

E-CHALLAN SYSTEM



Mir Umair Abbasi

01-134142-076

Noman Ahmad

01-134142-125

Bachelor of Science in Computer Science

Supervisor: **Mr. Umar Khattak**

Department of Computer Science

Bahria University, Islamabad

May 24, 2018

Abstract

In today's world, as we know that the main problem is traffic rule violation. There are many reasons behind the violation but the main reason is that there are very few police officers who control the traffic and stop the one who breaks the rule. So, taking advantage of this almost every one breaks the traffic rules. In this project, we are going to introduce an application by using which a traffic police officer can easily make a challan of a rule breaker in less time. So in less time one police officer can easily stop many rule breakers. The system scans the ID card of a rule breaker and matches the details in a dataset which is provided to the system, then uses that information, the system makes the challan and then sends the notification to the rule breaker to submit the challan. Our proposed system helps in decreasing the traffic accidents because if more people obey traffic rules then fewer accidents occur.

Acknowledgements

All praise is to Almighty Allah who bestowed upon us a minute portion of his boundless knowledge by virtue of which we are able to accomplish this challenging task. We are greatly indebted to our supervisor Mr. Umar Khattak. Without his personal supervision, advice and valuable guidance, completion of this thesis would have been doubtful. We are deeply indebted to him for his encouragement and continual help during this work.

Mir Umair Abbasi

Noman Ahmad
Islamabad, Pakistan

Contents

Abstract	i
1 Introduction	1
1.1 Project Background/Overview	1
1.2 Problem Description	1
1.3 Project Objective	1
1.4 Methodology	2
1.5 System Overview Diagram	2
1.6 Project Scope	2
2 Literature Review	3
2.1 Existing System	3
2.1.1 Automatic challan System using RFID Technology	3
2.1.2 Id card scanning using barcode	3
2.1.3 E-Challan for Traffic System Using QR-Code	4
3 Requirement Specification	6
3.1 System Overview	6
3.2 Existing System	6
3.3 Proposed System	6
3.4 Requirement Specification	6
3.4.1 Non Functional Requirements	7
3.4.2 Functional Requirements	7
3.5 Operational Scenarios(use cases)	7
4 Design	14
4.1 System Architecture	14
4.2 Design Constraints	14
4.3 High Level Design	15
4.3.1 Conceptual view	15
4.3.2 ProcessView(SequenceDiagram)	16
4.4 Low Level Design	21
4.4.1 Interface View	21
5 System Implementation	25
5.1 System Architecture	25
5.1.1 Android application	25
5.2 Tools and Technology Used	25
5.2.1 Android studio	25

5.2.2	Sql server	26
5.3	Development Environment or Language used	26
6	System Testing and Evaluation	27
6.1	Testing	27
6.2	Software Testing Techniques	27
6.2.1	Graphical User Interface Testing	27
6.2.2	Usability Testing	27
6.2.3	Software Performance Testing	28
6.2.4	Compatibility Testing	29
6.2.5	Exception Handling	30
6.2.6	Installation Testing	30
6.3	Test Cases	31
6.3.1	Test Case for login	31
6.3.2	Test Case for challan making	31
6.3.3	Test Case for checking previous challan	32
6.3.4	Test Case for challan updation	33
6.3.5	Test Case for sending notification	33
7	Conclusion	34
7.1	Future work	34
7.1.1	Challan Payment	34
7.1.2	Support Multiple Cities	34

List of Figures

1.1	Conceptual view	2
2.1	RFID Technology	4
2.2	Scanning id card	4
2.3	main page	5
2.4	add information	5
3.1	Main use case	8
3.2	Scan Id card	9
3.3	challan making	10
3.4	Previous Challan	11
3.5	Update challan	12
3.6	Sending sms	13
4.1	System Architecture	14
4.2	Conceptual view	15
4.3	Main Sequence diagram	16
4.4	Login Sequence diagram	17
4.5	Signup Sequence diagram	18
4.6	Challan making Sequence diagram	19
4.7	Sending notification Sequence diagram	20
4.8	Sign up	21
4.9	Login	22
4.10	Home Page	22
4.11	Challan Making	23
4.12	Scanning	23
4.13	Logout	24
7.1	Login	36
7.2	sign up	37
7.3	Home Page	38
7.4	Challan Making	39
7.5	Scanning	40
7.6	Logout	41

List of Tables

3.1	Scan Id card	9
3.2	challan making	10
3.3	Previous Challan	11
3.4	Update challan	12
3.5	Sending sms	13
6.1	Log-in Screen	28
6.2	Challan generation screen testing	28
6.3	Compatibility Testing	29
6.4	Installation testing	30
6.5	Login	31
6.6	Challan making	31
6.7	Checking Previous Challan	32
6.8	Challan updation	33
6.9	Sending notification	33

Chapter 1

Introduction

In today's world, as we know that the main problem is traffic rule violations. Increasing population of traffic has become a main and most dangerous problem in almost every big city in Pakistan. We are going to introduce an application which helps in making an electronic challan. This app is useful for traffic police in time saving. This application will have a very friendly interface so users can use it easily.

1.1 Project Background/Overview

To design an android application for traffic police that helps them to create challan in less time. By doing this traffic police can easily save their time and they can do as many Challans as they can which helps them to take control over traffic more efficiently. They can easily do challans for high speed riders or the cars with over speed. This can help in decreasing the number of accidents caused by over speeding. So the main purpose is to control the number of accidents by controlling over speed traffic.

1.2 Problem Description

Traffic problems are increasing day by day we can reduce traffic problems by making an app which helps in doing more challans in less time because more the challans more people will strictly follow the traffic rules which helps in decreasing traffic problems. This application is used for the purpose of ensuring safety and security of road users and for ensuring free flow of traffic.

1.3 Project Objective

To design an android application for traffic police that helps them to create challan in less time. By doing this traffic police can easily save their time and they can do as many Challans as they can which helps them to take control over traffic more efficiently. They can easily do challans for high speed riders or the cars with over speed. This can help in decreasing the number of accidents[2] caused by over speeding. So the main purpose is to control the number of accidents by controlling over speed traffic.

1.4 Methodology

This application is used when traffic police wanted to do challan of someone who violates the traffic rule. In this situation we use cnic to make the challan of rule breakers and using cnic no by scanning the card traffic police can check the details of rule breakers and make challans on the basis of that number this application also helps to specify the challan type and also tells the amount of challan . It will also notify the person by sending a message to him/her ,sms notification contains the details of rule breaker(name,cnic no) , challan reason and the amount of challan .

1.5 System Overview Diagram

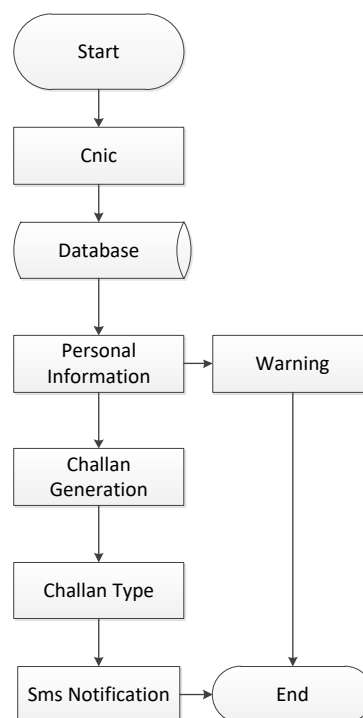


Figure 1.1: Conceptual view

1.6 Project Scope

This application will help people to decrease the number of accidents as well as other traffic problems. It will help traffic police to handle traffic easily we can use this application in the whole country. This application is very useful for the safety and the security of road users. By using this application police can easily check the data of rule breaker and can make challan with in less time . police can check the previous challans,and make the challan on the specific rule violate by the driver and if the warnings are not given to the driver then police can leave the driver by only giving a warning.This application helps to make challan on specific rule violated by the person and also tells money to be submitted by sending an sms notification .

Chapter 2

Literature Review

In this chapter, we will identify, evaluate and interpret any work or research that has been done related to our project. It will provide help and a layout for achieving our goals. The chapter holds a lot of significance. This chapter identifies the different features, extraction techniques and algorithms that can help with our project.

2.1 Existing System

The amount of work done in this area has its own significance. But there are applications with supporting hardware. There are many existing applications of this area in which authors worked on E-challan system with some limitations. Like they have limitations of using hardware with mobile phones to scan a card. Some applications do not use scanning. In an application, a challan is generated by using RFID technology and after making a challan text message is sent to the violator and the violator has to pay the challan. In the other system, an author proposed a system in which a barcode reader is used to scan the ID card of students by using this teachers can take easily attendance. Barcode scanners are used in barcode readers to scan ID cards.

