

**BANGLADESH POLICE CASE MANAGEMENT ANDROID APPLICATION AND
WEB-BASED SYSTEM PROJECT REPORT**

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

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MAY 20

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This Project titled “**BANGLADESH POLICE CASE MANAGENENT ANDROID APP AND WEB- BASED SYSTEM,**” submitted by. Samiul Islam Anton, ID No: 142-15-3944 and Tanvir Ahmed, ID No: 142-15-3488 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 Bachelor of Science in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06th May 2018.

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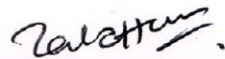
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DECLARATION

We hereby declare that, this project has been done by us under the supervision of Shaon Bhatta Shuvo, Lecturer, Department of CSE and Co-supervision by Mr. Anup Majumder, Lecturer, Department of CSE, Daffodil International University. We 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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ABSTRACT

Bangladesh is well populated country and its crime are almost moderate. Many people singed as police and so much case files are collected by papers. So, Police become Frustrated to manage those new police information, criminal information or so many case files. Huge data are collected daily for those type of data police needs a lot of papers and maintaining those papers are quite difficult. This is also a challenge to take proper steps for each complains. Now a day's technology makes everything easier. If Bangladesh police use technology, then maybe they can overcome this challenge. For this reason, we are going to develop an application and a responsive web-based system to control all of this data together and maintain those in an easy way. With this mobile application police can read about the criminal and he can also entry criminal details. User can find the nearest user and police station with map. Police can search by Name/NID number if he doubts anyone, if he had a criminal record before, the application will show the details about this criminal. This is the easiest way to find a criminal without searching a lot of papers. On the other hand, the website will store those criminal details. On this website many kinds of features will be available like police can able to update or add their profile and also some rules will be available which we need in our daily life. Website also shows the decrease/increase of crime by the month ratio using bar chart. This project is developed using web-based PHP, JAVA SCRIPT, MYSQL, HTML, CSS. On the other hand, android app developed using XML, Java, OOP.

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CHAPTER 1

Introduction

1.1 Background

We make a project which could help police officers to find out the criminal records easily and they also can identify the criminal in anywhere with this app. It's only for Bangladesh Police not for publicly use. We use NID number /Name to find any criminal's record. Police In every police station they have a user id they can access the website and app with their user id. After login they will get an admin panel. They Will be able to add new case details, also able to search criminals, Top 10 wanted list will be help police to know about dangerous criminals and show statistics of crime of different categories. In our country police keep criminal's data in files it is tough to find and store. when we file a case against someone police can't catch him if he/she change the district/division because other police station doesn't have any data of that case but the website and app will make easy to find the criminal data and police can catch criminal all over Bangladesh. In any function or national celebration, police can check with the app is there any dangerous criminal by searching with NID/Name of guests at the time of entrance. The aim of the project is making criminal information available to every police station.

1.2 Aim of the Project

The project is “**Bangladesh police case management android app and web-based system**”. We are willing to help our police because the management system of the police isn't quite wellfurnished. The entire data of police could be stored in web-based system and police can know the details about any criminal and police and his location. An emergency message could be deliver instantly with our app. It also helps police to know about the ratio of crime and that can be compared.

1.3 Methodology to be used

- a) The resolution of the principles of methods rules and postulate system by user-friendly.
- b) The methodical study of methods that are, can be, or have been applied within a discipline.
- c) A documented process for management of projects that contains procedures, definitions and interpretation of techniques used to collect, store, analyze and present information as part of research process in a given discipline.

At the stage of analysis, we have followed the Waterfall Development Methodology.

The waterfall model is consecutive software development process, in which progress is seen as flowing resolutely downwards through the phases of Conception, Initiation, Analysis, Design, Construction, Testing and Maintenance.

1.4 Benefit of the Project

We tried to help police to rearrange their case files easily and can be easily access to any data. They need not to search millions of papers. With the help of android app they can search any suspects still suspect had any crime reports or not. Police also can communicate with their nearby polices with the help of this app.

1.5 Organization of the Report

The whole report arranges as follows, chapter one discusses the introductory parts of the project. Chapter two review of the system that which features are included in this system and android app. Chapter three describe of the all type of feasibility of this project. Chapter four discuss about the requirement of the project with use case diagram. Chapter five contains the whole system design of database, e-r diagram and schema diagram. Chapter six discuss about the design specification of android application. Chapter seven discuss about the design specification of web-based system. Chapter eight described development and testing. Chapter nine will show the appendix side of project. Chapter ten will give the discussion part of the project. Chapter eleven discuss about the conclusion of the project and future work on this project.

CHAPTER 2

System Review

2.1 Introduction

The system is fully automated android app and web-based application. Android app needs to install in android device [1]. To view the admin panel, the server gets the request from the user and get expected data from the database. And the required information will appear in the browser window. The admin can easily add or update data easily in the database. Android app will also show the information from the database. Users can also input data from android app if required.

2.2 Objective

It's a dynamic website and app users can send data to database and it could be retrieve also[2]. All kind of criminal and police information could be stored in database if any user needs any data they can collect it form here. Users can also post important messages for all which will show in every android device. Police could chat with the help of android device which may help them to share important information. Without that some important form will be also available for local users. Local users also can complain to police about any kind of crime. That may help our city become crime free.

2.3 CMS

A content management system (CMS) is a computer system that accept publishing, editing, and modifying content as well as site maintenance from a central page[3]. It provides a collection of procedures used to manage workflow in a collaborative environment. User can send data to database and can add profile or update it with image. Local users can complain to police from website which will visible to every police. On the other hand, user can search suspect with the help of android app.

2.4 Application Features:

2.4.1 Complain

In this portal local user can complain to police.

2.4.2 Information

Some safety tips, Legal affairs will be available which will help users to know about law.

2.4.3 Add Case

New case can be adding by police user.

2.4.4 Form

Website will contain some important forms.

2.4.5 Links

Some of our important link will be here.

2.4.6 chart

User can be compare the ratio of criminal by bar chart.

2.4.7 Update

Profile can be update by police user.

2.4.8 Total registered

Total register police and criminal will show on website.

2.5 Development Language & Database

We are developing web-based system and android app for police by using the following language and database.

2.5.1 Web-based system

- HTML
- CSS
- JQUERY
- PHP
- MYSQL

2.5.2 Android app

- JAVA
- XML
- MYSQL
- PHP

2.6 Summary

In this chapter we discussed some features which is used in web-based system and android app like complain, information, add case, links etc. we also discussed about our developing languages on which platform we used in this project.

CHAPTER 3

Feasibility Study

3.1 Feasibility

Feasibility study is obviously needed for this project. It is used to ascertain the viability of an idea and analyze how a project can be completed. This study includes some technical issues and some economical costs. This type of study is obviously for a project. These studies aim to objectively and rationally unbolts the strengths and weaknesses of an existing business or proposed hazard, opportunities and threats as presented by the environment, the resources required to carry through, and ultimately the prospects for success[4]. Generally, feasibility studies precede technical development and project implementation.

There are five areas of project feasibility. They are as follows:

- Technical Feasibility
- Economic Feasibility
- Legal Feasibility
- Software Availability

3.1.1 Technical Feasibility

This evaluation focuses on the technical resources available on this project or not. If it is available, how it's used in it. The team still used those resources in a good way or not. When technical resources meet capacity, are the team members capable of converting the ideas into a working system. It also involves evaluation of the hardware, software, and other technology requirements of the proposed system. So, we ensured that currently, this project is not technically feasible.[5]

3.1.2 Economic Feasibility

Project needs some costs and obviously need to calculate times. This is the most important part for a project. Every project has to complete some requirement, we got some so and we developed our project with the requirement which was given. We completed it before the project time.[6]

3.1.3 Legal Feasibility

Sometimes project conflicts with legal requirements like zoning laws, data protection acts, or social media laws. Every project needs to maintain that type of law should be careful about those. In our project we ensure all kind of legal feasibility.[7]

3.1.4 Software Availability

Project needs couple of software. We need servers for uploading the whole software and database. In this section we also need to maintain the server correctly. We can use our own server on the other hand we can take part of any professional server provider.

3.2 Summary

In this lesson we learn about feasibility like Technical Feasibility, Software Availability, Economic Feasibility, and Legal Feasibility. In our project we maintained that feasibility for this our systems becomes feasible.

CHAPTER 4

Requirement Analysis

4.1 Introduction

Every project has some requirement analysis for its better design or implementation. With the help of requirement analysis could be guess about the structure of the project.

Basically, we need to know about what our client's requirement and what our system can do for that. If we know that matters we can work on it and there will be no complexity created on project. These analyses need because of their accuracy, and the possibility of Combining the requirements in the system to be developed is also studied

4.2 Why Requirement Collection Is Needed?

1. In every project the ultimate solution is depend on requirements, if the requirement is wrong project can't meet its goal actually.
2. Requirements analysis are basis on which potential solution are Evaluation.

Requirements identify what is needed, whether the solution fulfills the client's need or not.

4.3 Requirement Collecting Activities

1. Selection of the people who can determine the requirements. And they must have knowledge of it.
2. Hold requirements gathering workshop and interviews.
3. Keep in mind for relevant information.
4. Write down the collected information.
5. Keep the requirement circulated for review.

4.4 Flow chart diagram

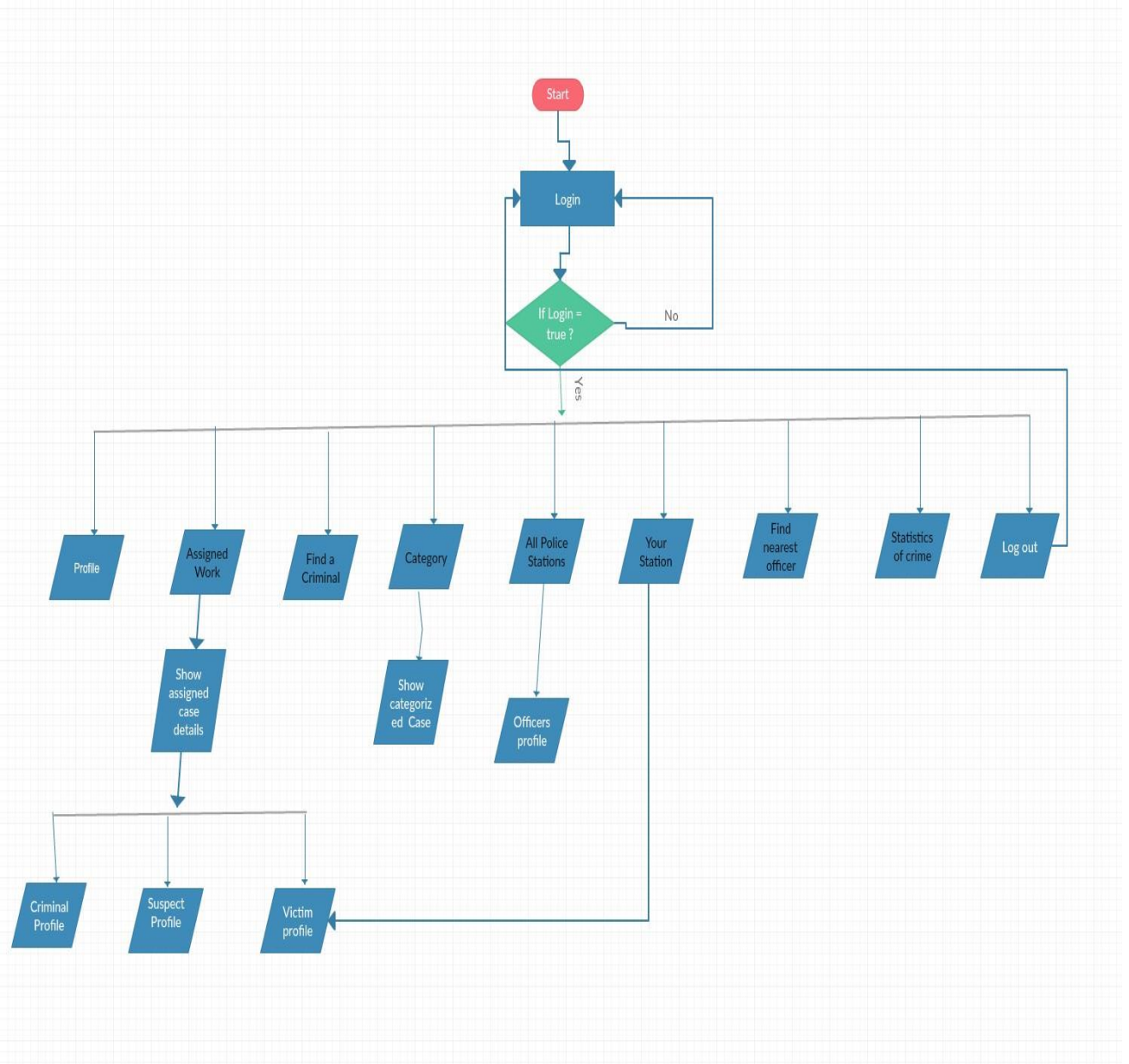


Figure 1: Flow chart diagram

4.5 use case diagram of website

Use case diagram of this project contains two sites. For this use case of Admin and station which are given below

