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# Design and Development of an App for Election Analysis and Voting



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## FACULTY OF ENGINEERING AND TECHNOLOGY



# Certificate

*This is to certify that the Project titled “**Design and Development of an App for Election Analysis and Voting**” is a bonafide work carried out in the **Department of Computer Science and Engineering** by Mr. Biswajit Basak bearing Reg. No.15ETCS002008 in partial fulfilment of requirements for the award of B. Tech. Degree in Computer Science and Engineering of Ramaiah University of Applied Sciences.*

**August – 2018**

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**Designation**

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## **Declaration**

### **Design and development of an app for election analysis and voting**

The project work is submitted in partial fulfilment of academic requirements for the award of **B. Tech.** Degree in the **Department of Computer Science and Engineering of the** Faculty of **Engineering and Technology** of Ramaiah University of Applied Sciences. The project report submitted herewith is a result of our own work and in conformance to the guidelines on plagiarism as laid out in the University Student Handbook. All sections of the text and results which have been obtained from other sources are fully referenced. We understand that cheating and plagiarism constitute a breach of University regulations, hence this project report has been passed through plagiarism check and the report has been submitted to the supervisor.

<b>Sl. No.</b>	<b>Reg. No.</b>	<b>Student Name</b>	<b>Signature</b>
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**Date : 16-05-2018**



## Acknowledgements

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It is with extreme pleasure and pride that we present our B.Tech. dissertation titled “Design and Development of an App for Election Analysis and Voting”. We would like to express our sincere thanks and gratitude to the following people, who stood by us throughout, helping us with much required inputs, guidance, knowledge and supported us.

It is our great pleasure to express our sincere thanks and gratitude to our academic project guide Ms. Vaishali R Kulkarni Asst. Professor Department of CSE, for her support, guidance and suggestions throughout the project which is leading this project for the completion.

We express our sincere thanks to Dr. Raghavendra V. Kulkarni, Head of the Department, Computer Science and Engineering, and Dr. Arulanantham, dean FET for their kind cooperation and support toward out dissertation, and to the management of Ramaiah University of Applied Science (RUAS) for their continued support. We are thankful to the staff members of the Computer Science and Engineering, RUAS for giving us good support and suggestion.

Lastly, we would like to thanks our parents and friends for their continued support, encouragement and motivation and God for paving our way of success in this object.



## Summary

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This project is about development of android application for e-governance. It helps the citizens to view complete and detailed information about leaders and parties and can participate in voting of a best suitable leader of their choice. Also, this project provides the ability to the people to vote directly from their cell phones without visiting a polling booth. Motivation behind this project is the fact that people lack adequate and correct information about a political party, their status, future and current portfolio. A majority of educated group do not vote for the overhead and stress caused due to standing in long queues on the election voting day. This project aims to provide citizens required information about all the parties, leaders, their social work and commitments, so that they can choose the best candidate and can vote directly from their houses or workplaces, offices, organisations etc. This project avoids the need of physically visiting a polling booth.

The scope of this project is to provide citizens a general mood of surrounding of elections, various polling results, information available at social media, search engines etc. This will help in taking the good decision in electing most suitable candidate using their cell phones. The different forecasts that determine the outcome of the people's vote are covered in this app. The first task in this project that is carried out is the literature survey. The present technology that is being used for online election is investigated. Further, information about leaders and parties is collected and deposited in the database for providing information to users. These gathered contents is refined for storing the true and relevant information in the database. In the further step, the functional and non-functional requirements are summarized. In the further step, a design based on the collected requirements is prepared using the use case, sequence diagrams and class diagrams. Next





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part is to implement the developed design where coding is performed using android studio. The development of database and coding on server's function is done. Finally the project testing is performed on both virtual as well as physical device.

Highlights of this project is mentioned below:

1. Gives complete and correct information about political parties and their leaders for efficient elections.
2. Analyze the promises and progress of the political parties.
3. Provide assistance in making good decisions about the candidate in election.
4. Facilitates the voting at user's place.
5. In summary, single platform is made available for the entire election procedure.



