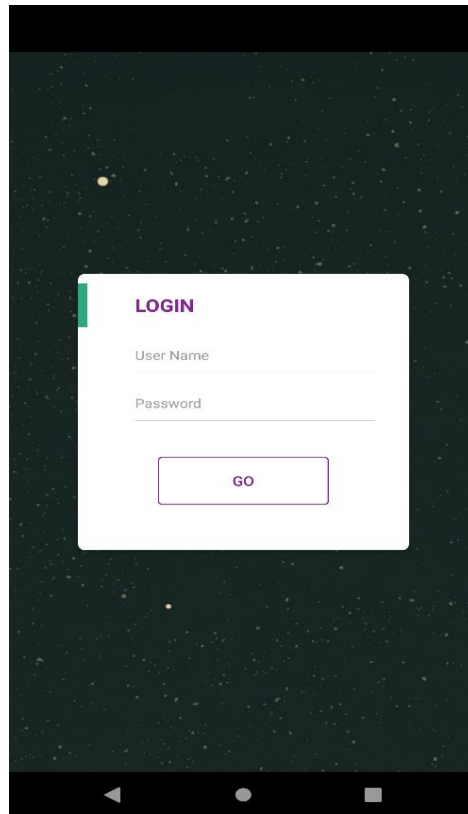

Figure 4.2: Login panel.

In Figure 4.3 describe the admin panel of this application, when admin user login with their id & password. The admin dashboard will appear. On the dashboard, the admin can see the 5 segments on the dashboard.
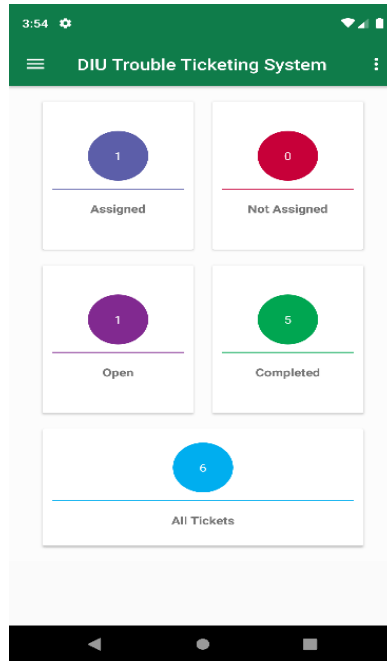
Figure 4.3: Admin Dashboard

In Figure 4.4 describe the admin navigation panel of my application, in this panel, admin can see the dashboard, register users & the other users of this application
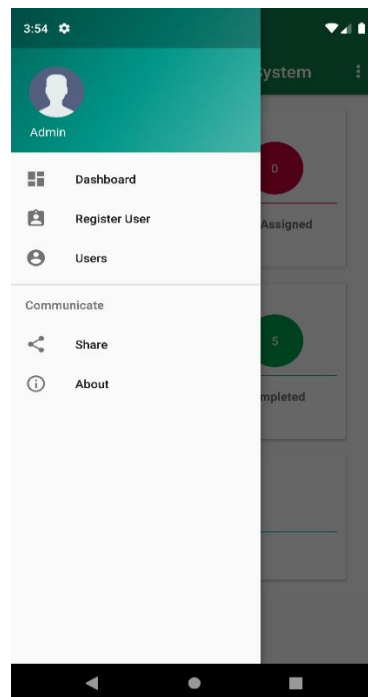

Figure 4.4: Admin Navigation panel

Figure 4.5 Registration user segment in the admin navigation panel is to register any user to the application. Here admin has provided the user name, mail, password phone number & also designated the registered user as a staff or a normal user.
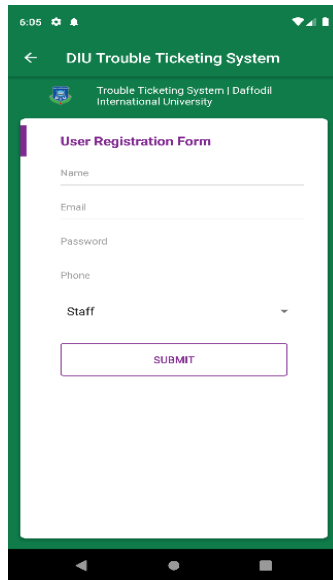