2.1.1 Automatic challan System using RFID Technology

In [1] an author has proposed the system that detects any rule violation and generates the e-challan on that violation. Using the RFID technology which is used to store data of information on a tag which is placed on the vehicle, they transfer the data to a reader over a wireless interface. This information is compared with the previous information after that it sends a text message (containing e-challan) to GSM which sends that message to RTO (regional transport office) and also to the registered mobile number of the owner of that vehicle. The owner has to pay the challan amount to the RTO office or can pay online if linked to an online payment system. This application also provides vehicle tracking which is driven by the vehicle driver.

2.1.2 ID card scanning using barcode

In the system [2] an author proposed a system in which a barcode reader is used to scan the ID card of students by using this teachers can take easily attendance. This project also helps the teachers to avoid maintaining the registry book. A barcode reader uses



Figure 2.1: RFID Technology

a barcode scanner. Barcode scanner used to take the attendance of students. As we know that each students ID card must have a barcode at back side of their cards. This contains unique data of each student such as roll number, name card no and year. Etc. By using this system student cant cheat. So by using barcode reader we can easily scan id cards.

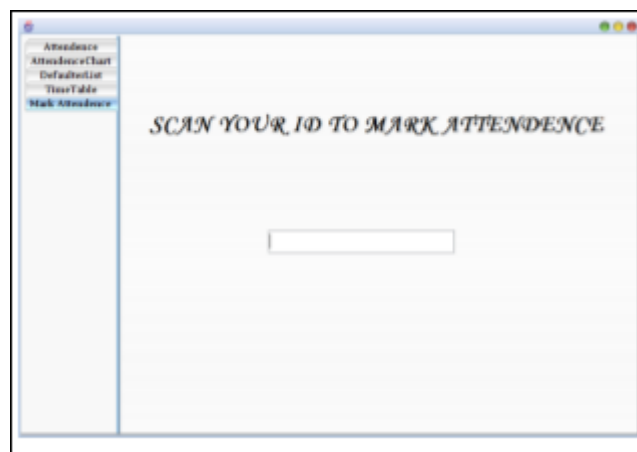


Figure 2.2: Scanning id card

2.1.3 E-Challan for Traffic System Using QR-Code

In the system[3] author proposed a system in which QR code used to implement the system. Due to increasing number of user on road it is very difficult to identify every vehicle uniquely. The proposed system is used To monitor the vehicle automatically because manually it is very difficult task. The main task of this research is to automate the vehicle identification who voilate the traffic rules. Now a days there

are many people breaking traffic rules.this system use QR-Code to implement this system .Using QR codes they can collect the information of vehicles who violate the rule .



Figure 2.3: main page

- Add information



Figure 2.4: add information

Chapter 3

Requirement Specification

3.1 System Overview

The proposed system is an android based application which is used on Android Phones. This proposed application will utilize the real-time image processing techniques to scan the id card . When the application is started, a camera of mobile is use for scanning, and using cnic number we can easily make challans.

3.2 Existing System

Although the idea of E challan system is not a novel idea. The amount of work done in this area has its own significance. But there are applications with supporting hardware. There are many existing applications of this area in which authors worked on E challan system with some limitations. Like they have limitations of using hardware with mobile phones to scan a card . Some applications donot use scanning . Our system will not use any hardware and will utilize the techniques of image processing to scan id card respectively

3.3 Proposed System

This application is used when traffic police wanted to do challan of someone who violates the traffic rule. In this situation we use cnic to make the challan of rule breakers and using cnic no by scanning the card traffic police can check the records of rule breakers and make challans on the basis of that number this application also helps to specify the challan type and also tells the submission date and the time. It will also notify the person by sending a message to him/her.

3.4 Requirement Specification

Specication of requirments is a description of all the functional and non-functional requirements of a system. In this sections we have discussed both the functional and non-functional requirements of our system

3.4.1 Non Functional Requirements

Non-functional requirements of the system are

- Reliability

Once the application is installed in the android phone. User can use it anytime it should detect keys correctly.

- Response time

User will get the accurate sound of speci?c key pressed in less amount of time.

- Usability

Application is very simple and user friendly, even new users can easily use the application.

- Portability

Design of the system should be easy to port the system to iOS in future.

3.4.2 Functional Requirements

- Functional requirement of our system are given below:

Android phone must be having a good quality camera e.g. 6MP, 12MP.

This application will start detecting the id card. After this, the user can easily make challan. Because system will detect id card and gives the information and we can produce the challan.

3.5 Operational Scenarios(use cases)

We use usecases for the representation of operational scenariosit is a list of events and actions which describe the interaction between the system and actors to achieve a goal.

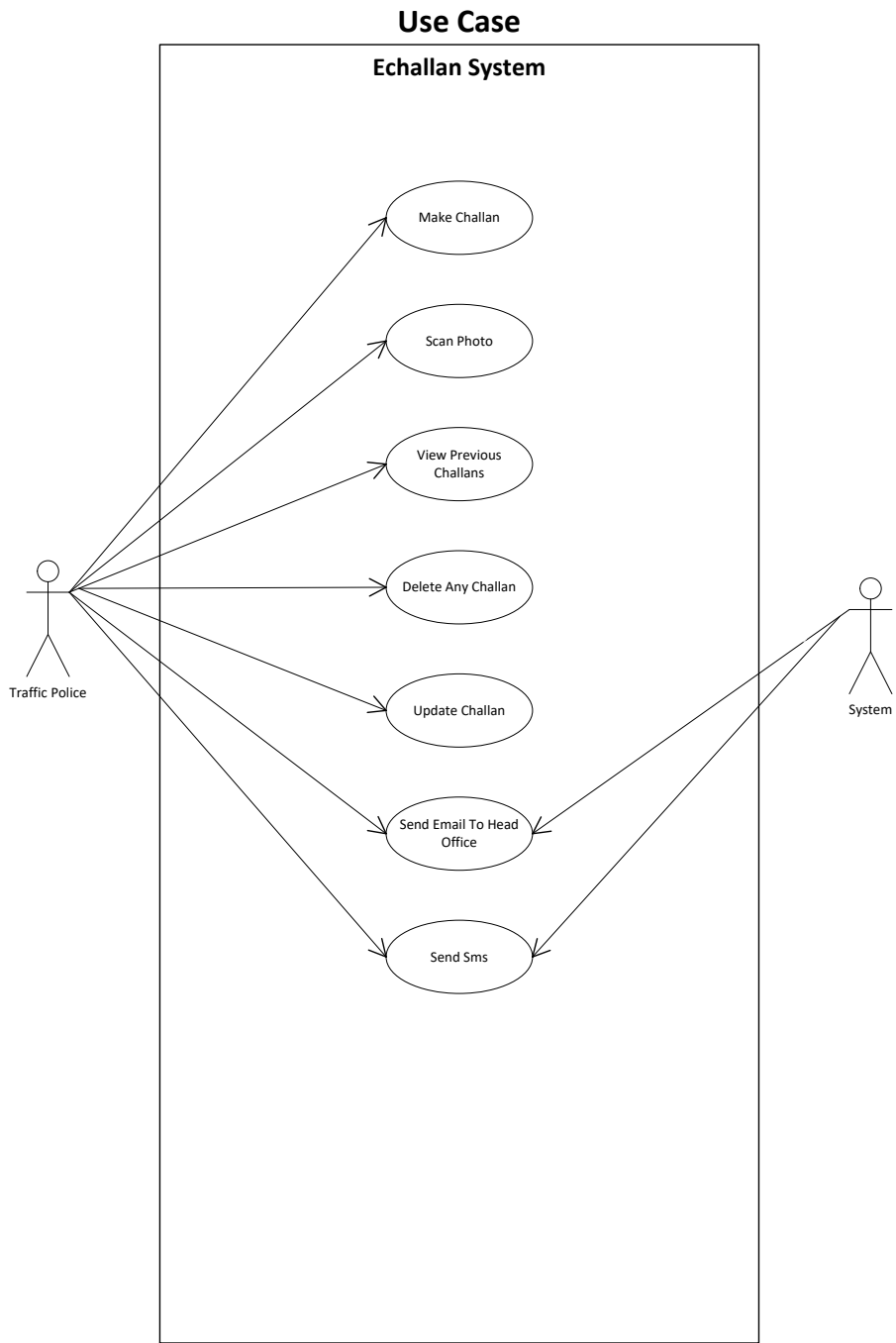


Figure 3.1: Main use case

- Use Case for Scan Id card

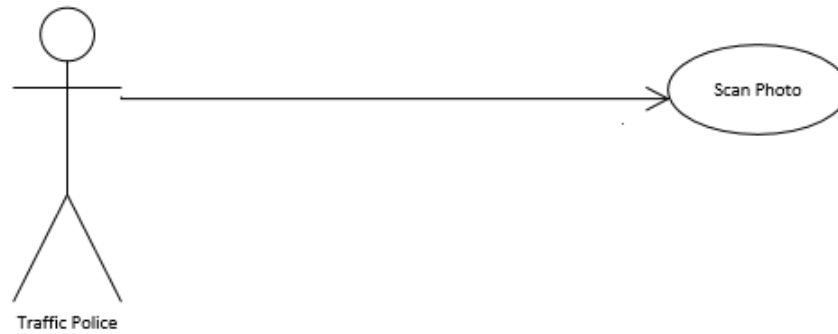


Figure 3.2: Scan Id card

- Use Case Table for Scan Id card

Table 3.1: Scan Id card

Use Case ID:	UC- 02
Use Case name:	Scan ID card
Actors:	software
Description:	User can scan the ID card no using the installed application.
Preconditions:	Should have the ID card and android mobile phone.
Post Conditions:	Should save the ID card no to fetch the data.
Exceptions:	View is not clear
Assumptions:	User knows how to set the camera

- Use Case for make challan

This test case is for logging-in to mobile application to check that if the customer is logging into mobile app properly with valid id and password .