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## 1. Introduction

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In Countries like India, the poor and challenged people cast their vote proportionally more than the rich and the upper caste people. Similarly, the number of voters is generally higher in rural areas than in cities. Majority of the people are between the ages of 20-30 years. Most of the elected state governments have policies for the poor; the poor have higher expectations of the state than the rich. The laws of India require the faithfulness of poor's and marginalized people in the democratic society in order to provide equal opportunities to each individual irrespective of their religion, caste and financial status.

### 1.1 Introduction:

Elections at regular interval are a significant feature of democracy. Elections ensure that the trust of the people is reflected in the formation of government and their public policies and decisions. It gives a choice to people to select their own government of their choice and the government that gets elected get the right to govern. It also gives a chance to the people to express their faith in the government and elect any government peacefully whenever they feel there is any need. Elections are the power of people's liberties and mechanism on checking on dictatorial tendencies. Thus, fair and free elections are important for the success of democracy. Many factors pose as challenge to the election system in India. Some of them are illiteracy, corruption, criminalisation of politics, communalization, evading code of conduct, money, muscle power, caste and politicization of the police.



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The Web based voting framework otherwise called e-voting is a term incorporating a few distinct sorts of voting grasping both electronic methods for checking votes. It depends on the other online administrations like 'Online Reservation Framework'. In this framework individuals who have citizenship of INDIA and whose age is over 18 years of any sex can give his or her vote online without heading off to any surveying stall. There is a database which is kept up by the Decision Commission of India in which every one of the names of voter with finish data is put away.

It can also involve transmission of ballots and votes via telephones, private computer networks, or the internet

## 1.2 Scope

- To encourage natives to pick best applicant through information examination and also through estimation investigation. They would have the capacity to get every one of the insights about their most loved political pioneers and gatherings.
- To provide the stage that helps to adjust insights about each pioneer, parties and their doings. It would likewise keep a record of the guarantees that were made and it would likewise track the guarantees that are satisfied.
- To give the timetable of the political party and the pioneers. This will help any individual to go and bring points of interest of over a wide span of time doing of the gatherings.
- To make mindfulness among the general population with the goal that they would have the capacity to vote sensibly. Since in creating nations extraordinarily in India, dominant part of the populace lives in ghettos and rustic territories, where any gathering can approach and perform brief advantages for the general population bringing about building a phony trust which brings about voting those competitors and not getting any advantages after the applicant has possessed his position.

- The principle advantage of this stage is that resident can vote from their home as it were. It predominantly spares the valuable time of the residents as nationals don't need to remain in long line sitting tight for their swing to survey their vote to their most loved applicant. It likewise empowers the debilitated individuals of our general public to survey their vote from their home just which escapes them from confronting issues and troubles of long line. It likewise diminishes the group at the surveying stall as hopefuls will vote from their home moreover.
- It is a propelled innovation utilized now daily. It builds the E learning of the clients which is extremely fundamental for current age. This would likewise help the general population to find the advanced world henceforth helping the nation to move towards Computerized India Development.
- The primary issue that will be dealt with is instances of vote miscalculates since at the backend of this framework, there lives a very much created database utilizing MySQL that can give the right information once it's effectively questioned.
- The benefit of web based voting over the regular "line technique" is that the voters have the decision of voting at their own particular leisure time and there is lessened blockage. It additionally limits on mistakes of vote tallying. The individual votes are submitted in a database which can be questioned to discover who of the applicants for a given post has the most elevated number of votes.  
Counting of votes would be done at a speedier rate subsequently the work heap of the Decision Division would be limited radically.

### 1.3 Organization of the report

In the primary section, the prologue to the undertaking subject was given. The fundamental point of the task is illustrated. The extent of the undertaking has been clarified quickly with help of a few illustrations. Information examination is done about various gatherings alongside their pioneers to give clear picture about them to the



residents. The created framework will spare time of the subjects and also cost of the entire voting process.

In the second part, the information investigation on the undertaking point has been performed to distinguish the all the related information. The clarification on the information investigation has been finished. Diverse periods of information investigation have been outlined and clarified at the same time. Security issues identified with the framework has been specified with depiction. The procedure of investigation on the information has been performed and every one of the issues that are included identified with it are illustrated. Opinion investigation is being performed too in this part.