Figure 4.5: User Registration form

Figure 4.6 Users segment in navigation panel, admin can see the staff & client number & can call for any needed
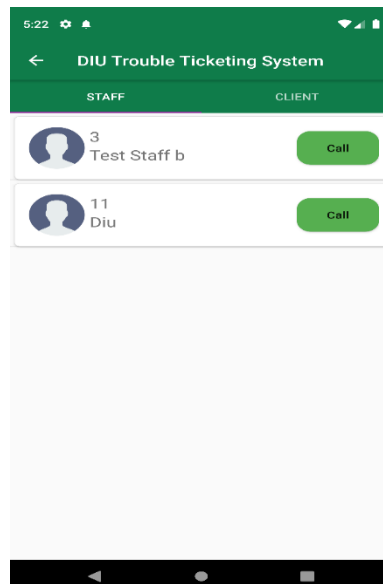

Figure 4.6:   Users segment

4.2 Back-end Design

Back-end is the part that working behind the project, but the user is not notify or cannot see this part. Actually, front-end design is only way to interact with the user but user cannot watch and never visualized how to this part is working. Back-end does everything that happens on the server or behind the application. Android developments resources are very limited and continuously updated their services or components. So android application development, is more difficult task to compeering with a web application, we have not created anything that could be reason for pressurized on the device in the back-end partition [6].

In DIU Trouble Ticketing application, I am using MySQL database to stored data in the database for better development and maintained the back-end section.

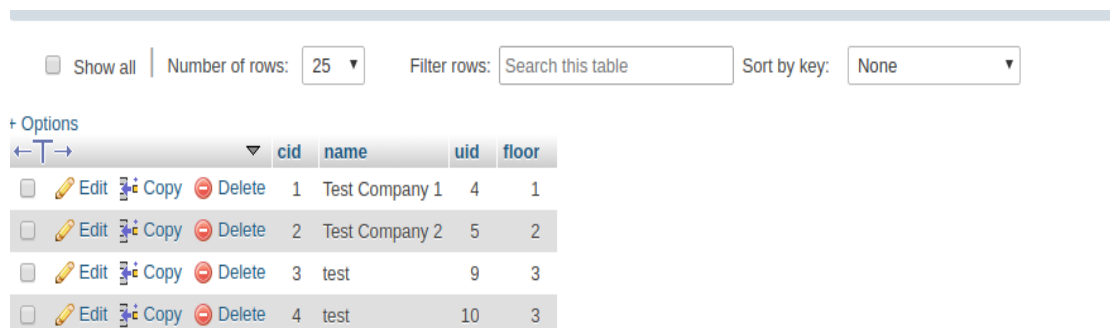Figure 4.7 I would like to shows the User Authentication Table. It shows how user authenticate occurs

Figure 4.7 User Authentication Table

Figure 4.8 shows the Company table. It contains the company's all Information.

Figure 4.8 Company's Table

Figure 4.9 shows the Tickets table. It contains the all ticket's Information.