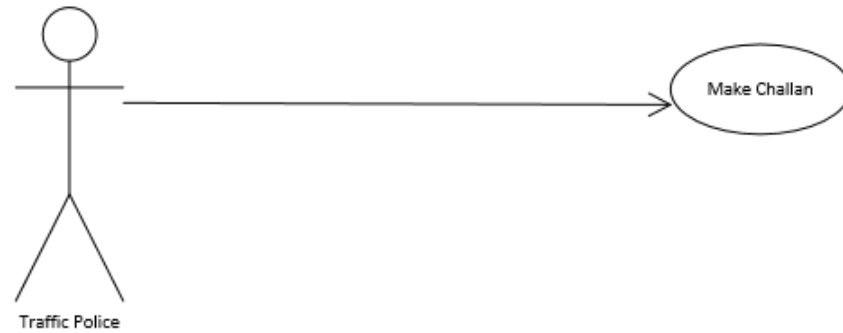


Figure 3.3: challan making

- Use Case Table for make challan

Table 3.2: challan making

Use Case ID:	UC- 01
Use Case name:	Make chalan
Actors:	Traffic Police(user)
Description:	User can create new chalan using the CNIC no on the ID card.
Preconditions:	Should have the ID card.
Post Conditions:	Should save the ID card no to fetch the data.
Exceptions:	Application does not start due to any type of error
Assumptions:	User knows how to start the application

- Use Case for view Previous Challan



Figure 3.4: Previous Challan

- Use Case Table for view Previous Challan

Table 3.3: Previous Challan

Use Case ID:	UC- 03
Use Case name:	Check previous challans
Actors:	Traffic Police(user)
Description:	User can check all the previous challans.
Preconditions:	Previous challan must exist
Post Conditions:	User checked previous challans
Exceptions:	Previous challans not found
Assumptions:	User can check previous challan successfully

- Use Case for Update challan



Figure 3.5: Update challan

- Use Case Table for Update challan

Table 3.4: Update challan

Use Case ID:	UC- 04
Use Case name:	Update chalan
Actors:	Traffic Police(user)
Description:	User can update the previous challan
Preconditions:	Should have the previous challan to update.
Post Conditions:	Should update the challan.
Exceptions:	Don't find challan for updation
Assumptions:	Challan updating successfully

- Use Case for Send sms



Figure 3.6: Sending sms

- Use Case Table for send sms

Table 3.5: Sending sms

Use Case ID:	UC- 05
Use Case name:	Send notification
Actors:	Traffic Police(user)
Description:	User can send sms
Preconditions:	Should have the challan.
Post Conditions:	Should have the the mobile no to send notification.
Exceptions:	Number is not correct
Assumptions:	We have challan and the number to send challan

Chapter 4

Design

4.1 System Architecture

It is a high level logical representation of application. It shows what components a system will have and how they are connected to each other. Following figure shows system architecture of our system that is an android based application.

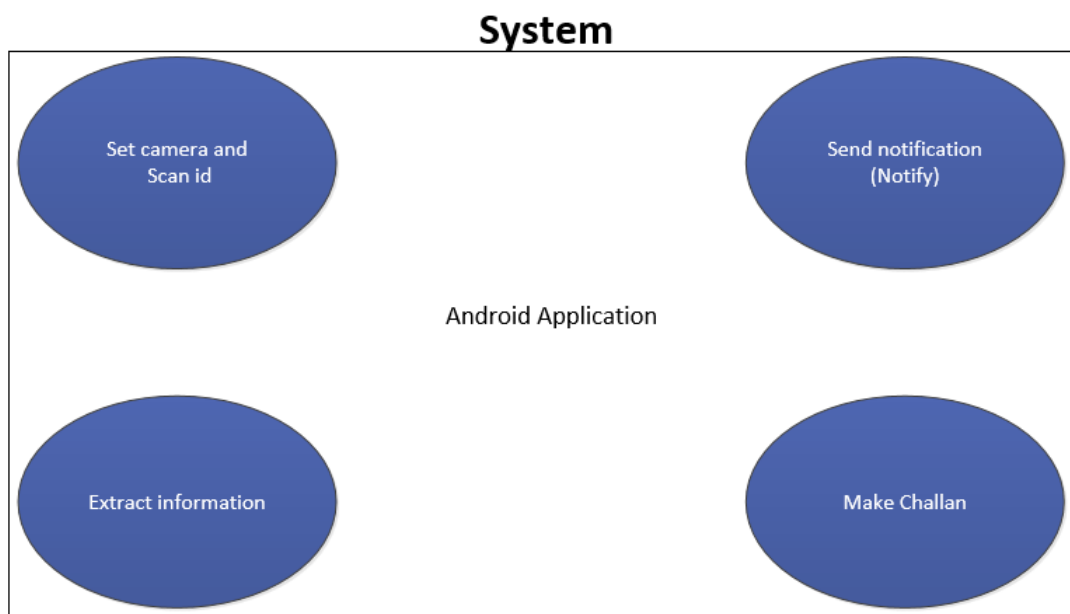


Figure 4.1: System Architecture

4.2 Design Constraints

We use waterfall process model to develop the system because the requirement of the system are well known and there is little chance of change any requirement. We use Unified Modeling language notations to specify requirements. It helps to maintain the proper standard in system development process. It can be applied to any implementation platform.

It also helps to understand the system easily to developers.

4.3 High Level Design

4.3.1 Conceptual view

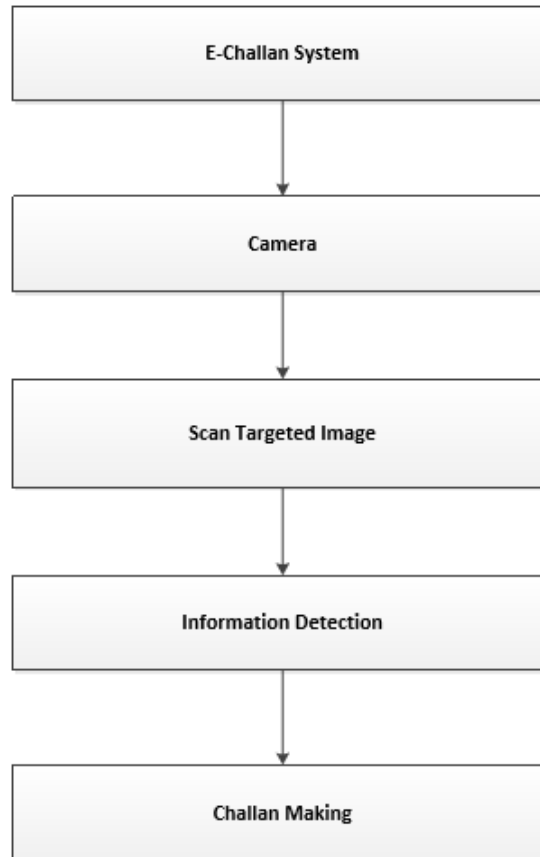


Figure 4.2: Conceptual view

Running on the android operating system the application will use the camera resource and scan the id card and extract the information by scanning the image which is provided in view of camera. .

4.3.2 ProcessView(SequenceDiagram)

Firstly when User start the application.It runs the camera of the phone. The id card is placed in front of camera that camera will read the target image. After reading the image user will start to make challan on the basis of information taken using targeted image.