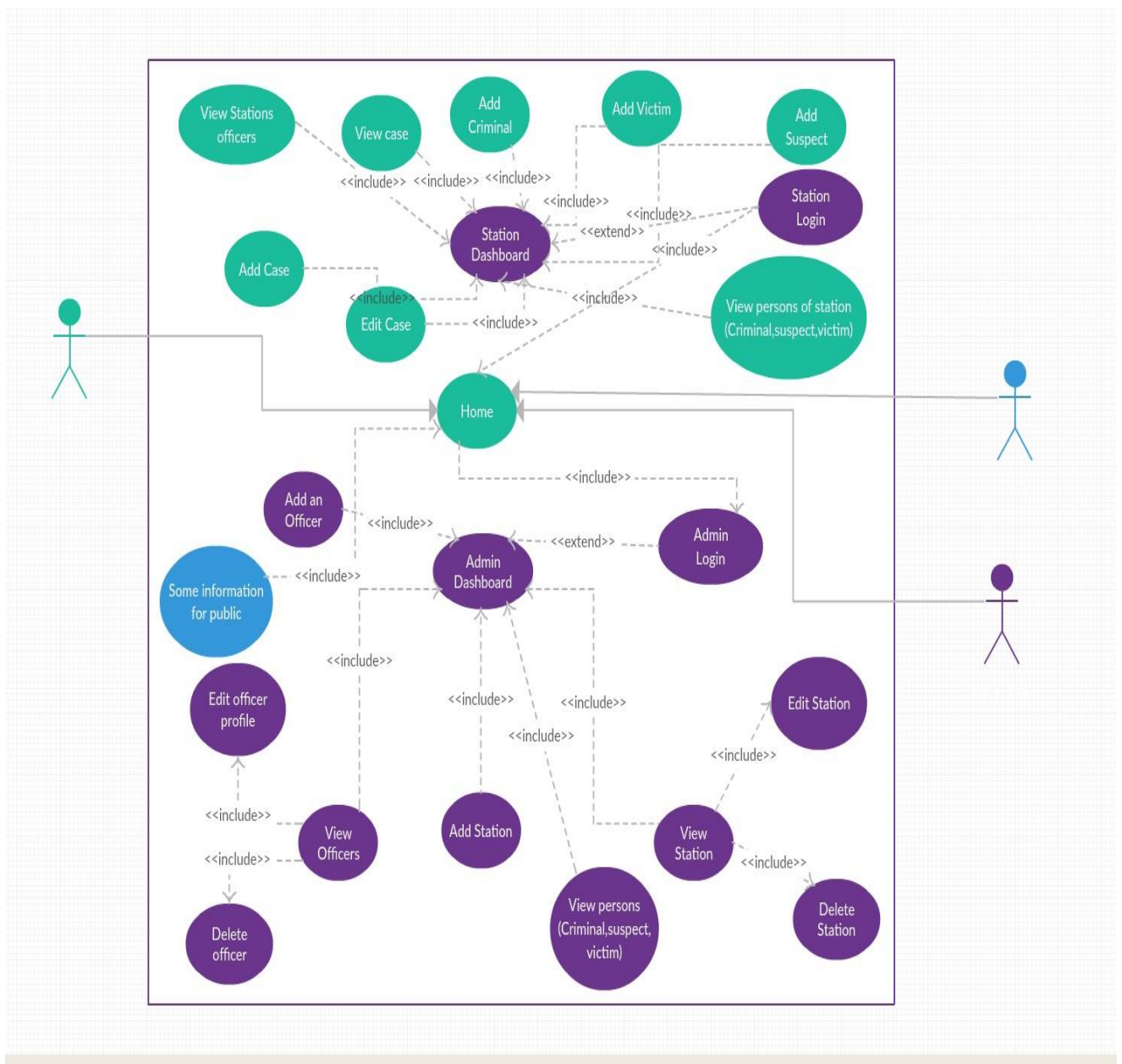


Figure 2 : use case diagram of website

4.6 Use case of android app

In our project, Android user's has some restriction. With that type of we made android user case diagram which is given bellow

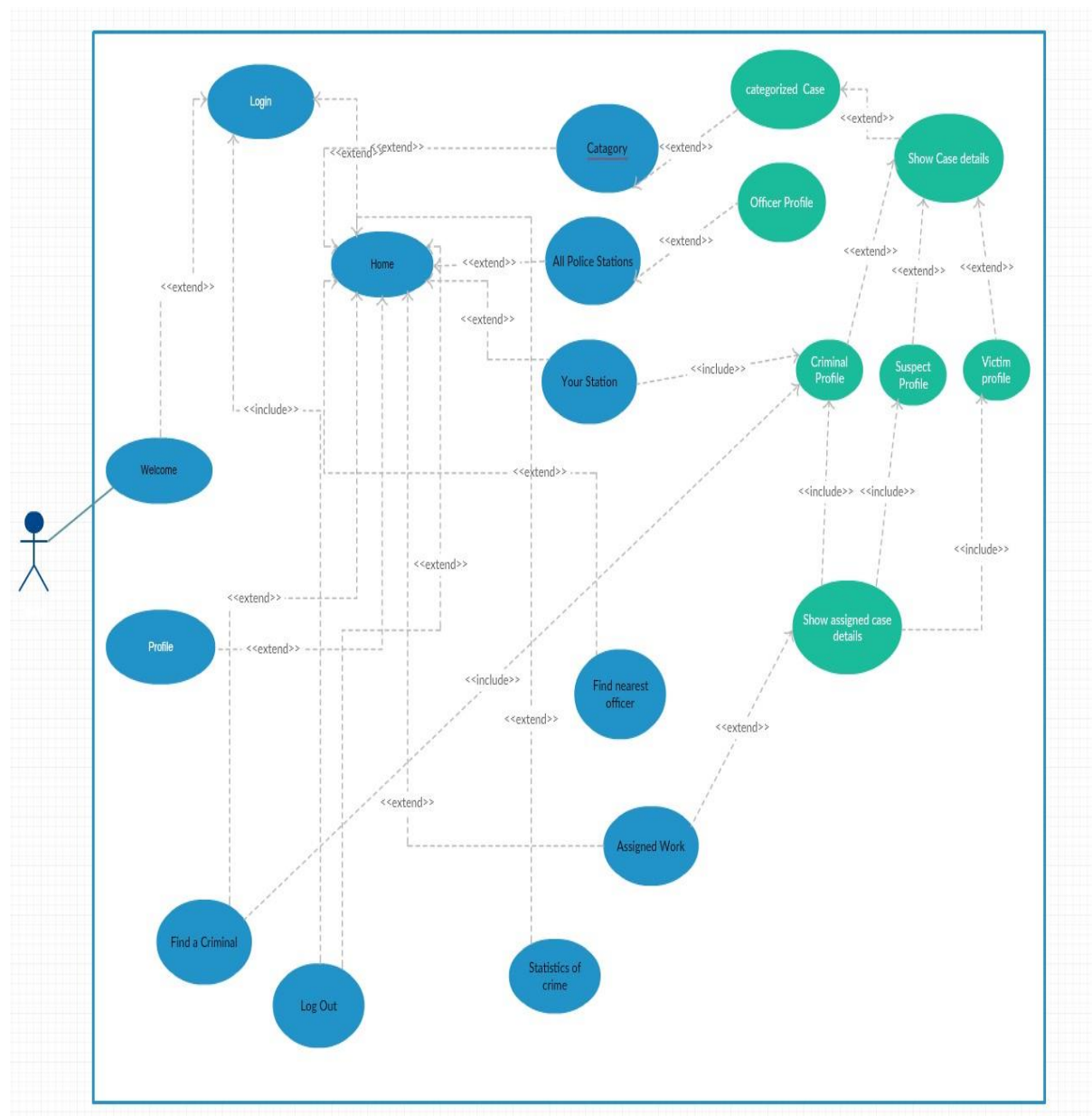


Figure 3 : Use case of android app

4.7 Summary

Use case diagram is used to capture the dynamic nature of a system. It's used in project because of high level graphical view of system. It's combined of cases, actors and relationships. The system functionalities and their flow are representing by use case diagram.

CHAPTER 5

System Design

5.1 Design

Software design is the main architect of project plan and solution. With this design the implementation of project software developers will develop a plan for solution. This is the design of architecture, modules, interfaces, and data for a system to satisfy specified requirements. It's meant to satisfy specific needs and requirement for project and to design how the project meets ultimate goal.

5.2 Database Management System (DBMS)

Database management system is the system how we can store our all data or information to database. In every dynamic software we need to input some data and retrieve it from database. The primary goal of database management system to provide an environment to convenient and efficient to use in retrieving and string database information. It can provide the safety and security of data from any kind of hackers or unauthorized access. If data are to be shared among several users, the system must avoid possible anomalous result

5.3 Database Design

In our project, we use same database portion for both web-based system and android app. Here in our project, an admin can store data from web-based system after that we can retrieve those data from database and view it into android app. Each record in a database is composed of the important elements of information for a particular item. Each record is composed of set of fields.

5.4 E-R Diagram

On E-R diagram can express the overall logical structure of database graphically.

Let's see our database's ER diagram. Following (5.1) figure show the entity relationship of the whole system.