	tid	title	description	type	image	assignedToUid	assignedToName	createdByUid	status	completeTime	as
Edit Copy Delete	2	test	test	test	15583392091.png	3	Test Staff b	1	Completed	1558345620	15!
Edit Copy Delete	12	qwer	sdsdsd	sds	15603289024.png	3	Test Staff b	4	Completed	1562672715	15(
Edit Copy Delete	13	Hahahaha	Hahahahaha	lol	15626724394.png	3	Test Staff b	4	Completed	1562672633	15(
Edit Copy Delete	14	test camera	dsf	2	15670561049.png	3	Test Staff b	9	Assigned		15(
Edit Copy Delete	15	test 2 tikcet	sdfsd	2	15670569869.png	2	Test Staff a	9	Completed	1567400753	15(
Edit Copy Delete	16	Hahahah	Hahahah	2	15696707949.png	2	Test Staff a	9	Completed	1572967542	15(
Edit Copy Delete	17	Computer Mouse	Computer mouse is not working properly	2	15730343499.png	3	Test Staff b	9	Assigned		15
Edit Copy Delete	18	Light Damage	Light is not working	2	15730351499.png	0		9	Not Assigned		15
Edit Copy Delete	19	Light Damage	Light is not working	2	15730351589.png	11	Diu	9	Completed	1573039435	15

Figure 4.9 Ticket Table

4.3 Interaction Design and UX

Interaction design is teaching that watches the connection between a framework and its user. All things considered association configuration is the procedures which comprehend the user issue space, process the issue and discover the outcomes, perform activities by the regarding comes about and take care of the issue.

We added an option by which one user can make his/her contact number private, many of us don't want to use this type of application for lack of security and for this reason I am using this feature so that people use this application comfortably.

For UX I have tried to give some fantastic experience by my application. I am keeping my system simple and easier for better experience and performance for the user.

4.4 Implementation Requirements

Different type of tools and components are used to implement my application help us to launch this application successfully. I have used lots of tool to develop this application so in this section I would like to discussed about those tools briefly.

4.4.1 Android Studio

Android studio gives the speediest apparatuses to building applications on each kind of Android gadget. Excellent code altering, troubleshooting, execution tooling, an

adaptable form framework, and a moment fabricate/send framework all enable you to concentrate on building novel and superb applications. I am utilizing the Android Studio as my application IDE. Since here I am discussing the Android Studio, so at first, we have to know some essential data about Android.

4.4.2 The Emulator

An Emulator is a Virtual device for running android applications virtually. Via Emulator I can run my application without a real-time device. In my application, I am using PIXEL-3 device. Developers use an emulator to testing their android applications locally.

CHAPTER 5

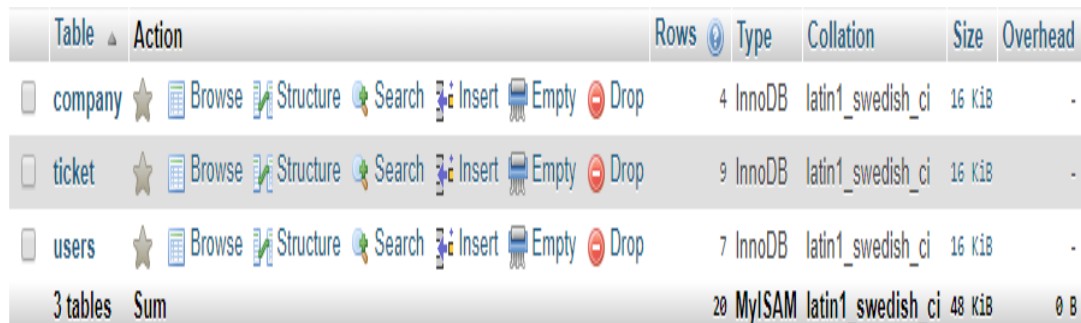# IMPLEMENTATION AND TESTING

5.1 Implementation of Database

The implementation phase is where you install the DBMS on the required hardware, optimize the database to run best on that hardware and software platform, and create the database and load the data. Create the database and tables. Load the data [7].

Database name: DIU_TTS

Table Name:

- User, Company, Ticket

I am using three database table for this Diu trouble ticketing application. In user table I am storing all types of user information as well as their email and password and their type as like as admin, staff and user. In Company table I am storing company's information as like as company's address, Floor, Phone Number etc. In the Ticket tables I am providing all types tickets information as like as who is generated or create ticket, Ticket status, Ticket details etc.