●Main Sequence Diagram

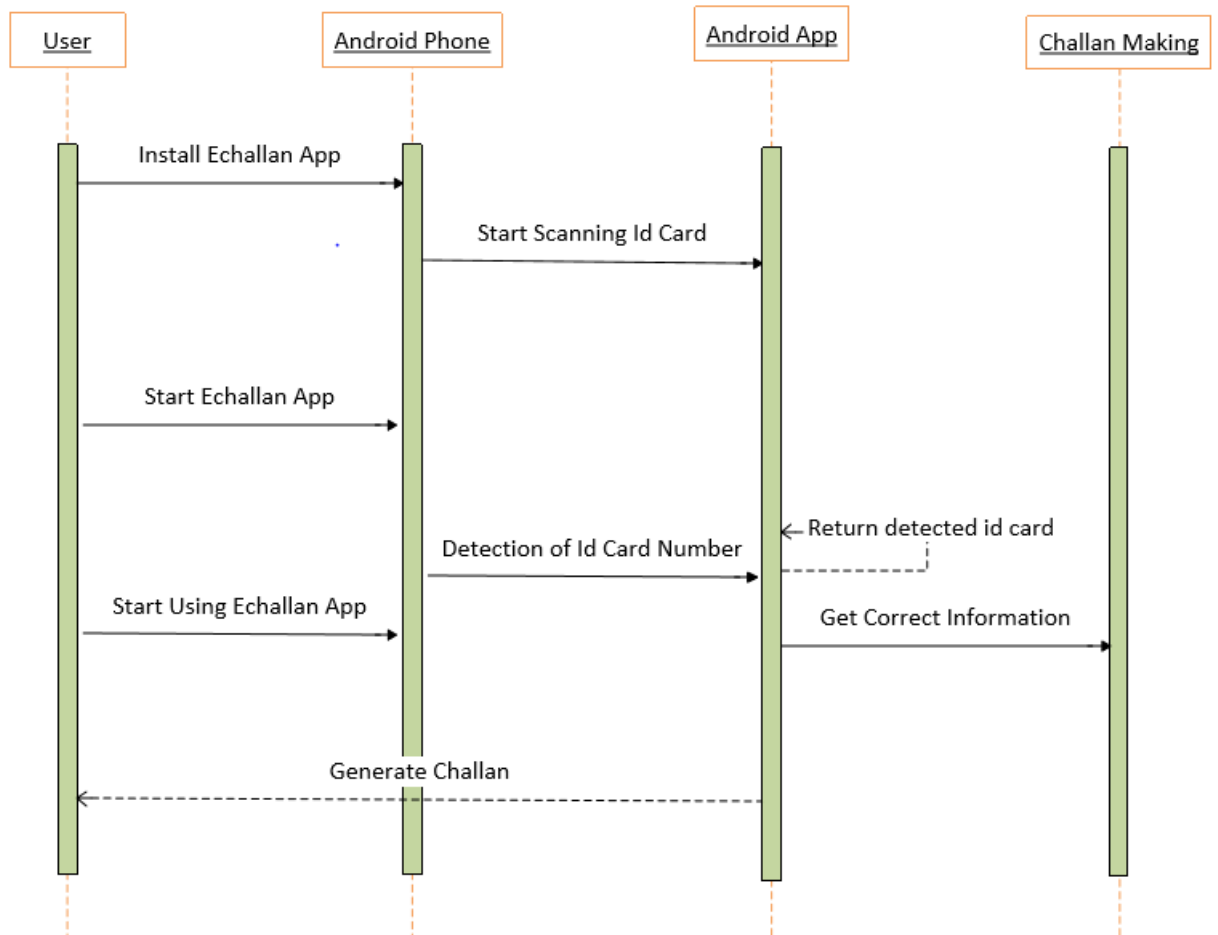


Figure 4.3: Main Sequence diagram

●Login Sequence Diagram

User have to sign in for using the application after signin user can easily make chal-lan by scanning id card or entering id card number, following is the sequense diagram for login.

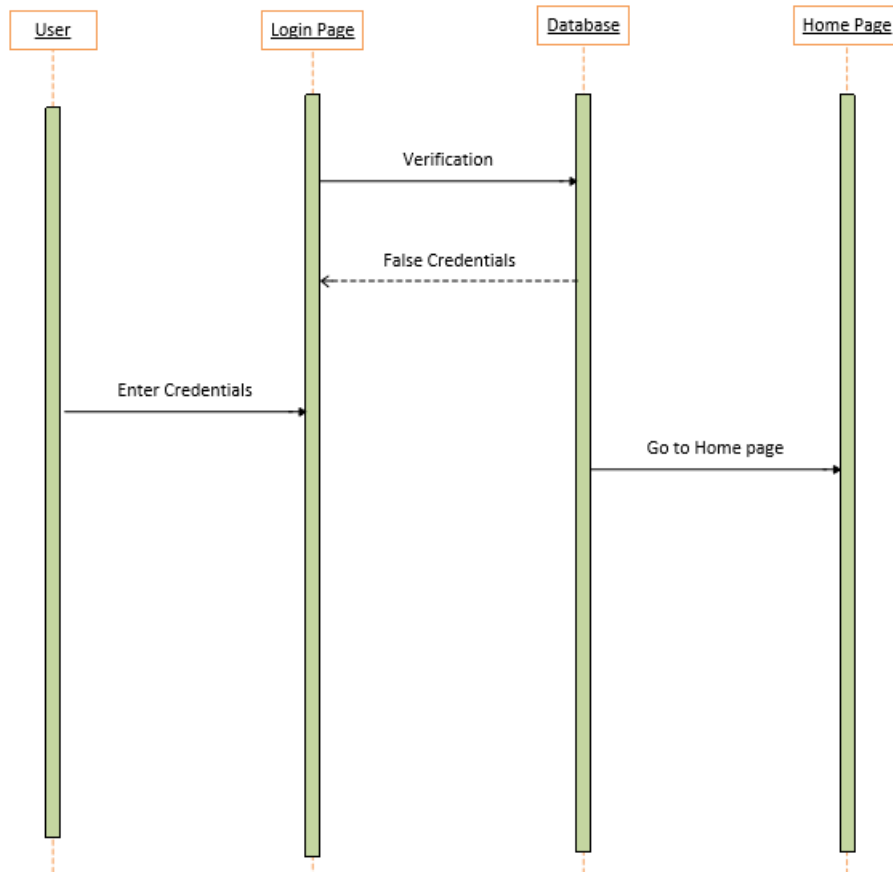


Figure 4.4: Login Sequence diagram

●Signup Sequence diagram

For the first time user have to sign up for the access of application, following is the sequence diagram for signup.

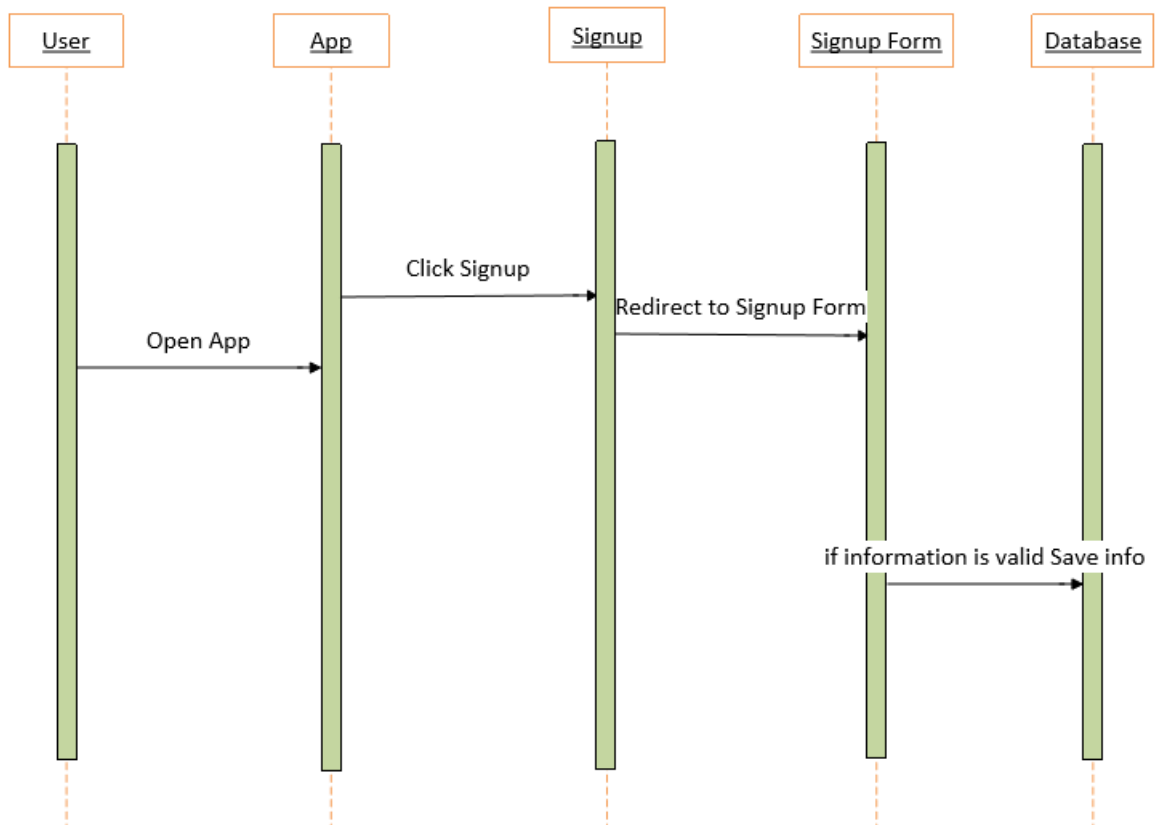


Figure 4.5: Signup Sequence diagram

●Challan making Sequence diagram

The home page of the application user have different choices where user can make challan , following is the sequence diagram for challan making.