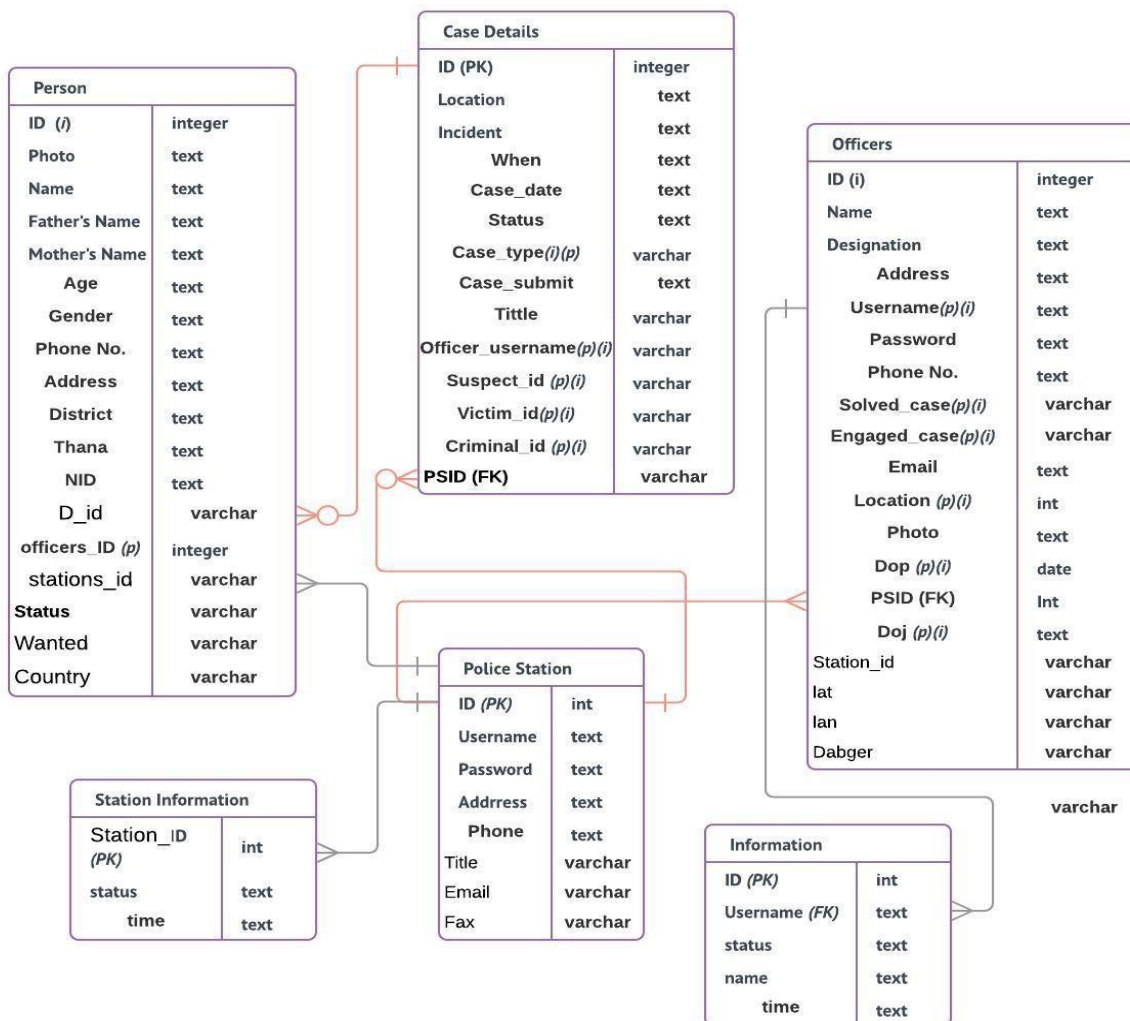


Figure 4 : E-R Diagram

5.5 Summary

In this chapter we saw database management system how it defined. Because of dynamic apps and web-based system we used database which and it's have rules.

Entity relation of our database management is well maintained.

CHAPTER 6

INTERACTION DESIGN AND UX

(For Android App)

6.1 Introduction

Design Specification part is the most important part of a project. It defined the user interface of a project. This chapter includes details about front end design (screen design), backend design (database design) etc. of Android Application.

6.2 Front end design

This is the biggest part of an application. A developer can attract users by doing interact front end design. A user always tries for easiest way for any kind of work. If an application made a user's work easy then the user will obviously rate the into five stars. Many things are depending on this design part like the beautifulness of an application and easy operate. Frontend design are in a great position to help bridge the divide between the design and development worlds. Backend design is not visual to everyone but frontend design is visual to user. A user doesn't know how to use this application first time but because of front end design user should not be distorted. Front end design should be penetration to all of users only this way can make the application popular or ways to use. So finally, we designed our application with great interact design and we made this application with easy design this will obviously penetrate by users.

We use android studio for make the application. Some of our screen design or user interfaces are given on next page.

.1 Opening the application

This activity will be appear after oppening the application. This is a slider activity after this activity login page will be shown.



Figure 5 : Opening the application

6.2.2 Login

User could login into this application via this activity.



Figure 6 : Login

6.2.3 Homepage

This is the main activity after login this will be appear.

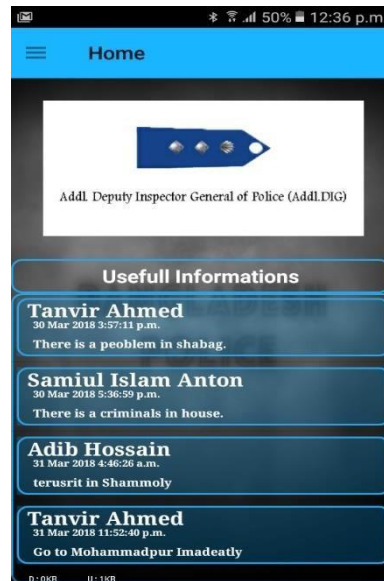


Figure 7 : Homepage

6.2.4 Navigation drawer

In this drawer user can choose his/her option what he's going to do.

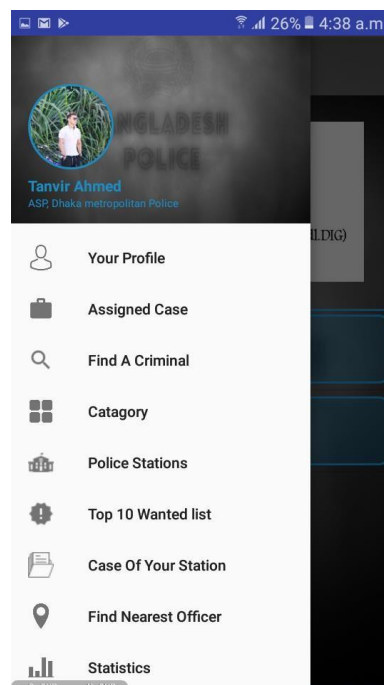


Figure 8 : Navigation drawer

.5 Your Profile

Here user can see his own profile. User can post information to database from here. User's solved case and engaged case will show in this activity.

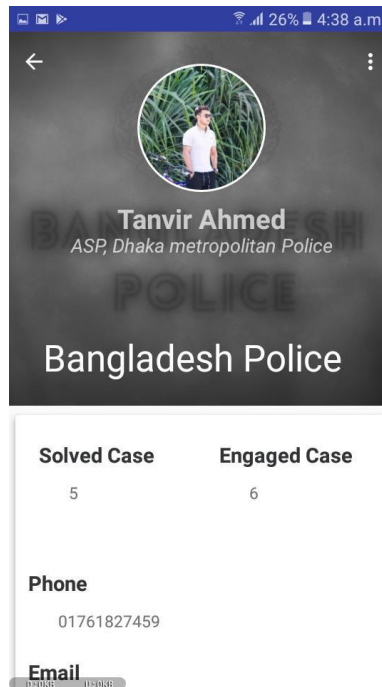


Figure 9 :Your Profile

6.2.6 Assigned Case

User's assigned cases and case details will show in this activity. Users can see the case details by clicking which case he/she wants to open.

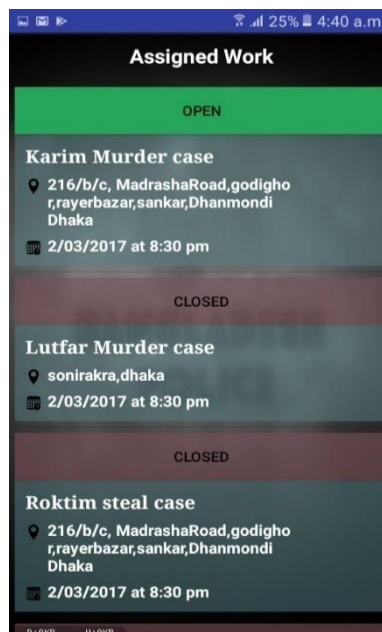


Figure 10 : Assigned Case

6.2 • Case Description

Here in this activity user can see case description and will also see if there any victim, criminal or suspects are available.

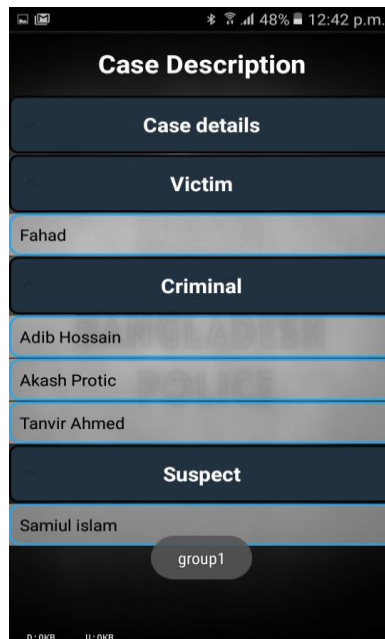


Figure 11 : Case Description

6.1.7 Search Criminal Option

In this activity user can search criminal by NID, Name, District and from which station the case created.



Figure 12 : Search Criminal Option

.8 Category of crime

This activity will show the crime's category and after click any kind of category it will show the estimate of solved case and pending.

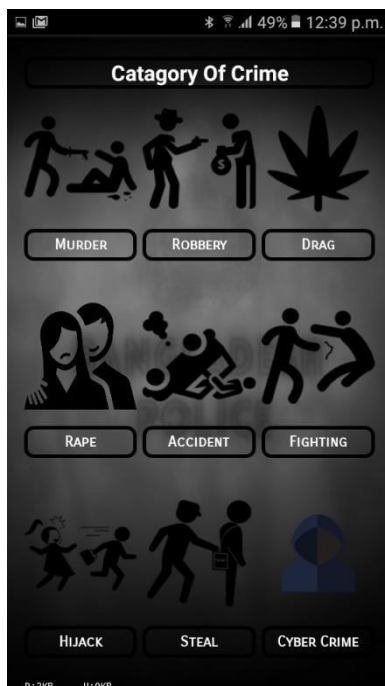


Figure 13 : Category of crime

- **Category of crime statistics**

Selected activity will show the statistics and criminals. After this activity user can see the details of selected case.

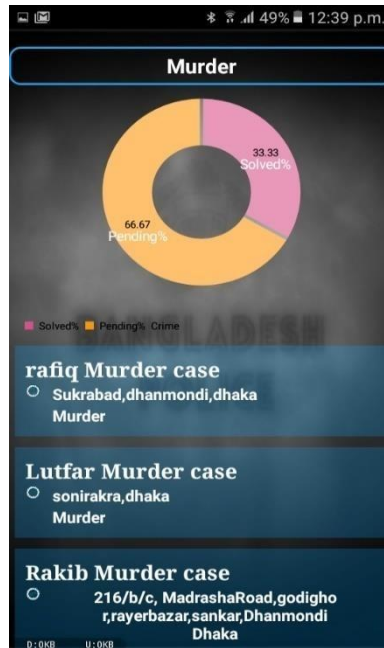


Figure 14 : Category of crime statistics

- **Details of selected case.**

This activity will show the details of selected case and the total criminals with this case. Here user also can see the case is still open or not and criminal profile will show by clicking criminal name.

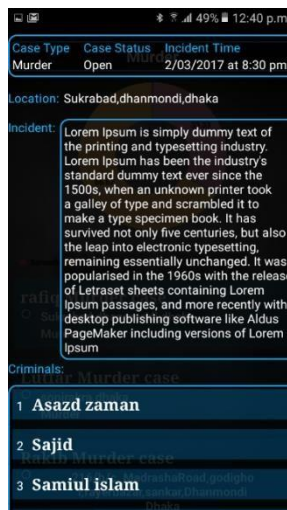


Figure 15 : Details of selected case.

- **Criminal profile**

Here user can see the details of criminal.

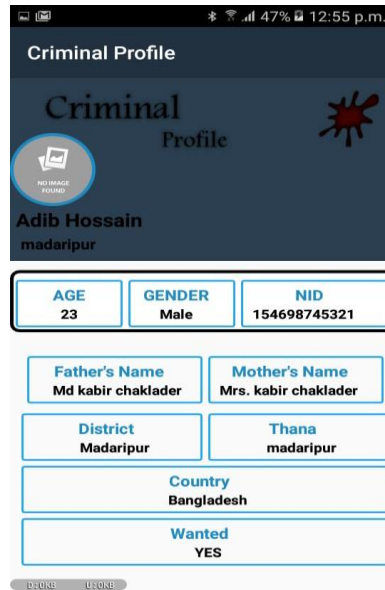


Figure 16 : Criminal profile

.9 Police stations

Here user can see the police stations details.