Table ▲	Action	Rows	Type	Collation	Size	Overhead
company	⭐ 🔲 Browse 🏗 Structure 🔍 Search 📥 Insert 🗑 Empty 🚫 Drop	4	InnoDB	latin1_swedish_ci	16 KiB	-
ticket	⭐ 🔲 Browse 🏗 Structure 🔍 Search 📥 Insert 🗑 Empty 🚫 Drop	9	InnoDB	latin1_swedish_ci	16 KiB	-
users	⭐ 🔲 Browse 🏗 Structure 🔍 Search 📥 Insert 🗑 Empty 🚫 Drop	7	InnoDB	latin1_swedish_ci	16 KiB	-
3 tables	Sum	20	MyISAM	latin1_swedish_ci	48 KiB	0 B

Figure 5.1 Database Implementation

5.2 Implementaion of Front-end Design

DIU Trouble ticketing application web Panel first page as like as Figure 5.2. There are two panels are available in DIU Trouble Ticketing application in this stage I would be like briefly describe about the features of DIU Trouble Ticketing application and it will

be helpful for the end user for their better understanding they know why they use of this application.
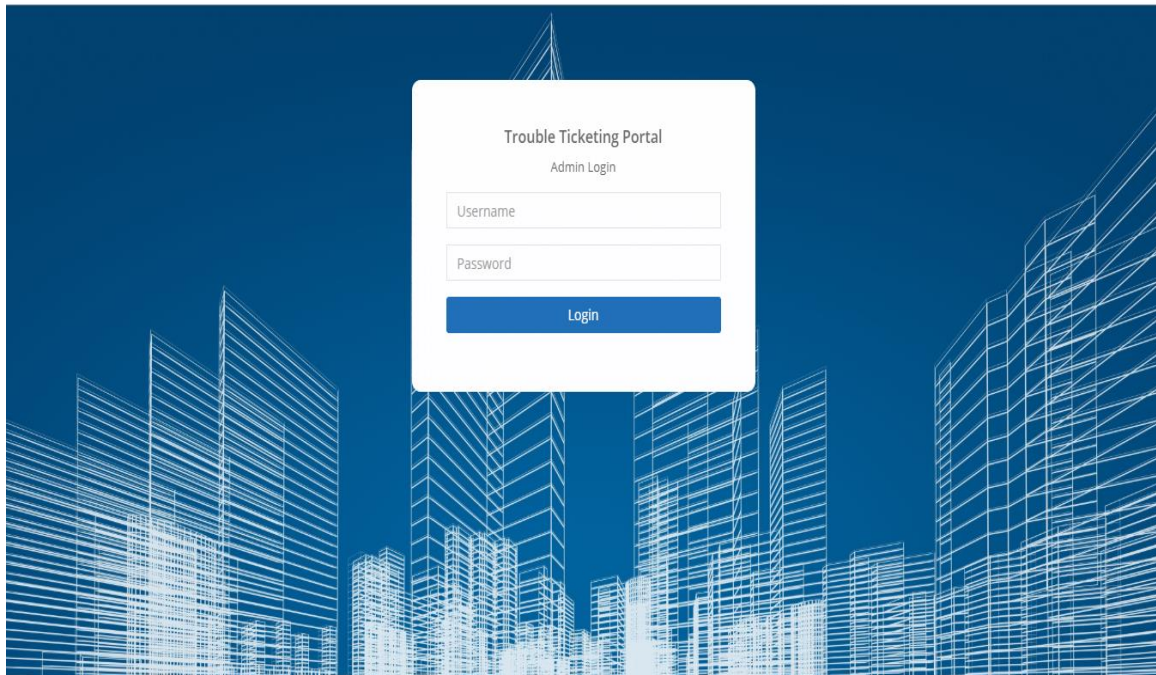
Figure 5.2 Admin Log In panel