In the third part, the point has been expressed and characterized. Likewise, the destinations are clarified. The wellspring of information techniques for gathering, the assessment of the current framework and the association structure of the framework issue are introduced. It incorporates particular techniques which were utilized to accomplish the destinations of the undertaking, required for usage of the venture and a short clarification of why such strategies were utilized for actualizing the proposed framework, additionally included is a concise depiction of the present arrangement of voting.

#### **1.4 Conclusion:**

The conclusion of the chapter is that in this chapter the introduction on the project is being done. The illustration the scope and the organization of the project is being done. The main advantage of the project is that the people can vote from any place through online voting. It allows every people to cast their vote for their particular candidate. It will save time of people as well as it will decrease the crowd at the polling booth. Different scope of the project has been mentioned which gives a brief insight of the project.



## 2. Background Theory

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A web-based voting framework for Indian decision is proposed in this undertaking. The proposed show has a more noteworthy security as in voter high security secret word is affirmed before the vote is acknowledged in the primary database of Decision Commission of India. The extra component of the model is that the voter can affirm if his/her vote has gone to rectify competitor/party. In this model a man can likewise vote from outside of his/her distributed voting public or from his/her favoured area. In the proposed framework the counting of the votes will be done consequently, subsequently sparing an immense time and empowering Decision Magistrate of India to declare the outcome inside a brief period.

### 2.1 Background Theory (or Theoretical basis):

#### **E-voting**

E-voting i.e., electronic voting refers to the computerized voting machines that use electronic ballots rather than paper ones. These can also be referred as direct-recording electronic machines.

The Web based voting framework which can be called e-voting is a term incorporating a few distinct sorts of voting grasping both electronic methods for checking votes. It depends on the other online administrations like 'Online Reservation Framework'. In this framework individuals who have citizenship of INDIA and whose age is over 18 years of any sex can give his or her vote online without heading off to any surveying stall. There is a database which is kept up by the Decision Commission of India in which every one of the names of voter with finish data is put away.

#### **E-governance**

E- governance is new style of governance in which the use of paper is being eliminated or rather it has been reduced, and also the work of government is done in digital mode rather



than through paper and files which is older practice. E-Governance is basically associated with carrying out the functions and achieving the results of governance through the utilization of ICT i.e., Information and Communications Technology. E-Governance is like governance in an electronic environment. It is usually both governance using electronic tools.

#### Benefits of e-Governance:

Better service delivery to citizens: - It will be helpful to the people as the process can be tracked. Also, it becomes easier to ensure that the work is done on time.

Safety of the document and the environment: - The saved documents can be easily kept for longer duration without taking any physical space. It will be easier to search them as well in the future. The lesser the paper is used, lesser the harm for the environment. It will also generate much lesser junk which helps in the safety of the environment.

Empowering people through information

Improved efficiency within Governments: - It leads to making the work easy, smooth, efficient, fast and accountable also.

Improve interface with business and industry: - All the ministries and departments are easily connected, and cooperation can be ensured.

#### **Security:**

It is that by the experience of the people, it has been revealed that the online voting system which are being often confronted by different security issues when the system is running. Basically, the origin of security issues was not only due to the outsider i.e., due to voters and attackers but is also due to the insiders i.e., system developers and the administrators. These errors basically cause the voting system to crash.

So, the solutions are also being proposed correspondingly and that are also being outlined to hold back these attacks correctly. For example, in order to avoid hacker in making incursion into the voting system via the network, it must be needed to design the system which will transmit the data without network.





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In the project, the security has been used for opening the application using a four-pin lock. The security concept will be used to encrypt or decrypt the vote when the user choice the option to do vote for the candidate. At the time of voting a unique id will be generated for all the candidate who took part in election. Through the unique id the voted vote will be counted. To make it more secure a six-digit OTP will be send to the user like three digits will be sending to mail and three digits will be send to registered mobile number. Then the OTP will be verified. The vote will be counted and confirmation message will be send to user.