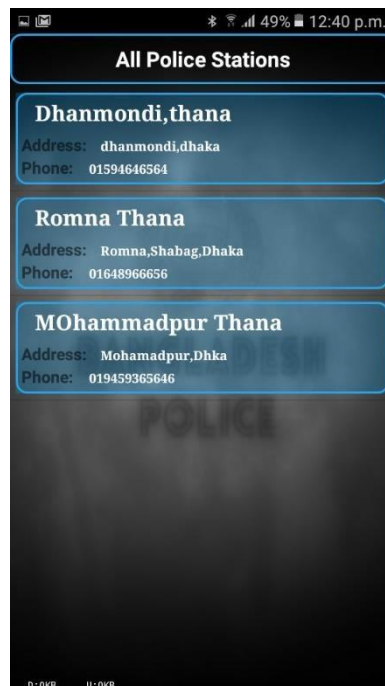


Figure 17 : Police stations

• Police station details 2

With the help of this activity user can able to see the police of each station particularly.



Figure 18 : Police station details 2

6.2.10 Your stations

User can able to see his/her own station and the wanted criminals registered under your station will also show in that activity. Important message from station will show this activity shortly. User can see the criminal details from here.

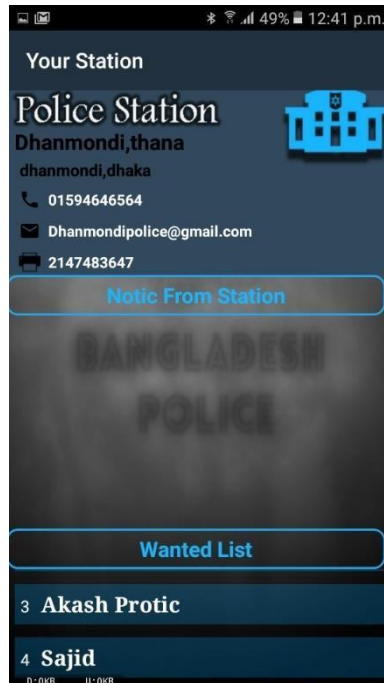


Figure 19 : Your stations

6.2.11 Find Nearest Police

Here user can find his/her nearest user by location.



Figure 20 : Find Nearest Police

6.2.12 Statistics

A pie-chart is implemented in this activity which will help to know about the ratio of criminal.



Figure 21 : Statistics

6.3 Back end design

For implementing the project, we use my sql as database and android studio for create the whole structure. We create some table and connect to the activity of application.

6.3.1 Database Table

This is the database of this project with the tables

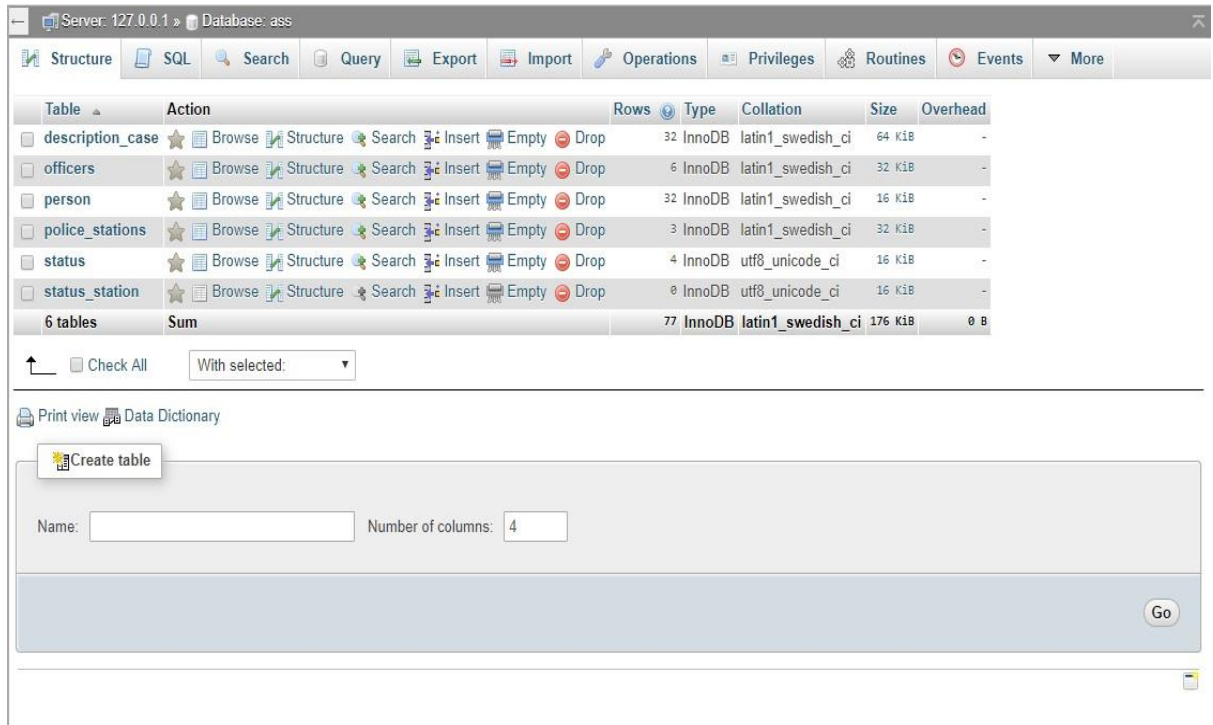


Figure 22 : Database Table

6.3.2 Description Table

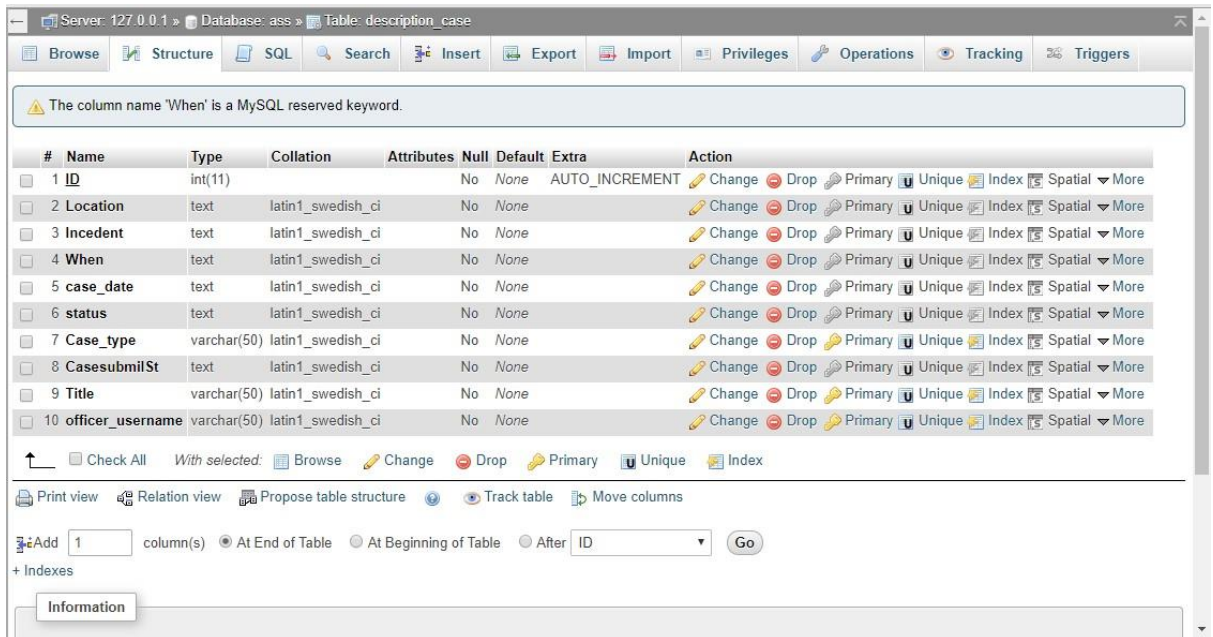


Figure 23 : Description Table

6.3.3 Officers Table

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	ID	int(255)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial More
2	Name	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
3	Designation	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
4	Address	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
5	Username	varchar(50)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
6	Password	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
7	Phone	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
8	Email	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
9	photo	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
10	Dob	varchar(10)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
11	Doj	varchar(10)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
12	Station_ID	varchar(11)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
13	lat	varchar(100)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
14	lan	varchar(100)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
15	Danger	varchar(50)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More

Figure 24 : Officers Table Database

6.3.4 Person table

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	ID	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial More
2	Name	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
3	Address	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
4	NID	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
5	D_id	int(11)			No	None		Change Drop Primary Unique Index Spatial More
6	age	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
7	gender	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
8	Phonenumber	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
9	status	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
10	officer_id	int(11)			No	None		Change Drop Primary Unique Index Spatial More
11	photo	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
12	Fathers_name	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
13	mothers_name	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
14	District	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
15	Thana	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
16	stations_id	varchar(20)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
17	Country	varchar(20)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More
18	Wanted	varchar(20)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial More

Figure 25 : Person table Database

6.3.5 Summary Tools & Languages

- Android Studio
- Android Programming
- Java
- AWS Instance
- SQLite
- MySQL

CHAPTER 7
INTERACTION DESIGN AND UX
(For Web-Based system)

7.1 Introduction

This chapter will show the front-end design of the web-based system. This site is only use for admin and police station.

7.1 Front end design

This front-end design will show some user interface of web-based system.

7.1.1 Home for local user's

This page contains some legal affairs, Tips and important forms.