In figure 5.2 shows the admin panel of my application in this panel only admin can access with the same email and password which admin can used also mobile application admin panel. I am using utoken for this both (web and mobile app) login. In the web panel after login admin can also create a user as per as mobile apps. Admin can do everything which he or she doing in the mobile application panel.
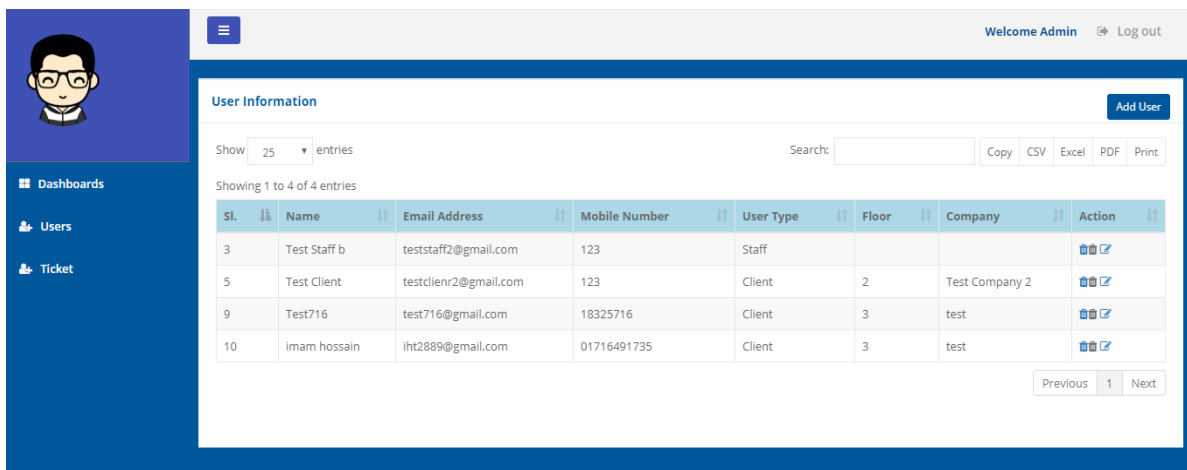

Figure 5.3 User Information

In figure 5.2 shows the details user information in a single table as like as Name, email address, Mobile Number, user Type (Admin, staff or client), Floor Number, Company Name and Action where there are three buttons for view, update and delete option we can perform those operation via clicking the button. In the Top of the table there is a button add user we can add user cling this button and a model window will be come. In figure 5.3 we add a user form the Web panel.

Figure 5.4: Add user

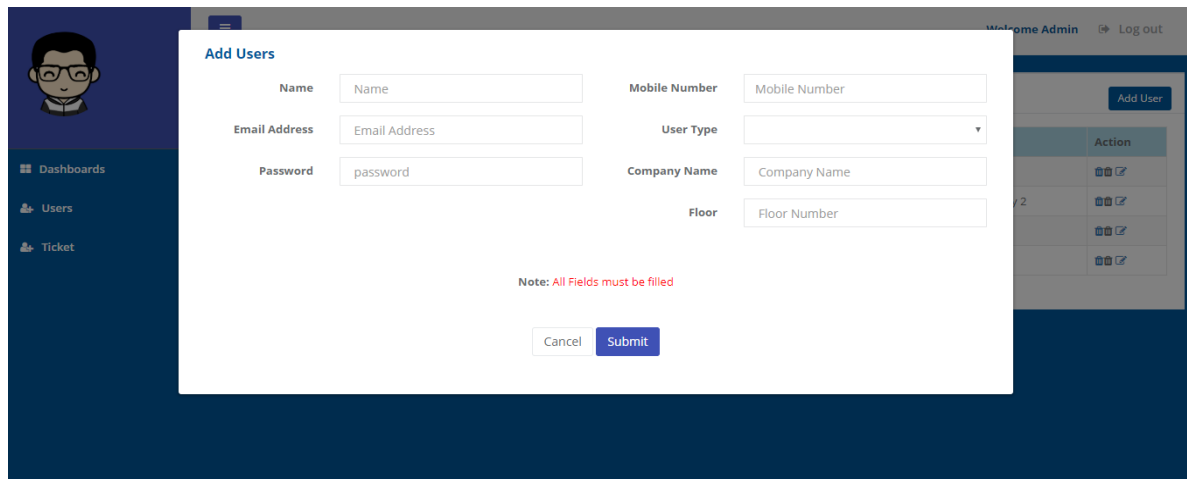Figure 5.4 we View the Ticket's Information. When admin log in into web panel, he or she can able to view ticket's all information as like as title, image, created by, assign to etc. and admin can also generate a reports monthly basis in the format of excel, csv and pdf. Admin can filter the data serial wise ticket wise, assigned name wise, created names wise.