## **2.2 Conclusion:**

It deals with the security, e-voting and e-governance. Among the many security issues that are being cited above with electronic voting, one main point was to accurately observe the voting results and then test whether every vote was recorded and another issue with the machines involves access as whenever officials of a given party have time alone with machines, there is a high possibility of tampering/fraud. Many of the critics point to the things like the availability of the USB flash drive ports on electronic voting machines would be an easy way to tamper with the system. Thus, e-voting has be made more secured by using a six-digit OTP that will be send to the user like three digits will be sent to mail and other three digits will be sent to registered mobile

### 3. Aim and Objectives

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The most crucial factor for a system to be successful is to exhibit a voting protocol that can prevent opportunities for fraud or for sacrificing the voter's privacy. The Voting Protocol that will be designed and implemented for the system will combine the advantages of existing protocols and techniques, while at the same time it will aim at eliminating most of the identified deficiencies and problems. Online voting system is a software system through which a voter can give votes through registering themselves on the voting website. All the information in sites which has been entered are stored in database. For each page in the website have its own database table. Each voter has to enter his all basic information like name, sex, religion, nationality and criminal record. The functionalities to the current online voting system is achieved which will increase the voting rates in different regions of country. This system is highly reliable and secured in order of their operation. It is user friendly and easy to handle if person don't have technical knowledge and skills. This system has an excellent mechanism that doesn't require geographical proximity of the voters.

#### 3.1 Title

Design and development of an android app for election analysis and voting

#### 3.2 Aim

To build a simple and user-friendly android application for people to make informed decision in electing leaders with support of voting.

#### 3.3 Objectives

- To do literature survey in political field
- To do requirement analysis
- To design diagrams to model functional requirements
- To implement the developed diagrams
- To test the developed application



- To write project report

### 3.4 Methods and Methodology/Approach to attain each objective

Objective No.	Statement of the Objective	Method/ Methodology	Resources Utilised
1	Literature survey	1.1 Current technology being used 1.2 Collecting information about leaders and parties 1.3 Analyzing and filtering content	Internet, Research papers
2	Requirement analysis	2.1 Jotting down functional requirements 2.2 Jotting down non-functional requirements	
3	Design	3.1 Object oriented approach to be followed 3.2 Use case diagram, sequence diagrams	Dia software
4	Implementation	a. Android app development b. Server-side coding c. Database development	Android studio, Knowledge of Java and XML, PHP, MySQL
5	Testing	5.1 Testing on android emulator 5.2 Testing on physical device	Android virtual device (emulator), Physical device

### 3.5 Conclusion



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In this chapter, the aim of the project has been depicted. The objectives that are to be fulfilled are also listed. This chapter also contains the objective table that are used followed. The table contains statement of the objective, methodologies and the resources utilized. In the next chapter the problem solving approach would be demonstrated.