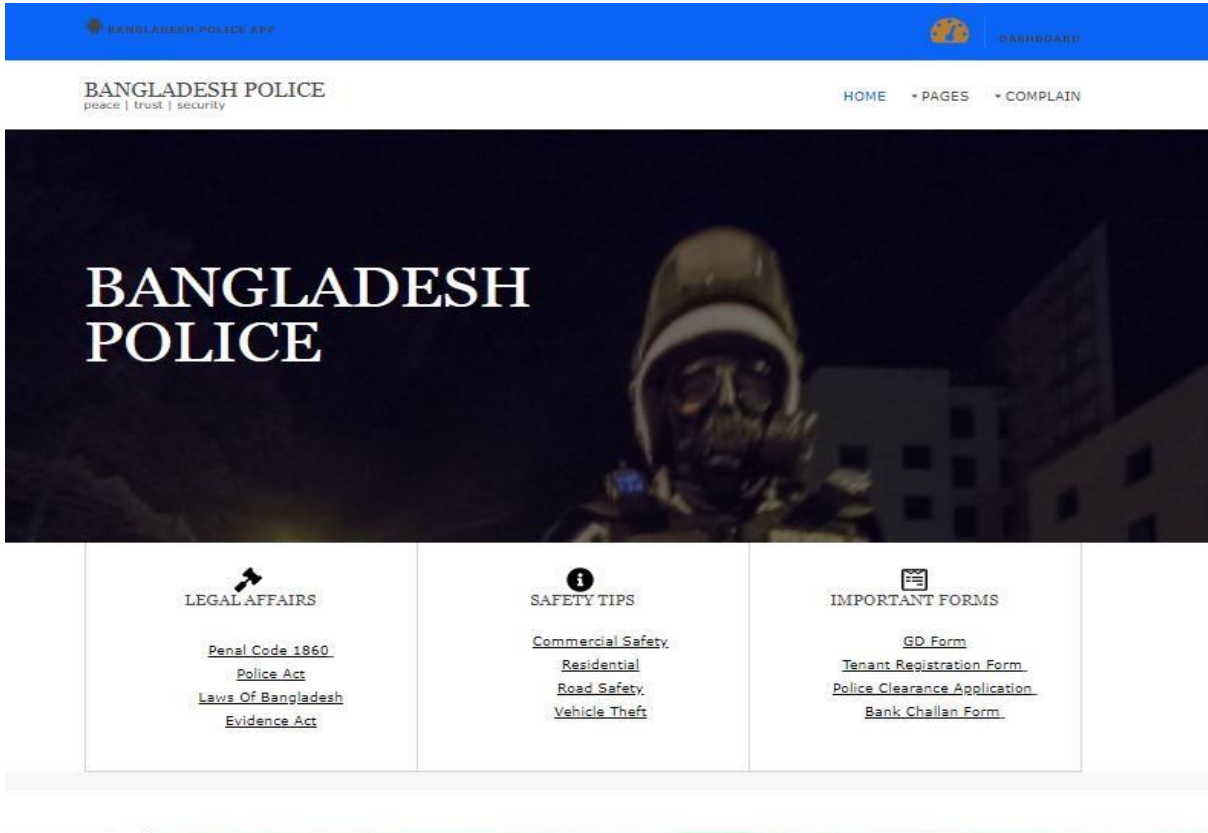


Figure 26 : Home for local user's

7.2.1 Selection page

This page helps you to log into which panel you want

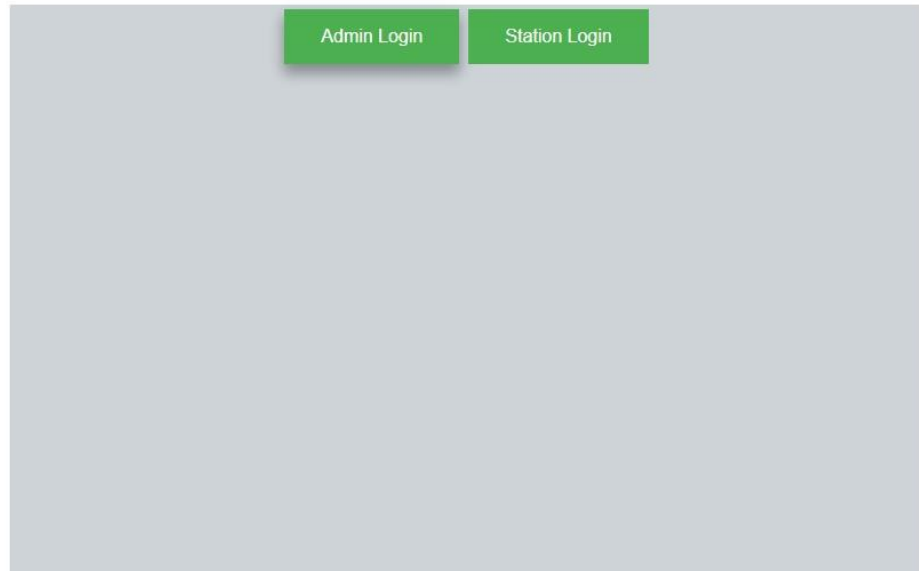


Figure 27 : Selection page

7.2.2 Admin login panel

This dashboard is only for admin use. User need to create account from head of admin.

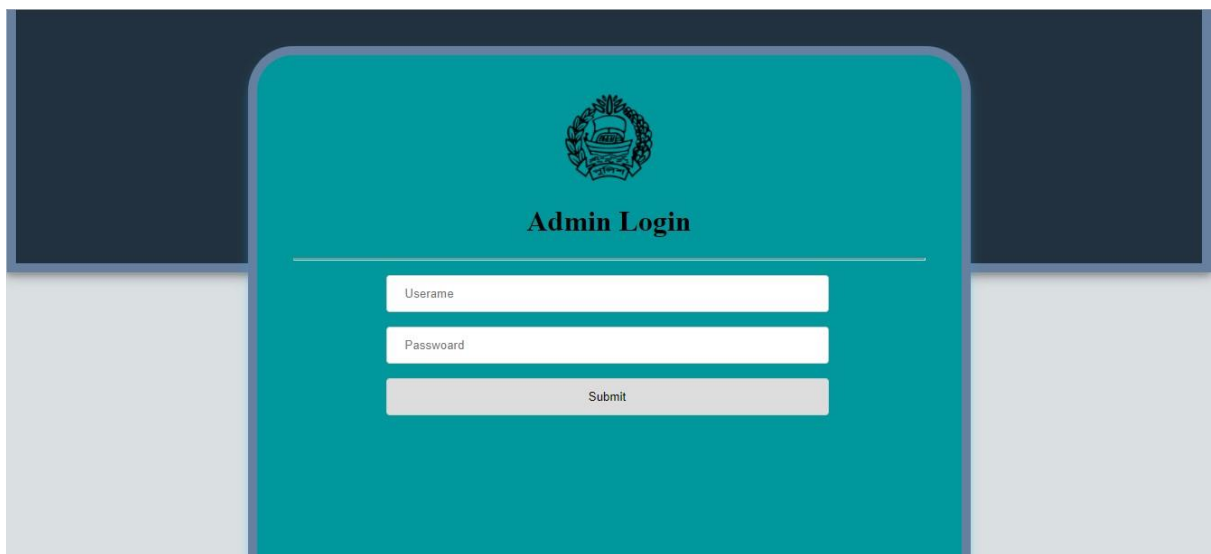


Figure 28 : Admin login panel

7.2.3 Dashboard of admin

This is the main panel for admin. Total statistics and the important message from the station will show in here.

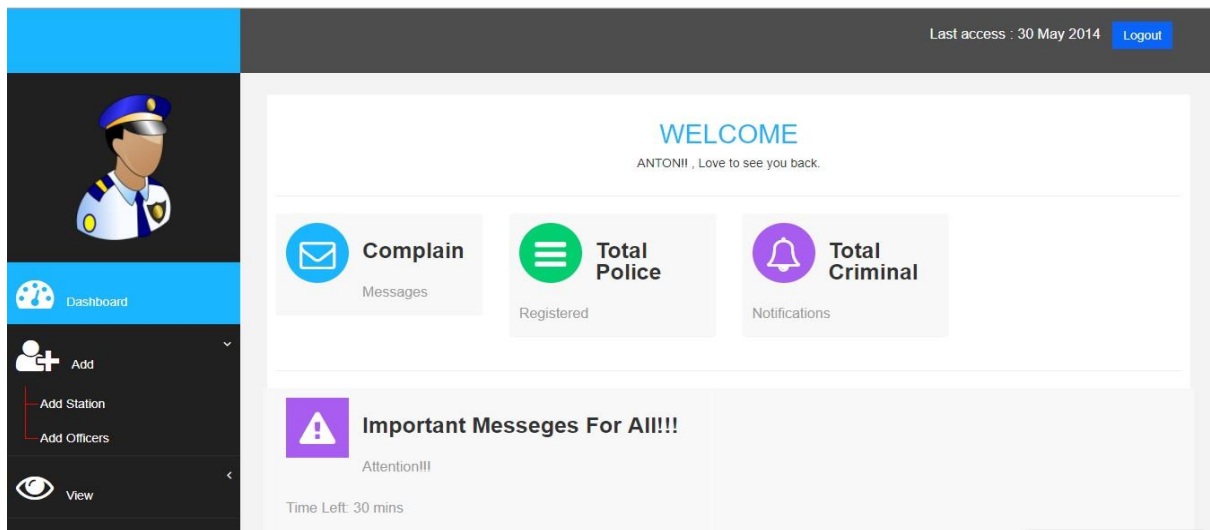


Figure 29 : Dashboard of admin

7.2.4 Add

Admin can view his profile and also can edit few features. Most of the edit box will be lock. If admin need to change it admin needs to contact with the head of admin.

• Add Station

Here admin can add new station for police.

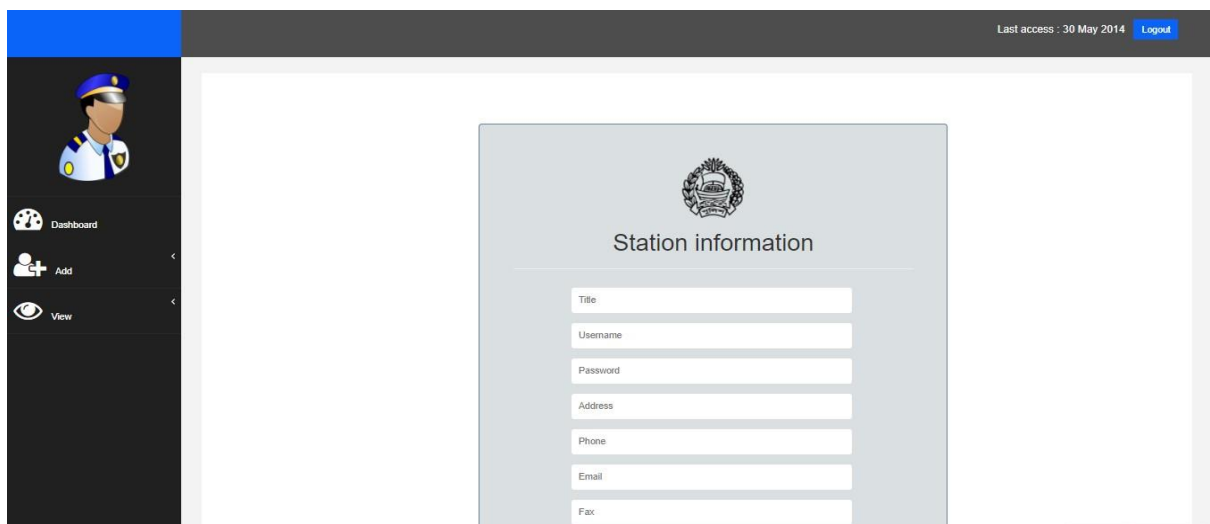


Figure 30 : Add Station

• Add Officers

Here an admin can create new officers profile for android application.

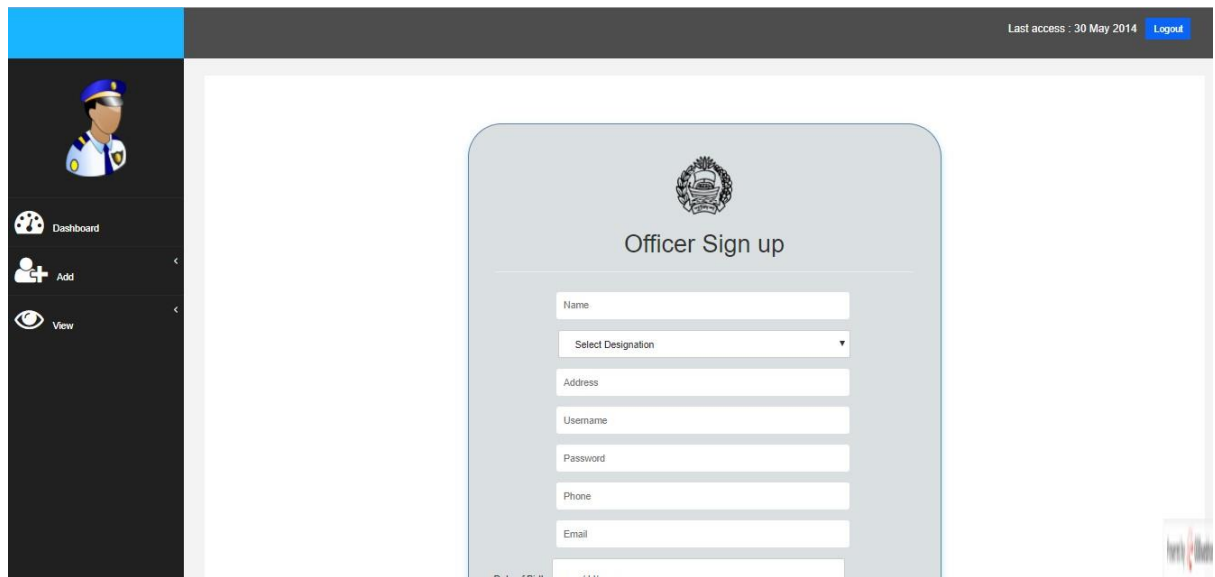


Figure 31 : Add Officers

7.2.5 View

This section is only for head of admins. He can view stations details and the details of officers also.