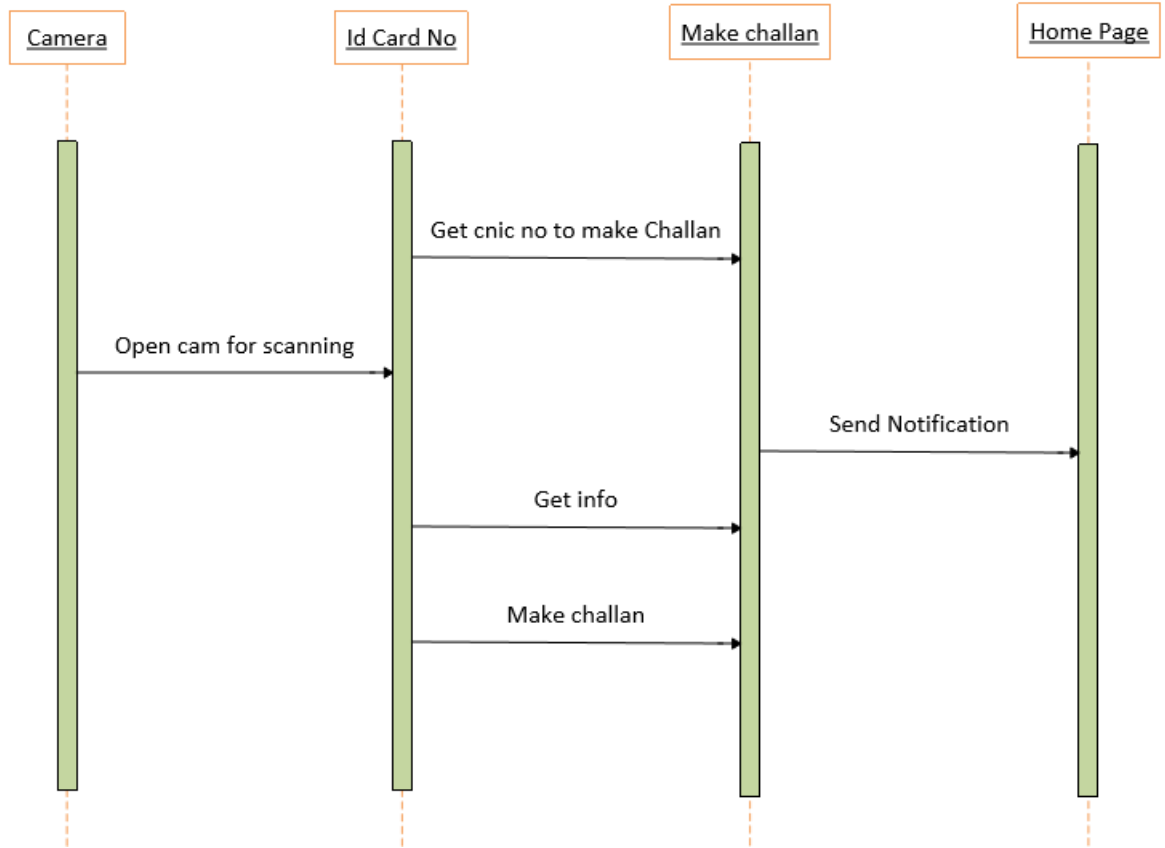


Figure 4.6: Challan making Sequence diagram

●Sending notification Sequence diagram

After making challan a notification is sent the following is the sequence diagram for sending notification.

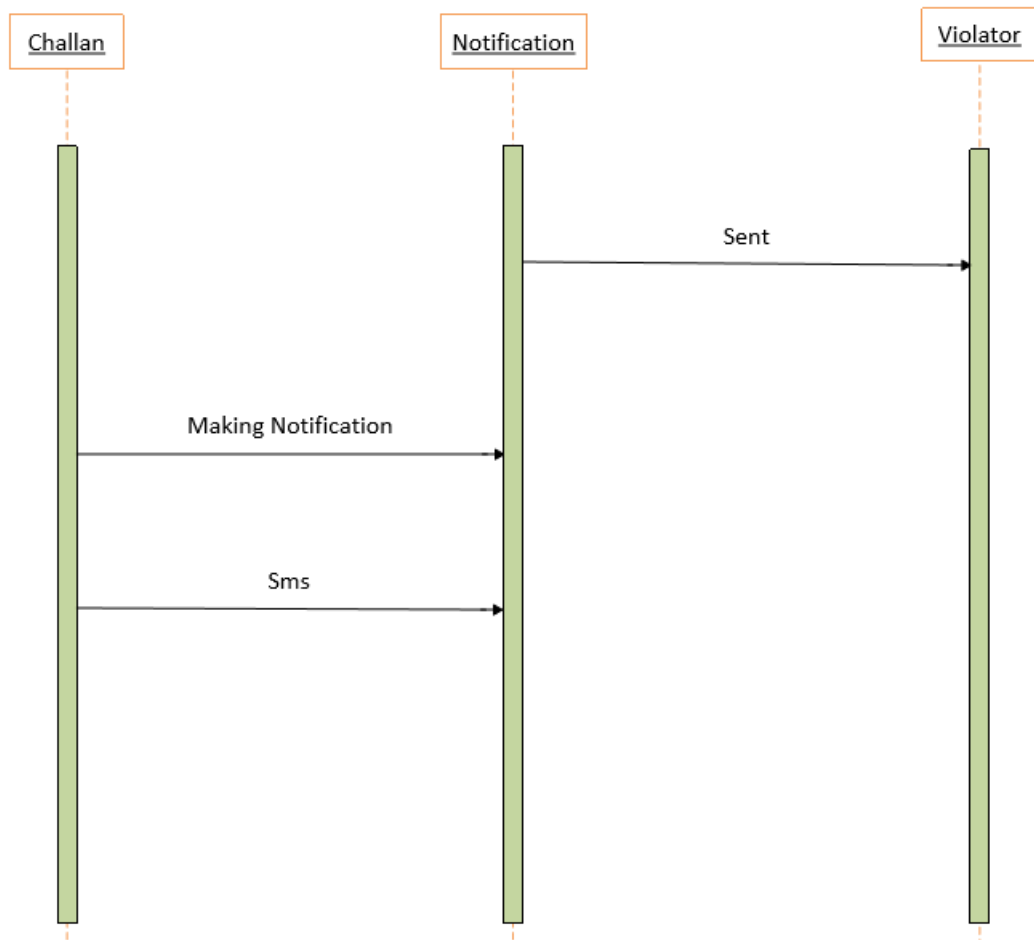


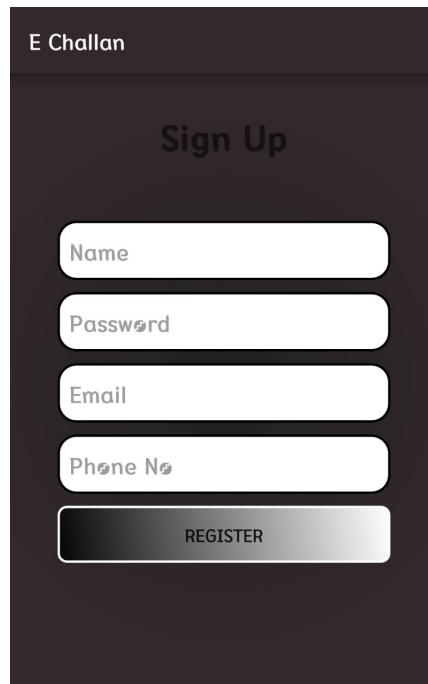
Figure 4.7: Sending notification Sequence diagram

4.4 Low Level Design

4.4.1 Interface View

Signup

For the first time user have to sign up for the access of application use following screen is the signup screen of the application.