Figure 5.5 Ticket's Information from web panel
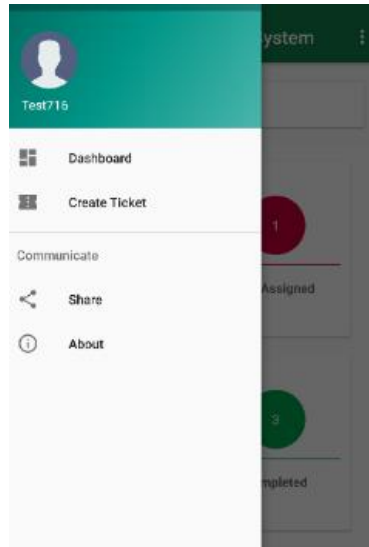
Figure 5.6: Navigation Drawer of a User

In Figure 5.6 we can saw how user can generated Tickets. User can login after providing their email address and password, after login in the navigation section he or she can view the create Tickets Option. Or on the top of the Dashboard Crate a Ticket button.
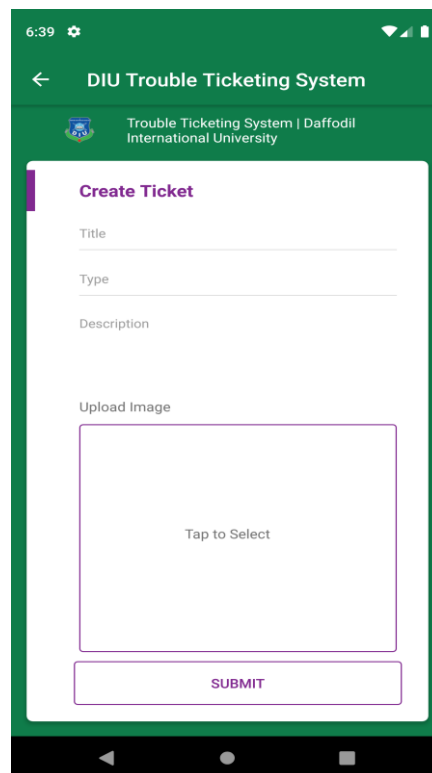
Figure 5.7: Create Tickets by a user

In Figure 5.7 when a user creates a tickets admin assigned these tickets against a staff who is suitable for this task.
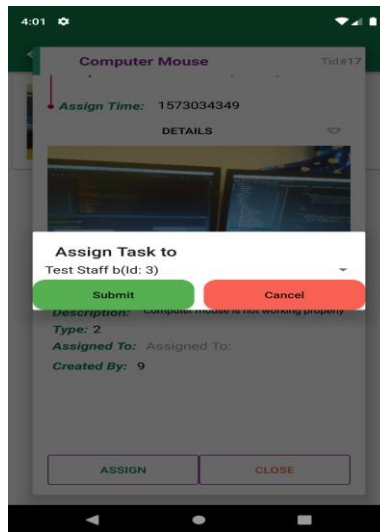
Figure 5.8: Admin assigned tickets to the Staff

When admin assigned ticket, staff gets a notification and he can view the complete details of this tickets as like as figure 5.8. After he doing his task completely, he can just click the button mark as complete and admin can get a notification as well as user.