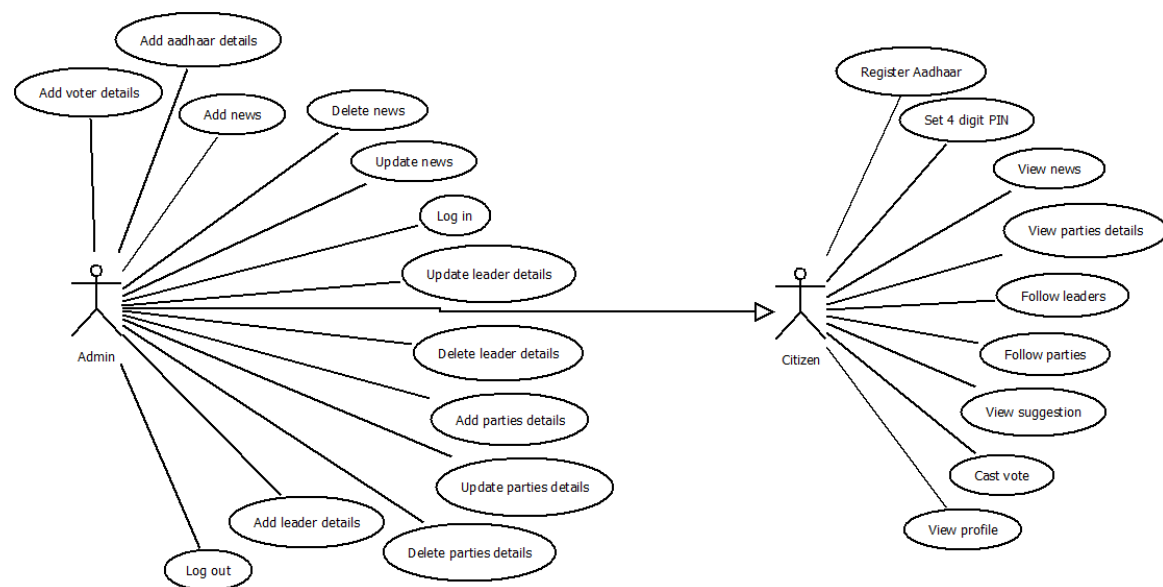
## 4. Problem Solving

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An online voting system project is implemented in Android platform using MySQL database as back end. Main aim of this system is to develop an online application for citizens who are above 18 years of age to vote online. Using these system citizens of India can vote through online without visiting polling booth. A centralized database is maintained by election commission of India, where citizens information is maintained. Whenever citizen is using online voting system, his/her information is authenticated with the data present in database.

#### 4.1 Design

Effective design and implementation of applications can have profound, positive implications on productivity, efficiency, accuracy, and satisfaction in a huge range of environments. Application design is done using an Object-Oriented approach.



*Figure 4.1: Screenshot of the use case diagram*

Figure 4.1 depicts the screenshot of the use case diagram which consists of actors and use cases. A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. Two actors are there where admin is the actor that can perform

all the activities that the actor citizen can perform plus some of its own specialized activities.

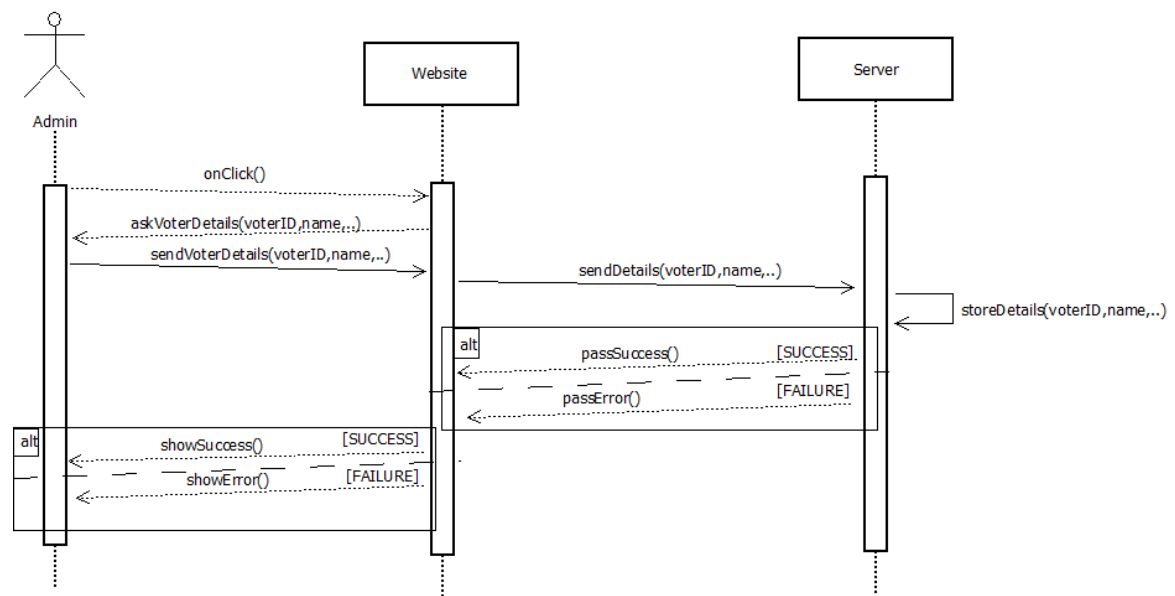


Figure 4.2: Screenshot of the sequence diagram for use case add voter details

This is the sequence diagram for add voter details for the admin. Here the admin can add the voter details. Admin will send the voter details such as voter id, name, date of birth, address etc using the website. Then this detail will be send to server. If success, pass the success message. If error, pass the error message.