The image shows a mobile application interface for signing up. The screen is dark-themed. At the top left, the text 'E Challan' is visible. The main heading is 'Sign Up'. Below this, there are four white input fields stacked vertically, labeled 'Name', 'Password', 'Email', and 'Phone No'. At the bottom of the form is a dark button with the text 'REGISTER' in white.

Figure 4.8: Sign up

Log-inScreen

User have to sign in for using the application after signin user can easily make challan by scanning id card or entering id card number.

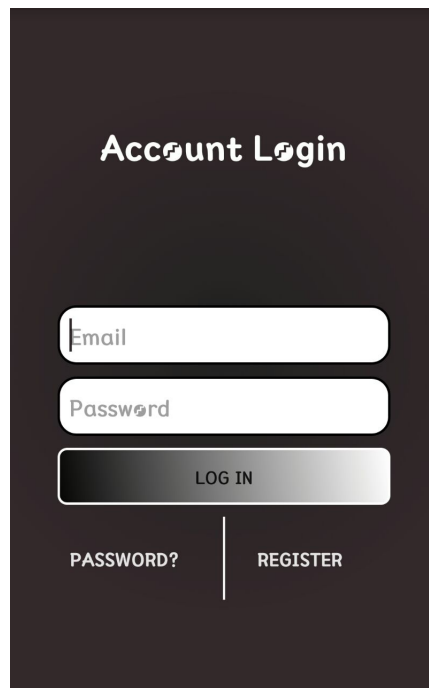


Figure 4.9: Login

Home Screen

The home page of the application user have different choices where user can make challan or check the previous information .

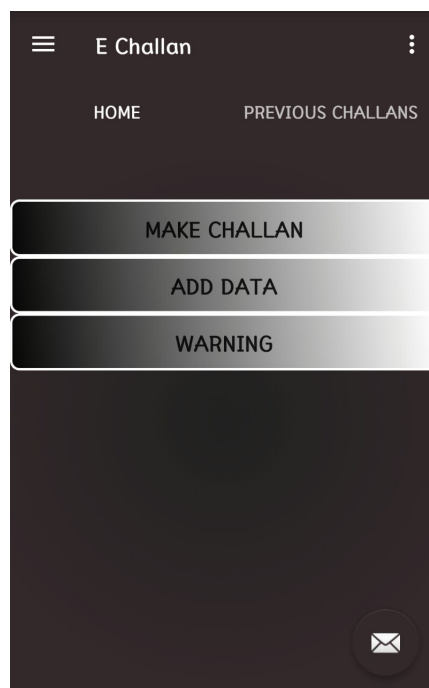


Figure 4.10: Home Page

Challan making Screen

This is the Challan making screen of the Android Application, in this user enter cnic number or simply scanning card to get cnic number for challan generation.

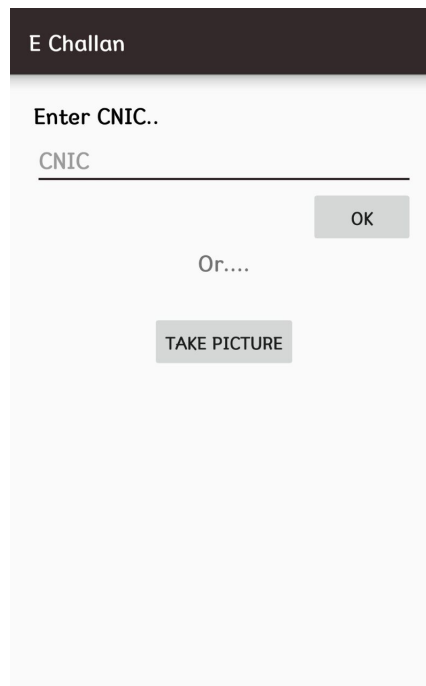


Figure 4.11: Challan Making

Scanning screen

This is the scanning screen of the Android Application, in this screen user can use auto focus or click on text detect button for cnic num detection user also use flash light by selecting flash light option.

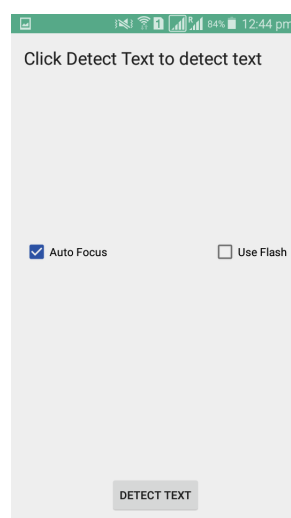


Figure 4.12: Scanning

Logout Screen

This is the logout option screen of the Android Application, after using the application user can leave the application by using the logout option.



Figure 4.13: Logout

Chapter 5

System Implementation

5.1 System Architecture

It describes us the architecture of the system, it include the internal and external components of the system. The main component of the system is the following.

5.1.1 Android application

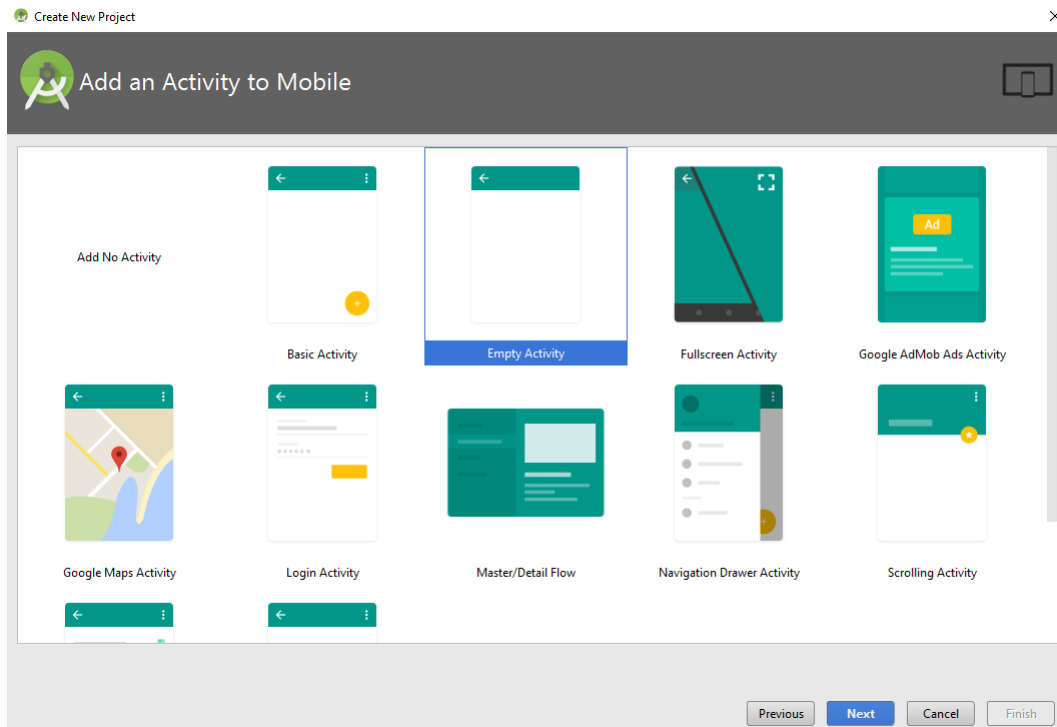
Users will be using Mobile Application in the proposed system. User can check the previous challans,can make new challan.It is required for the user to enter ID and password to have access to their account and for scanning id card and challan making , contact number will be used to send notication about challan.

5.2 Tools and Technology Used

The tools and software that were required for our proposed project are as follows:

5.2.1 Android studio

We are using Android Studio which is an ofcial IDE. It's purpose is to built applications for Android to accelerate our development andit also helps us to build the highest-quality applications for every Android device. It also offers tools custom-tailored for Android developers,which includes code editing, debugging, proling tools, and testing.



5.2.2 Sql server

SQL is database server developed by Microsoft Corporation, it is relational database management system which is used in software application with the key function of saving and retrieving information as requested by the user. It is popular database application which is used for applications as well as for storing and maintaining database information.

5.3 Development Environment or Language used

Android Studio is used as the development environment for our application and it is widely used for the android application development. Android Studio is an integrated development environment which offers a richer code editing that includes extras like (NDK debug mode) etc. The code of this application is written in Java language.