Figure 5.9: Ticket Details

5.3 Implementation and Interaction

To make DIU Trouble ticketing application interactive and better user understanding I have implemented responsive User Interface (UI). In the real world, almost everywhere you can find interaction which is the key to making any system attractive, responsive and dynamic to the user. For attractive design and those features, the Diu Trouble Ticketing application is user-friendly. Make a system that is user-friendly and interactive and it is very important to the developers who developed any system. So, I try my best to make my application which is user-friendly and interactive and trying to include some unique features to interact with this application which is I mentioned earlier. Only Super Admin will access to create a profile for the admin panel and after login into the admin panel, admin can perform their tasks.
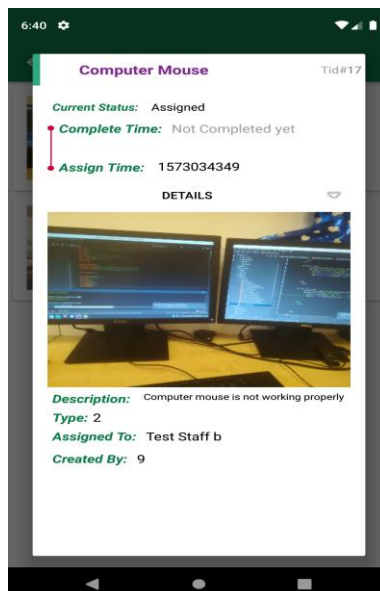
5.4 Testing Implementation

Testing implementation is way or process of testing for implementation of a software or application, where a system designer played a roll of a tester to see the test case and application specification

In the following table 5.1 I am describing possible test case of my application when the real user is testing of this application and I am asking this kind of question of each and every person for make my application user friendly.

Table 5.1 Test Plan

SL	Test Case	Test Input	Expect	Actual	Result	Tested
1	Admin panel log in	Both Web and Mobile log in panel Working or not	Both panels are working	Both panels are working	Passed	1/7/2019
2	Only admin can access web panel	only admin can access panel or all user access to the web panel	Only admin can access web panel	Only admin can access web panel	Passed	10/7/2019

3	Create user from web Panel	Create user from web Panel or not	Create user from web Panel	Create user from web Panel	Passed	25/7/2019
4	Modify or delete user information from web panel	Modify or delete user information from web panel or not	Modify or delete user information from web panel	Modify or delete user information from web panel	Passed	10/8/2019
5	Modify or delete user information from mobile app	Modify or delete user information from mobile app or not	Cannot Modify or delete	Cannot Modify or delete	Passed	15/8/2019
6	Install Application	Tested on various Android version -	Install all Device Successfully	Successfully installed	Passed	5/9/2019
7	User Registration	Without Registration.	Rejected	Rejected	Passed	5/9/2019
8	Display all option	Display all option	Display all option	Display all option	Passed	10/11/2019
9	Dashboard	All dashboard are working or not	All Dashboard are working	All Dashboard are working	Passed	10/11/2019
10	Create Ticket	Tickets are created or Not	Tickets are created Successfully	Tickets are created Successfully	Passed	1/10/2019
11	Assigned Ticket	Tickets are Assigned or Not	Tickets are assigned Successfully	Tickets are assigned Successfully	Passed	5/10/2019
12	Make Phone call	Make a phone call or not	function is working for Phone call	function is working for Phone call	Passed	6/10/2019
13	Permission	Ask allow permission for camera, gallery, and call	Give permission alert message	Give permission alert message	Passed	8/10/2019
14	Mark as Complete	When staff complete task mark as complete or not	Mark as complete	Mark as complete	Passed	12/11/2019