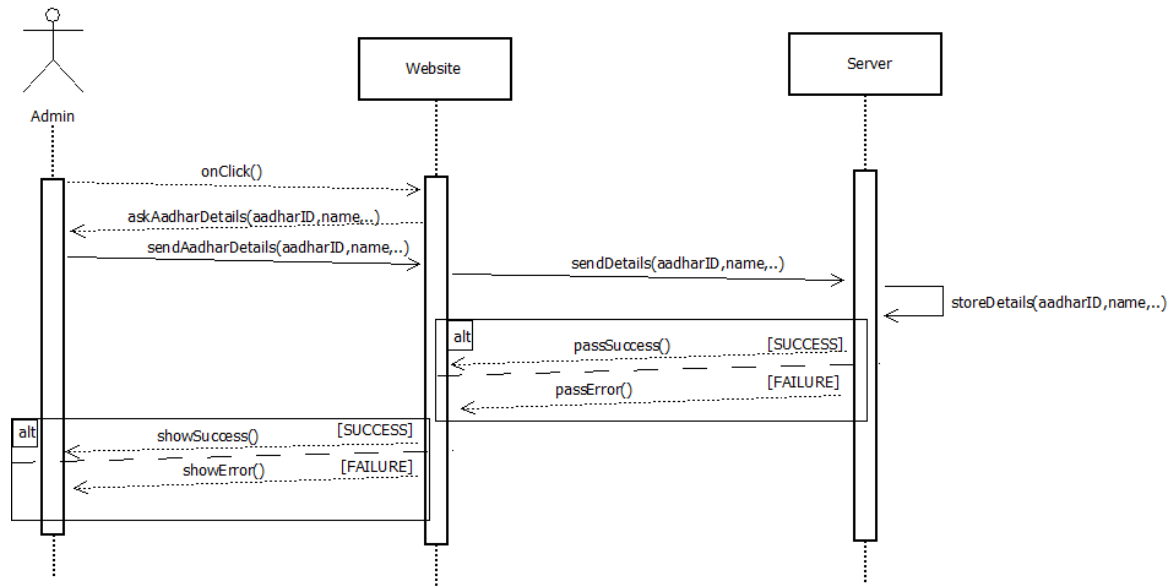


Figure 4.3: Screenshot of the sequence diagram for use case add Aadhar details

This is the sequence diagram for add aadhar details for the admin. Here the admin can add the aadhar details. Admin will send the aadhar details such as aadhar id, name, date of birth, address etc using the website. Then this details will be send to server. If success, pass the success message. If error, pass the error message.