- **View Station**

Here all station's information are given only the admin on this panel can see it.

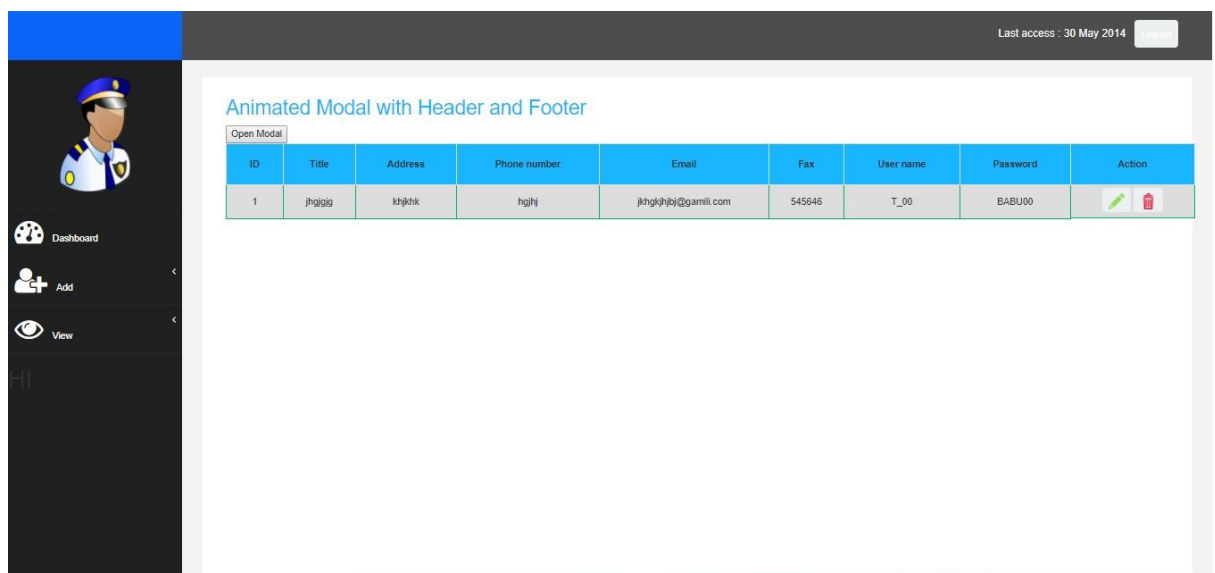


Figure 32 : View Station

- **View officers**

Admin can also see the profile of officers and he can able to edit or update it.

ID	Photo	Name	Designation	Address	Username	Password	Phone	Email	Date of Birth	Date of Join	Danger	Deauty	Action
1		Tanvir Ahmed	ASP, Dhaka metropolitan Police	Mohammadpur,Dhaka	babu00	1234	01761827459	babuand@gmail.com	18-0-1-199	0000-00-00	NO		
2		Shariar Fahad			Shad	heelo			0000-00-00	0000-00-00			
3		Ahmed Tanvir	SI Barladesh police		tanvir	456123		Tanvir3488@gmail.com	0000-00-00	0000-00-00			
4		Samiul Islam Anton	ASP Bangladesh Police	Badamtala, madaripur Sadar,Dhaka	Anton	10987		Anton@gmail.com	0000-00-00	0000-00-00	NO		
5		Maraj Siddiki			tanbir				0000-00-00	0000-00-00			
6		Adib Hossain	ASP, Dhaka metropolitan Police	60 feet, shamoly,	adib	1234	01761827459	Adib@gmail.com	0000-00-00	0000-00-00	NO		
7		Tanvir Ahmed	1	Madaripur,dhaka	tanvir3488	0000	01681109159	tanvir3488@gmail.com	2016-04-17	2018-04-26			
8		Tanvir Ahmed	1	Madaripur,dhaka	tanvir3488f	vau	01681109159	tanvir3488@gmail.com	2016-04-17	2018-04-26			
9		Tanvir		Madaripur,dhaka	tanvir3488f	vau	01681109159	tanvir3488@gmail.com	2016-04-17	2018-04-26			

Figure 33 : View officers

7.3.1 Station Login

Station user can log in this panel. This access will provide by an admin from admin panel.

Bangladesh police

rbf

.....

login

Not registered? Create an account

Powered by 000webhost

Figure 34 : Station Login

7.3.2 Station Dashboard

This is the dashboard of station. Here user can see the total police, criminal, suspect and important message from admin etc.

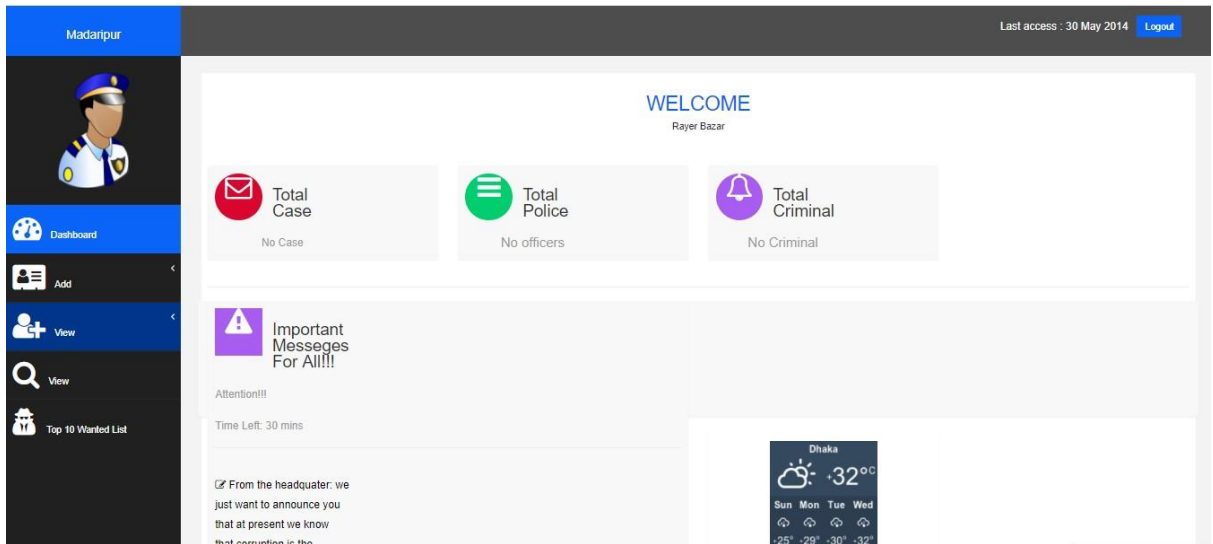


Figure 35 : Station Dashboard

7.3.3 Add

- **Add Case Details**

This is the input form of case details.

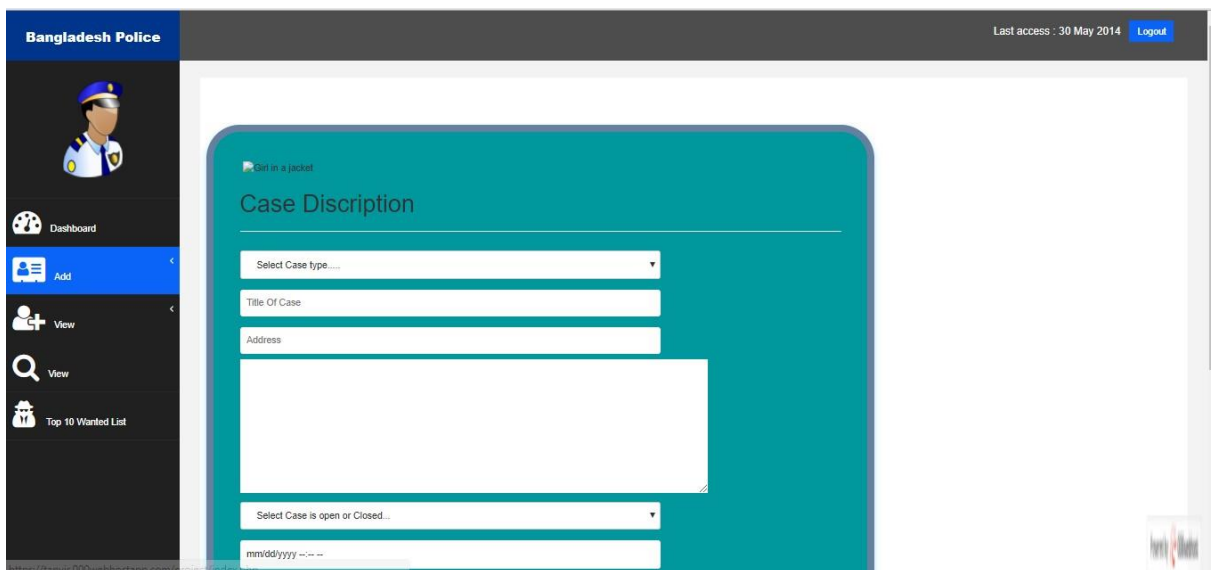


Figure 36 : Add Case Details

- **Add Criminal**

New criminal form. Station user can fill up this form.

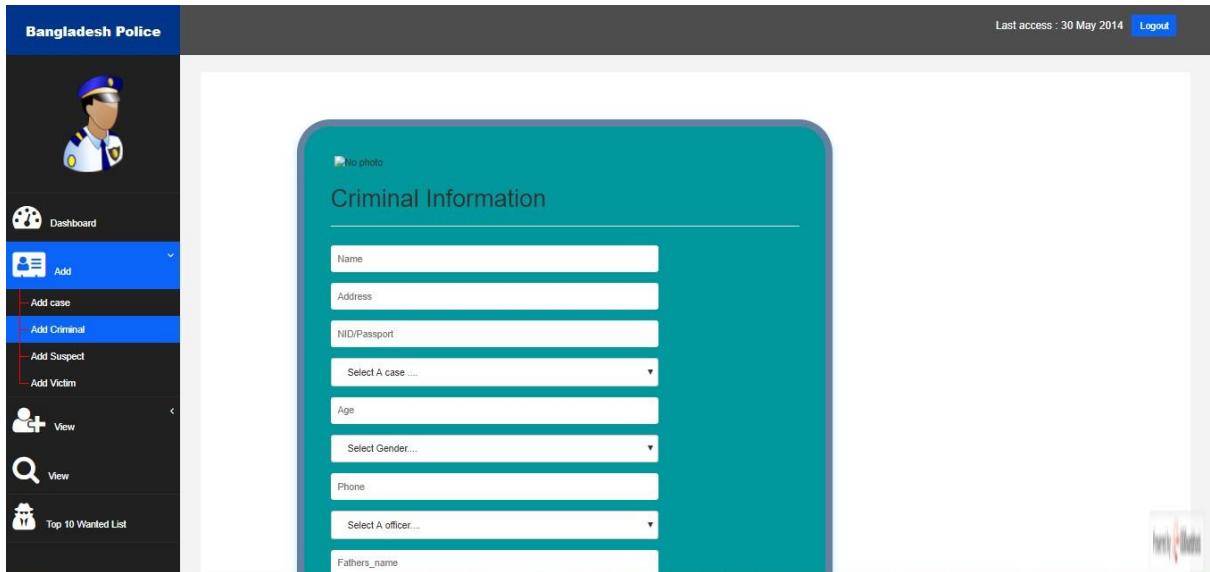


Figure 37 : Add Criminal

7.3.4 View

- **View Case Details**

Case details preview in this section

- **View criminal details**

This is the details panel of criminal information.