15	Notification	Tickets create, complete, assigned notification received	Notification Received Admin, user and staff depends on task	Notification Received Admin, user and staff depends on task	Passed	13/11/2019
16	Log in Multiple device	Log in Multiple device	At a time cannot login multiple device	At a time cannot login multiple device	Passed	20/8/2019
17	Counting Tickets	all types ticket counts properly or not	Counts Properly	Counts Properly	Passed	15/10/2019
18	Documents Upload	File, Image Upload or not	Uploaded File or image	Uploaded File or image	Passed	20/10/2019
19	Log out	Log out properly or not	Log out	Log out	Passed	25/10/2019

5.5 Test Results and Reports

In this section I am discussed about how many test cases I have Planed in this application, how many test cases are excited in this DIU Trouble Ticketing application, Number of passes test case and how many tests are failed.

In Table 5.2 I can generate a simple table which is the summary report of uses test cases in my application.

Table 5.2 Test case planned vs Executed

Test case Planned	Test Case executed	Test Case pass	Test Case Failed
170	185	180	05

In figure 5.10 I can generate a Graphical representation of total using test cases in my application.
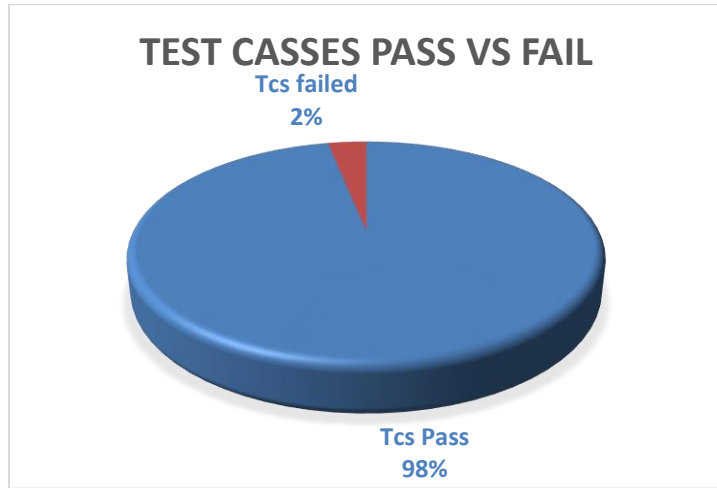
Figure 5.10: Graphical Representation of test cases

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

I can successfully implement an Android-based mobile application and web-based admin panel for my application. I am testing every function of my application with lots of devices such as mobile, Laptop, Tab and our devices my application worked perfectly and give us the desired output or data. People who have the minimum knowledge about smartphone or tab they can easily use this application because I am trying to design font-end are user interactive and also user-friendly.

I am personally encouraged to the developer to developing this kind of application because we see lots of problems occurs our campus premises if we solved that kind of problem smartly, we can minimize our time, cost manpower and most of the things we can solve a problem very quickly in a digital way. We know most of the people in our country use the internet Nowadays. In our country more than 40 million people using the internet according to the survey of 2019. In the present world, everything is based on Computer science and we are living in the era of modern and updated technology. We initiate this application as a web and android based application, with that we hope people will get the desired service

6.2 Limitation

As well as other application, in this application has also some limitation. In future I will be overcome those limitations. Some of the main limitations are –

- I am using MySQL Database so without internet user cannot use this application.
- In this application user can not generate monthly report.

6.3 Scope for Future Developments

- In future user can able to use this application from offline.

- I am adding more additional features to make it more dynamic to satisfy larger organizations

APPENDIX

Appendix A: Project Reflection

There are mainly three features in my application

- Admin
- Staff
- User

Admin can register user and Staff (Add, edit, delete, Search)

Admin can view all ticket status.

Admin can assign tickets to the staff.

User can create tickets.

User can view their tickets status.

Staff complete task which is assigned by admin.

Staff can view their all tickets status.

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