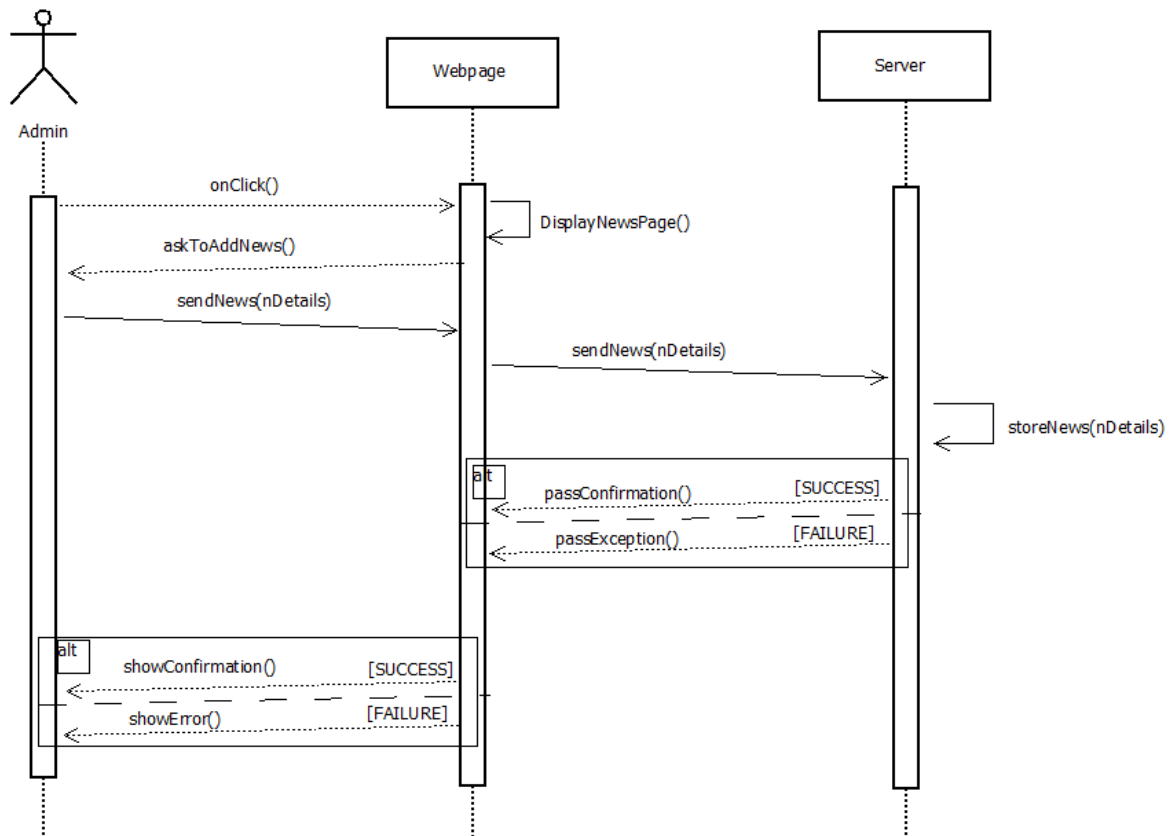
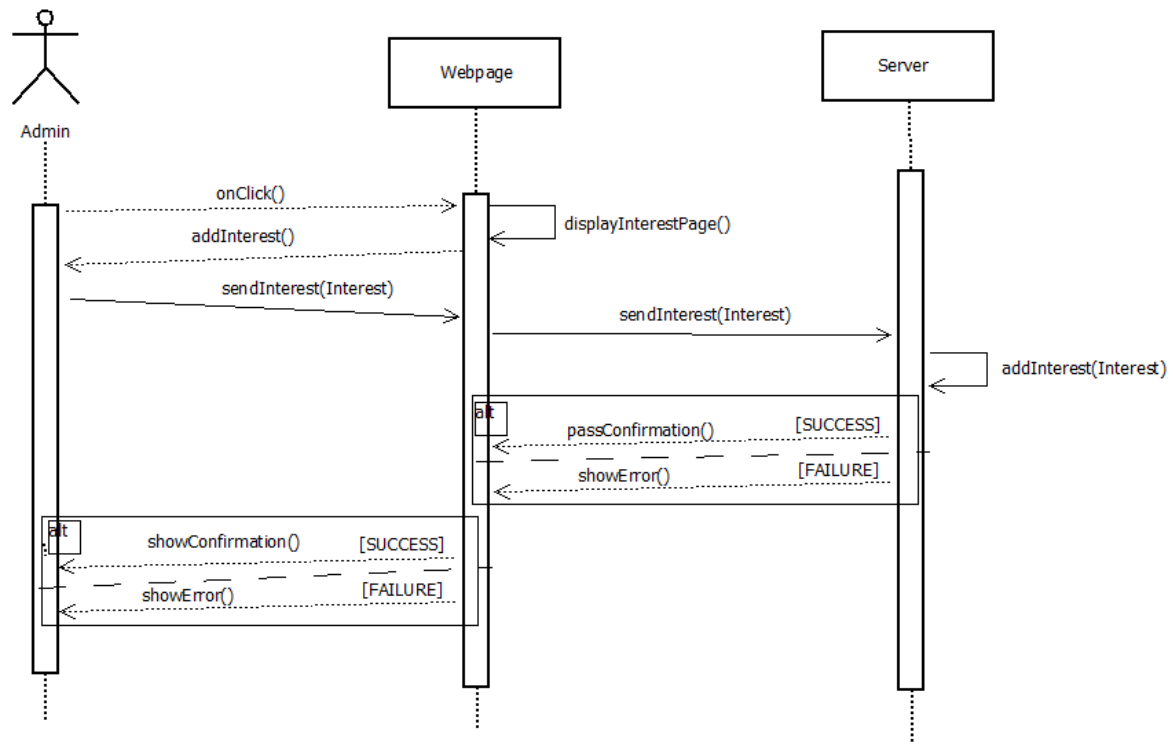