ID	Photo	Name	Designation	Address	Username	Password	Phone	Email	Date of Birth	Date of Join	Danger	Deauty	Action
1		Tanvir Ahmed	ASP, Dhaka metropolitan Police	Mohammadpur, Dhaka	babu00	1234	01761827459	babuand9@gmail.com	18-0-1-199	0000-00-00	NO		
2		Shariar Fahad			Shad	heelo			0000-00-00	0000-00-00			
3		Ahmed Tanvir	SI Bangladesh police		tanvir	456123		Tanvir3488@gmail.com	0000-00-00	0000-00-00			
4		Samiul Islam Anton	ASP Bangladesh Police	Badamtala, madaripur Sadar, Dhaka	Anton	10987		Anton@gmail.com	0000-00-00	0000-00-00	NO		
5		Maraj Siddiki			tanbir				0000-00-00	0000-00-00			
6		Adib Hossain	ASP, Dhaka metropolitan Police	60 feet, shamoly,	adib	1234	01761827459	Adib@gmail.com	0000-00-00	0000-00-00	NO		
7		Tanvir Ahmed	1	Madaripur, dhaka	tanvir3488	0000	01681109159	tanvir3488@gmail.com	2018-04-17	2018-04-26			
8		Tanvir Ahmed	1	Madaripur, dhaka	tanvir3488f	vau	01681109159	tanvir3488@gmail.com	2018-04-17	2018-04-26			
9		Tanvir		Madaripur, dhaka	tanvir3488f	vau	01681109159	tanvir3488@gmail.com	2018-04-	2018-04-			

Figure 38 : View criminal details

7.4 About us and useful links

This section reserved for contact with us by social network and some useful links will appear on it.



Figure 39 : About us and useful links

7.5 Implementation of Front-end Design

- ✦ Implementation Tools and Design
- ✦ HTML
- ✦ HTML5
- ✦ Bootstrap
- ✦ JavaScript
- ✦ Notepad++
- ✦ Sublime Text
- ✦ Object Oriented PHP

7.6 Back end design

This portion will show some back-end design of the web-based project and the basic structure of the project.

7.6.1 Database table of web-based system

This is the main database table of this project the application databases are connected with it. The data stored in it and application can retrieve from it.

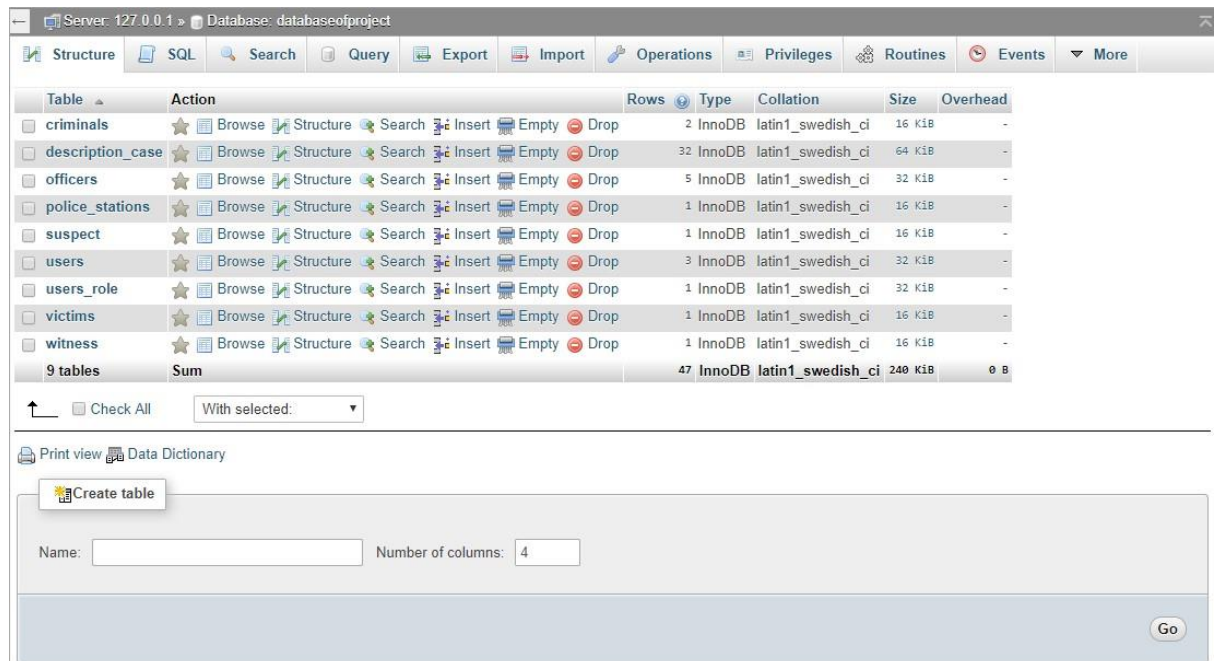


Figure 40 : Database table of web-based system

7.6.2 Implementation of back end design

- XAMPP
- PhpMyAdmin
- MySQL

CHAPTER 8

Development and Testing

8.1 Introduction

Before the implemented it should be tested the expected result and its efficiency. Every project has some bug and errors after completing it. The system design or implement is not perfect always. There may have system error, communication problem, programmer's negligence, bug etc. The performance can be improved by continuous testing and development.

8.2 Software Development

Now a day all of our manual works turned into automated. In this era, we need to update our self rapidly. For this kind of situation, we need to update our software as requirement. Basically, software require development for its error or any kind of bugs. software development may include research, new development, prototyping, modification, reuse, re-engineering, maintenance, or any other activities. We need to make a sketch diagram of the overall procedure in our mind. Then we need to divide the whole procedure in different portion to make it easy and simple. After that we select the suitable platform include language and database server. Finally, we design and developed the application.

8.3 Implementation

In implementation section first of all for a new software we need to think about the environment where it will run. We have to think that in which server, OS, Web server or the database software will use for the best performance. For this kind of new software project manager need to think about its all environment.

8.4 Critical Appraisal

It is true that development environment is totally unpredictable. Sometimes project got some error or issues when it was under development. For this reason, time developments plan needs to be changed. We faced Short of problems in our project. We fixed this problem instantly.

8.5 Problems of Critical Appraisal

Firstly, we face some problem while development as we are very new in this platform. We tried to implement it as best as possible error free still we need more testing to ensure it. Secondly, launching the application in real environment is not done yet. We developed two systems one is android application and web-based application both of them are connected with each other's. For this reason, it was hard to manage the whole environment for these two platforms. We tested the whole system too many times but it is necessary to test that project with real environment.

8.6 Testing

Testing is the biggest part of a project. After finishing a project, we need to test it clearly for any kind of difficulties. Testing the project that still it can meet the ultimate goal as requirements or not. It is a part which should be done throughout the whole development process. Software testing is one of the “verification and validation,” or V&V, software practices.

8.7 Testing Plan

8.7.1 First test with those test objective

Serial no	Test Objective
1.	To check whether program runs or not.
2.	To check if the program menu displays all menu options or not.
3.	To check all options are right or not.
4.	To check if the logout option works or not.
5.	To check if the error message after entering invalid user name or password.
6.	To check if the invalid username or password displayed or not.
7.	To check if Admin Panel works properly or not.
8.	To check if „Home Page“ option shows the info or not.

8.7.2 Test case 1 for program running

Test Case	1
Test Objective	To check whether program runs or not.
Test Data	Running the program.
Expected Result	Main screen should display successfully.
Test Result	Main screen appears correctly.
Conclusion	Expected result matches actual result.

8.7.3 Test case 2 Menu testing

Test Case	2
Test Objective	To check if the program menu displays all menu options or not.
Test Data	Open the main menu.
Expected Result	All the options should be displayed correctly with serial order.
Test Result	Menu options are displayed in right order.
Conclusion	Expected result matches actual result.

8.7.4 Test Case 3 Option testing

Test Case	3
Test Objective	To check all options are right or not.
Test Data	Open menus
Expected Result	All options are right.
Test Result	All options are right and displayed correctly.
Conclusion	Expected result matches actual result.

8.7.5 Test case 4 Logout Testing

Test Case	4
Test Objective	To check if the logout option works or not.
Test Data	Run program.
Expected Result	Exit program using option.
Test Result	Program exits.
Conclusion	Expected result matches actual result.

8.7.6 Test case 5 Error message Testing

Test Case	5
Test Objective	To check if the error message after entering invalid user name or password.
Test Data	Run program.
Expected Result	Error message should be shown.
Test Result	Error message shown.
Conclusion	Expected result matches actual result.

8.7.7 Test case 6 Username or Password Testing

Test Case	6
Test Objective	To check if the invalid username or password displayed or not.
Test Data	Run program.
Expected Result	Error message should be shown.
Test Result	Error message shown.
Conclusion	Expected result matches actual result.

8.7.8 Test case 7 Admin panel Testing

Test Case	7
Test Objective	To check if Admin Panel works properly or not.
Expected Result	Suggestion must be added.
Test Result	Suggestion Added successfully.
Conclusion	Expected result matches actual result.

8.7.9 Test case 8 android crashed or not

Test Case	8
Test Objective	To check if the application crashed or not
Expected Result	Should not be crushed.
Test Result	Apps don't crush.
Conclusion	Expected result matches actual result.

8.8 Test Results and Reports

Sl. No	Test Objectives	Results
01	To check whether program runs or not.	Successful.
02	To check if the program menu displays all menu options or not.	Successful.
03	To check all options are right or not.	Successful.
04	To check if the logout option works or not.	Successful.
05	To check if the error message after entering invalid user name or password.	Successful.
06	To check if the invalid username or password displayed or not.	Successful.
07	To check if Admin Panel works properly or not.	Successful.
08	To check if „Home Page“ option shows the info or not.	Successful.

8.9 Summary

In this chapter, we know about the implementation and how to check the full project with development. We tested every part of our project and after that we got everything's clear. We faced some environmental issues which can be solved with real time testing. Finally, with the help of this chapter we already know about how we tested our project.

CHAPTER 9

Discussions

9.1 Introduction

In this section, we will have discussed about our whole project. Some of our project's strength and weakness are also available in here. Discussion also mention that what we learned with that project. In this project design and development stage should carry out the evaluation review.

9.2 Strength of the Project

- Admin can control the whole system from one point.
- System Provide better security by categorize users in different levels.
- Some pages are restricted for local police.
- Reduce more time-consuming work.

9.3 Weakness of the Project

- No option to upload video through our system.
- Data cannot be downloaded.

9.4 Learning from that project

After completing the project, we learn lots of things. Some new things and also some old things. That may help us to work fluently in future. Below we are listing all the things that we have learned from the project.

- **Android**
 - (1) Java.
 - (2) Understand of XML work.
 - (3) Android SDK.
 - (4) Android Studio.
 - (5) MySQL.

- **Web-Based system**

- (1) Analysis and Design a system using Unified Modeling Language (UML).
- (2) Using PHP create new module for open cart.
- (3) PHP.
- (4) JAVA SCRIPT.
- (5) MySQL.

9.5 Summary

In this lesson, we know some strength and weakness of the project. We also point out some of skills we gathered with the help of this project. With that skills we can work in future fluently. This project helps us to know the environment of each platform.

Chapter 10

Conclusion and Future work scope

10.1 Conclusion

In Bangladesh police case management android app and web-based system project we tried to meet the easiest process to handle huge data record which is hard to organize. This project could help our police to connect with each other.

They can read about the suspect's info easily. In this project any important message from station could be share to other's duty officers. Finally, we can say that is the easy way to manage every hard simply with an app and a web-based system. Our aim was to help the police by handle hard works with an easiest way. That project will help the police to control criminals easily.

10.2 Future work scope

- i. We will work for more features on this project
- ii. We will enrich information on this project.

Chapter 11 Appendix

Appendix A: Project Reflection

After completing the project, we have gain depth knowledge and skill in HTML, CSS, xml for designing the structure of any website and we have also learned PHP for the development of a dynamic application. We used java oop for android application. This knowledge will help us for designing any kind of website and android app which will help us in our future career.

Appendix B: Related Diagrams

The following figure B1 shows the Android Studio Database connection.