Chapter 6

System Testing and Evaluation

6.1 Testing

Software testing is the main and essential part of development process which is used to check and evaluate the performance of system. Software Testing means many things to many people. The main objective of software testing is to ensure the software functions as specified before going in to production. It also means making sure the software is intuitive and easy to use. This chapter consists of different types of software testing methods to test our system

6.2 Software Testing Techniques

6.2.1 Graphical User Interface Testing

Graphical user interface testing is very important and the main aspect of any system. It depends on user that how a user interacts with system. GUI explains that how a user use the system in sufficient manner. It should be simple and easy to use so every user can easily use and interact with the system. In this project, GUI consists of every simple information on items(button ,textbox)placed on GUI so user can use it easily and without any training or help.Users are satisfied to use the app because it is easy to use

6.2.2 Usability Testing

Usability testing is a testing by the users.It gives us the feedback of the system to the developer that how the system works and how much time the system required to perform the desired task in the application or the response time of the system. It helps the developers to show that, whether the user is satisfied or not with the performance of application. Our project users are satisfied with the application because it is easy to use and more helpful in their everyday work.

Log-in Screen testing

Table 6.1: Log-in Screen

TC- 01			
Log-in Screen			
Android device			
Android device must be in working condition.			
Step	Task	Expected Result	Actual result
1	Execute application.	Pass/Fail	Pass
2	Verify that the log-in button work properly.	Pass/Fail	Pass
3	Verify that user log-in is properly done.	Pass/Fail	Fail

Challan generation screen testing

Table 6.2: Challan generation screen testing

TC- 02			
Challan generation			
Android device			
Android device camera must be in working condition.			
Step	Task	Expected Result	Actual result
1	Execute application.	Pass/Fail	Pass
2	Verify that the scan button work properly.	Pass/Fail	Pass
3	Verify that scanning is properly done.	Pass/Fail	Fail

6.2.3 Software Performance Testing

This testing is used when we have to check the overall system performance , and can check that how much our system is efficient and

reliable, and what is accuracy percentager or which part of our system gives good accuracy,it also helps to determine how fast some aspect of a system performs by giving work load.

6.2.4 Compatibility Testing

Compatibility testing is a testing to ensure that the system runs on different devices and the application is compatible with different devices and different android version.This system is tested on different devices which is shown in Table.

Table 6.3: Compatibility Testing

Tasks	Excepted result	Actual result
Android version 1.6 (Donut)	Pass / Fail	Fail
Android version 2.1 (Eclair)	Pass / Fail	Fail
Android version 2.2 (Froyo)	Pass / Fail	Fail
Android version 2.3 (Gingerbread) [Tested]	Pass / Fail	Fail
Android version 3.0 (Honeycomb)	Pass / Fail	Fail
Android version 4.0 (Ice Cream Sandwich) [Tested]	Pass / Fail	Pass
Android version 4.1 (Jelly Bean) [Tested]	Pass / Fail	Pass
Android version 4.4 (KitKat)	Pass / Fail	Pass
Android version 5.0 (Lollipop)	Pass / Fail	Pass
Android version 6.0 (Marshmallow) [Tested]	Pass / Fail	Pass
Android version 7.0 (Nougat)	Pass / Fail	Pass

6.2.5 Exception Handling

Exception handling is the process in which the unexpected behaviour of the system controls which interrupts the normal flow of system. The system through different exceptions on unexpected behaviour to avoid that we can do exceptional handling in our main activity to control or avoid our application from crashes.

6.2.6 Installation Testing

It is the important round of testing involve installation of the application at user sites. This testing is to check the installation of the application. The tests focus on two things: completeness of the installation on the system and to verify that any functional or non-functional characteristics that may be affected. The users were satisfied with the application.

Table 6.4: Installation testing

TC- 03			
Installation testing			
Android Device			
Android device must be in working condition.			
No	Device	Expected Result	Actual result
1	Galaxy S4	Pass/Fail	Pass
2	Galaxy S5	Pass/Fail	Fail
3	Galaxy j1 Ace	Pass/Fail	Fail
4	Samsung Grandprime	Pass/Fail	Pass

6.3 Test Cases

6.3.1 Test Case for login

This test case is for logging-in to mobile application to check that if the customer is logging into mobile app properly with valid id and password . .

Table 6.5: Login

TC- 04			
Login screen Testing			
Android Studio			
Android Studio must be installed on system.			
Step	Device	Expected Result	Actual result
1	Open the log-in screen menu	Pass/Fail	Pass
2	Verify that the log-in screen is displayed properly.	Pass/Fail	Pass
3	Enter User-name and password.	Pass/Fail	Pass
4	Verify that the User-name can be entered.	Pass/Fail	Pass
5	Verify that the password is masked and can be entered.	Pass/Fail	Pass
6	Verify that a submit and reset buttons are displayed..	Pass/Fail	Pass
7	Verifythateveryeldonthelog-inscreenworking properly..	Pass/Fail	Fail

6.3.2 Test Case for challan making

This test case is for challan making to check that the mobile application is maikng challan properly or not.

Table 6.6: Challan making

TC- 05			
Make Challan			
Android Studio			
Android Studio must be installed on system.			
Step	Device	Expected Result	Actual result
1	verify that the scan button working properly	Pass/Fail	Pass
2	Verify that the camera is fetching the card .	Pass/Fail	Pass
3	Verify that the id card num detection is properly done	Pass/Fail	Pass
4	Verify that the information is getting properly on cnic no.	Pass/Fail	Fail
5	Verify that the challan is made properly .	Pass/Fail	Fail

6.3.3 Test Case for checking previous challan

This test case is for checking the previous challan information that the mobile application is checking information properly or not .

Table 6.7: Checking Previous Challan

TC- 07			
Checking challans			
Android Studio			
Android Studio must be installed on system.			
Step	Device	Expected Result	Actual result
1	verify that the previous challan tab working properly	Pass/Fail	Pass
2	Verify that previous challan exist.	Pass/Fail	Pass
3	Verify that previous challan show properly	Pass/Fail	Pass

6.3.4 Test Case for challan updation

This test case is for challan updation to check that the mobile application is updating challan properly or not.

Table 6.8: Challan updation

TC- 08			
Challan updation			
Android Studio			
Android Studio must be installed on system.			
Step	Device	Expected Result	Actual result
1	verify that the challan updation button working properly	Pass/Fail	Pass
2	Verify that previous challan exist.	Pass/Fail	Pass
3	Verify that previous challans update properly	Pass/Fail	Fail

6.3.5 Test Case for sending notification

This test case is for sending sms notification to check that the mobile application is sending sms notification properly or not.

Table 6.9: Sending notification

TC- 09			
Sending Notification			
Android Studio			
Android Studio must be installed on system.			
Step	Device	Expected Result	Actual result
1	verify that the sending notification button working properly	Pass/Fail	Pass
2	Verify that previous challan exist.	Pass/Fail	Pass
3	Verify that sms sending button working properly	Pass/Fail	Fail
3	Verify that sms sending properly	Pass/Fail	Fail

Chapter 7

Conclusion

We have established the application E Challan System which helps traffic police in making challan easily and will save time by making challan in less time. This application provides the previous challan data of violators .An sms notification is send to violators to submit their challan.

7.1 Future work

Future enhancement includes:

7.1.1 Challan Payment

This application is for making challan and sending the notification for challan submission, but payment is made manually. Challan payment by using the application is the future work so that violator can easily submit challans with in no time .

7.1.2 Support Multiple Cities

Our application is for small city but we can enhance our project for multiple cities in future .

A User Manual

A.1 Introduction

A User Manual Provide guidance of the system to its users that how to use the system, and also describe that how system will react on specific actions. User guide of the application is given below in appendices. Appendices are provided to give supplementary information.

A.2 Log-inScreen

This is login screen of the Android Application, User will use this application .User will input user-name and password to login to application for using it. After user enter user name and password user can click Login button for signing in to the application or click cancel button otherwise.