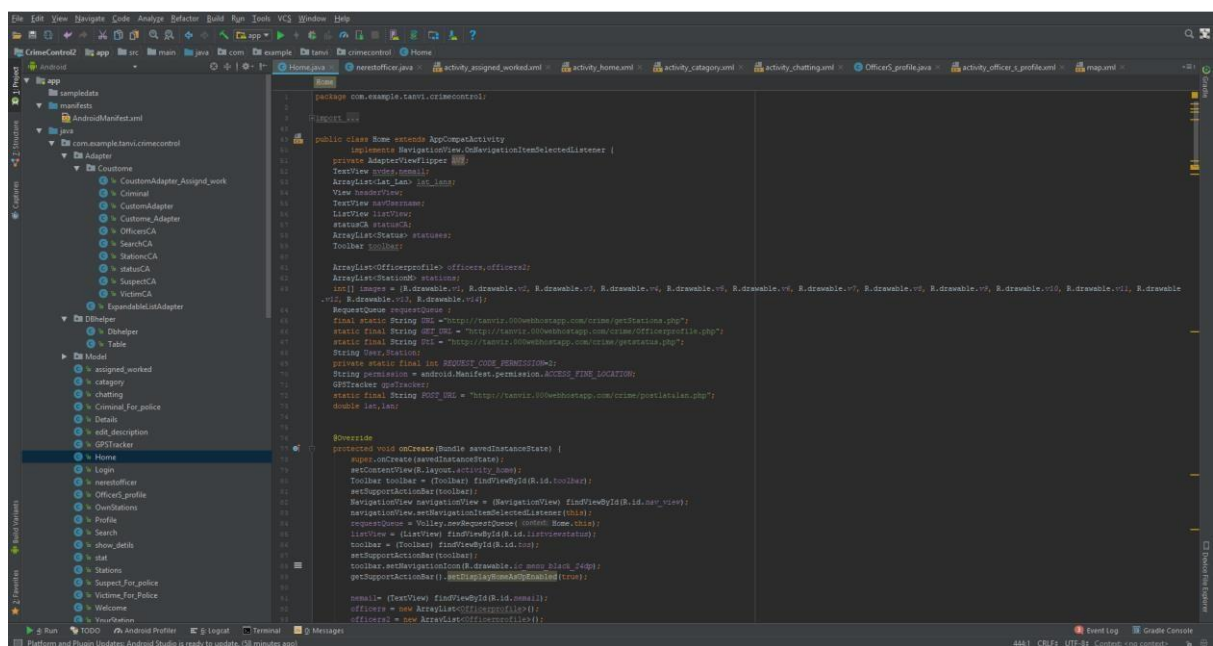


Figure B1

The following figure B2 shows the Android Studio Activity of application.

```

package com.example.tanvi.crimecontrol;

import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.widget.Toolbar;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;
import androidx.navigation.NavController;
import androidx.navigation.fragment.NavHostFragment;
import androidx.navigation.ui.NavigationUI;
import androidx.navigation.ui.AppBarConfiguration;
import java.util.List;
import java.util.HashMap;

public class CrimeControlApp implements AppCompatActivity {
    implements NavController.OnDestinationSelectedListener {
        private AppBarConfiguration appBarConfiguration;
        private NavController navController;

        @Override
        public void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
            setContentView(R.layout.activity_home);
            Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
            setSupportActionBar(toolbar);
            NavController navController = (NavController) findViewById(R.id.nav_host_fragment_activity_home);
            appBarConfiguration = new AppBarConfiguration.Builder(navController.getGraph()).build();
            NavigationUI.setupActionBarAndNavController(this, navController, appBarConfiguration);
            RecyclerView recyclerView = (RecyclerView) findViewById(R.id.list);
            recyclerView.setLayoutManager(new LinearLayoutManager(this));
            recyclerView.setAdapter(new CrimeListAdapter(this));
            TextView login = (TextView) findViewById(R.id.login);
            login.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick() {
                    startActivity(new Intent(CrimeControlApp.this, Login.class));
                }
            });
            TextView profile = (TextView) findViewById(R.id.profile);
            profile.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick() {
                    startActivity(new Intent(CrimeControlApp.this, Profile.class));
                }
            });
            TextView search = (TextView) findViewById(R.id.search);
            search.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick() {
                    startActivity(new Intent(CrimeControlApp.this, Search.class));
                }
            });
            TextView stations = (TextView) findViewById(R.id.stations);
            stations.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick() {
                    startActivity(new Intent(CrimeControlApp.this, Stations.class));
                }
            });
            TextView suspect = (TextView) findViewById(R.id.suspect);
            suspect.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick() {
                    startActivity(new Intent(CrimeControlApp.this, Suspect.class));
                }
            });
            TextView welcome = (TextView) findViewById(R.id.welcome);
            welcome.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick() {
                    startActivity(new Intent(CrimeControlApp.this, Welcome.class));
                }
            });
        }
    }
}

```

Figure B2

The following figure B3 shows the Android Studio Activity with XML.

```

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">

    <android.support.design.widget.TextInputLayout
        android:id="@+id/search_bar"
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:layout_margin="10dp">
        <android.support.design.widget.TextInputEditText
            android:layout_width="match_parent"
            android:layout_height="match_parent" />
    </android.support.design.widget.TextInputLayout>

    <android.support.design.widget.FloatingActionButton
        android:id="@+id/fab"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:src="@android:drawable/ic_dialog_search" />

    <android.support.design.widget.RecyclerView
        android:id="@+id/recycler_view"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_margin="10dp" />

    <android.support.design.widget.FloatingActionButton
        android:id="@+id/fab_phone"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:src="@android:drawable/ic_dialog_phone" />

```

Figure B3

The following figure B4 shows the Database connection. of PHP.

```

1 <?php
2 defined('BASEPATH') OR exit('No direct script access allowed');
3
4
5 $active_group = 'default';
6 $query_builder = TRUE;
7
8 $db['default'] = array(
9     'dsn' => '',
10    'hostname' => 'localhost',
11    'username' => 'root',
12    'password' => '',
13    'database' => 'DatabaseofProject',
14    'dbdriver' => 'mysqli',
15    'dbprefix' => '',
16    'pconnect' => FALSE,
17    'db_debug' => (ENVIRONMENT !== 'production'),
18    'cache_on' => FALSE,
19    'cachedir' => '',
20    'char_set' => 'utf8',
21    'dbcollat' => 'utf8_general_ci',
22    'swap_pre' => '',
23    'encrypt' => FALSE,
24    'compress' => FALSE,
25    'stricton' => FALSE,
26    'failover' => array(),
27    'save_queries' => TRUE
28 );
29

```

Figure B4

The following figure B5 shows the main dashboard code after login.

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4     <meta charset="utf-8">
5     <link rel="shortcut icon" type="image/ico" href="http://www.datatables.net/favicon.ico">
6     <meta name="viewport" content="initial-scale=1.0, maximum-scale=2.0">
7     <link rel="stylesheet" type="text/css" href="../../examples/resources/syntax/shCore.css">
8     <link rel="stylesheet" type="text/css" href="../../examples/resources/demo.css">
9     <script type="text/javascript" language="javascript" src="../../media/js/jquery.js"></script>
10    <script type="text/javascript" language="javascript" src="../../examples/resources/syntax/shCore.js"></script>
11    <script type="text/javascript" language="javascript" src="../../examples/resources/demo.js"></script>
12
13    <title>TableTools examples - TableTools examples</title>
14 </head>
15
16 <body class="dt-example">
17     <div class="container">
18         <section>
19             <h1>TableTools example <span>TableTools examples</span></h1>
20
21             <div class="info">
22                 <p>TableTools is a plug-in for the DataTables HTML table enhancer, which adds a highly customisable button toolbar to a DataTable. Key features include:</p>
23
24                 <ul class="markdown">
25                     <li><a href="#">Copy to clipboard</a></li>
26                     <li><a href="#">Save table data as CSV, XLS or PDF files</a></li>
27                     <li><a href="#">Print view for clean printing</a></li>
28                     <li><a href="#">Row selection options</a></li>
29                     <li><a href="#">Easy use predefined buttons</a></li>
30                     <li><a href="#">Simple customisation of buttons</a></li>
31                     <li><a href="#">Well defined API for advanced control</a></li>
32                 </ul>

```

Figure B5

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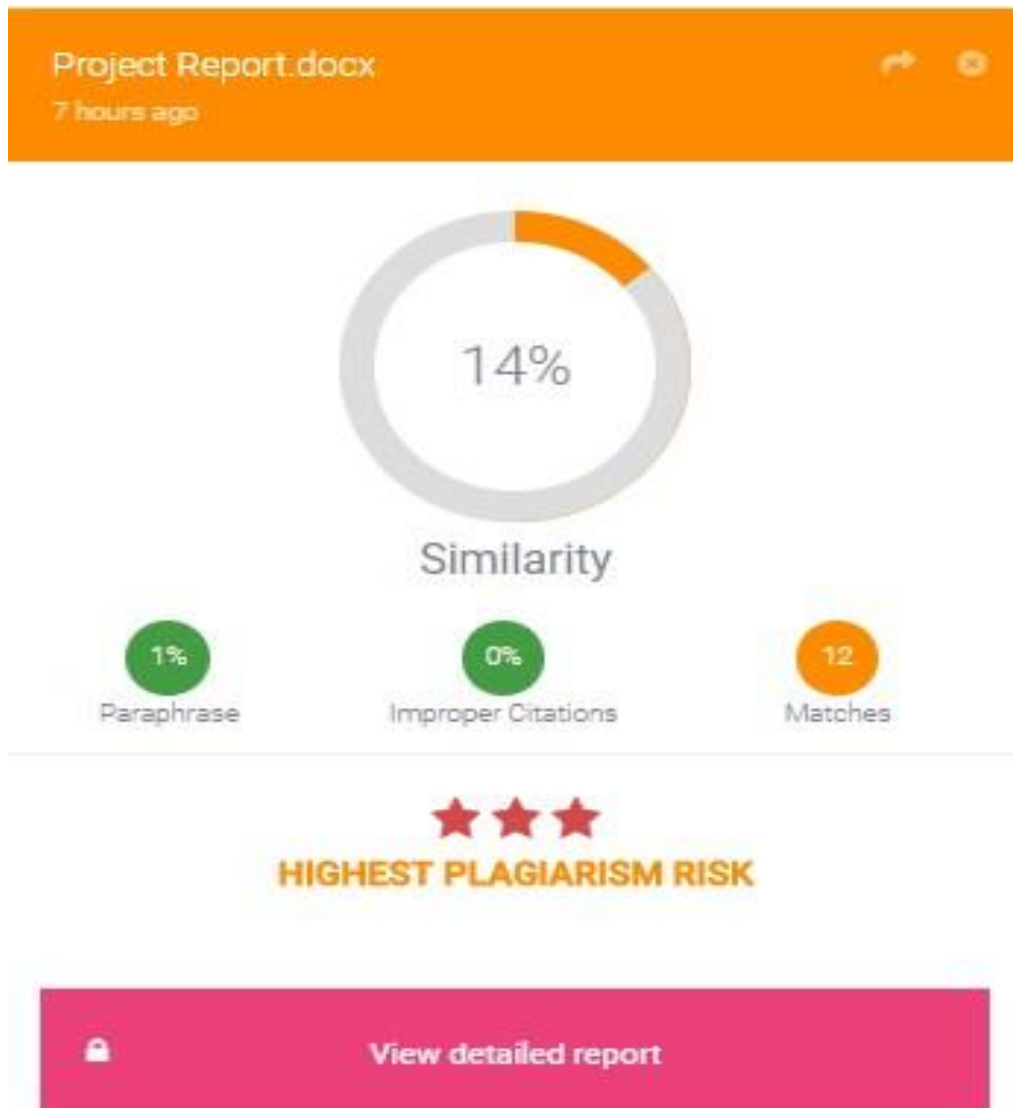
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PLAGARISM CHECK



! Wait for protection to be enabled.

THE END!!!