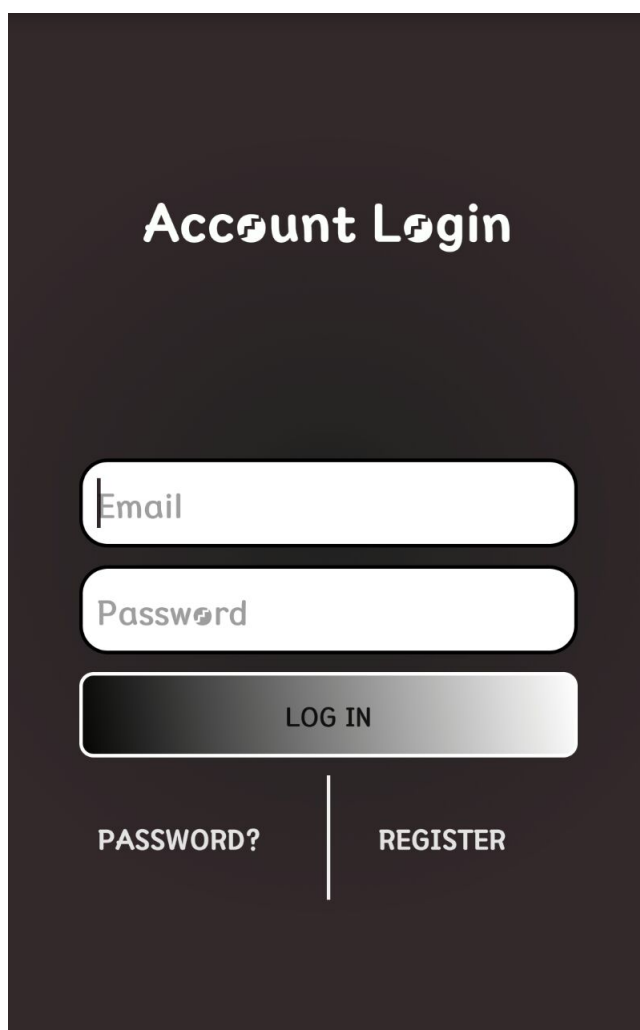


Figure 7.1: Login

A.3 Signup

This is signup screen of the Android Application, for logging in user have to register itself using signup page. User will input his correct information and then press signup button to register. After registration user can use the application by giving correct user name and password in login screen.

The image shows a mobile application interface for signing up. At the top, the text 'E Challan' is displayed in a dark header. Below this, the title 'Sign Up' is centered in a large, bold font. The form consists of four vertically stacked input fields, each with a light gray background and rounded corners. The first field is labeled 'Name', the second 'Password', the third 'Email', and the fourth 'Phone No'. Each field contains a small circular icon on the left side, likely representing a clear or toggle function. Below the input fields is a prominent 'REGISTER' button with a dark background and a light gradient, centered horizontally.

Figure 7.2: sign up

A.4 Home Screen

This is the home screen of the Android Application, in this screen there are two tabs: home tab and previous challan tab. By clicking the home tab, the user can generate a challan, and by clicking the previous challan tab, the user can check the details of previous challans.



Figure 7.3: Home Page

A.5 Challan making Screen

This is the Challan making screen of the Android Application, in this user enter cnic number or simply scanning card to get cnic number for challan generation.

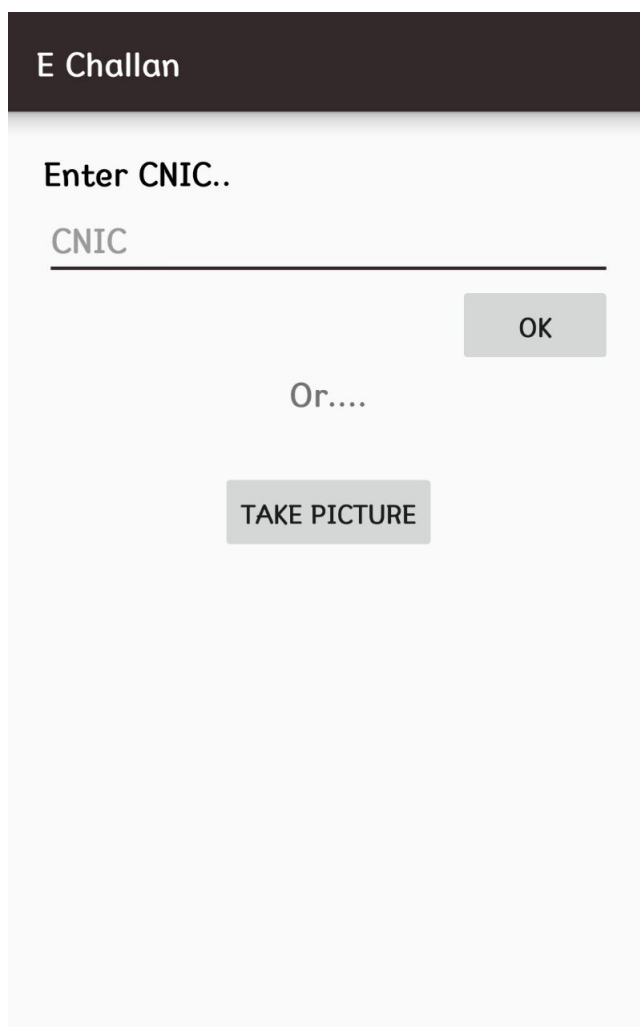


Figure 7.4: Challan Making

A.6 Scanning screen

This is the scanning screen of the Android Application, in this screen user can use auto focus or click on text detect button for cnic num detection user also use flash light by selecting flash light option.

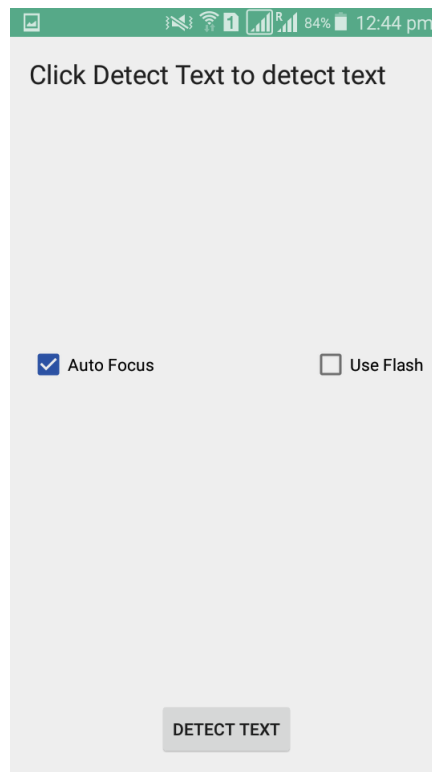


Figure 7.5: Scanning

A.7 Logout Screen

This is the logout option screen of the Android Application, after using the application user can leave the application by using the logout option.

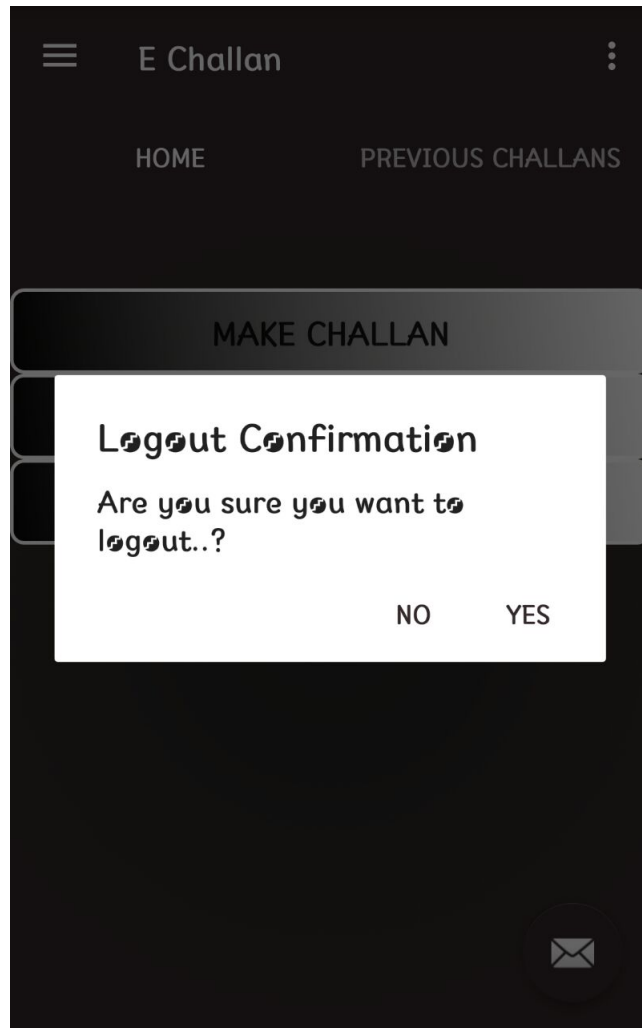


Figure 7.6: Logout

Bibliography

- [1] Avinash Shinde¹, Rounak Sathe¹, Prakash Sutar¹, Prof.R.Sadakale², –AUTOMATIC E-CHALLAN GENERATION FOR TRAFFIC VIOLATION —,International Journal of Advance Engineering and Research Development Volume 4, Issue 8, August -2017
- [2] K.Lakshmi ,Shirish Shinde,Titus Thomas ,–Barcode based Student Attendance System —,International Journal of Computer Applications (0975 8887) Volume 119 No.2, June 2015
- [3] Sankara Narayanan¹, –QR codes and security solutions—,International Journal of Computer Science and Telecommunication, Volume 3, Issue 7, July 2012