Figure 4.4: Screenshot of the sequence diagram for use case add news

This is the sequence diagram for add news for the admin. Here the admin can add the recent news. Admin will send the details of news using the website. Then this details will be send to server. If success, pass the success message. If error, pass the error message.





*Figure 4.5: Screenshot of the sequence diagram for use case add interest category*

This is the sequence diagram for add interest category for the admin. Here the admin can add the interest category. Admin will send the details of interest using the website. Then this details will be send to server. If success, pass the success message. If error, pass the error message.

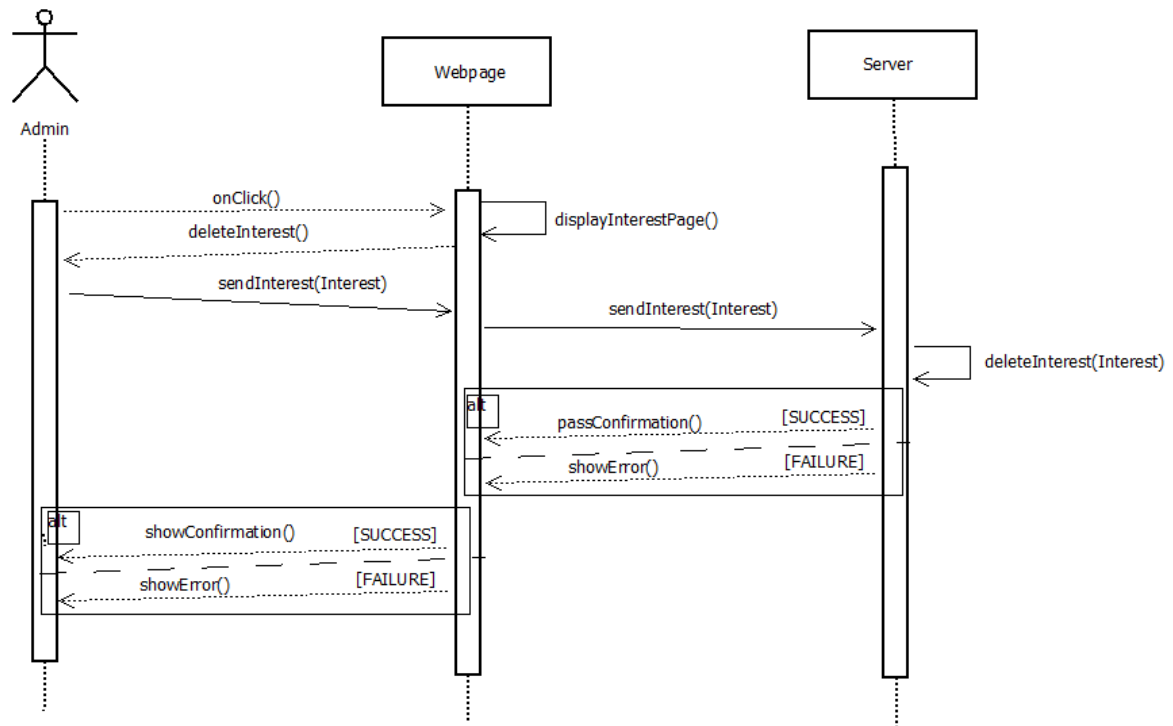


Figure 4.6: Screenshot of the sequence diagram for use case delete interest category

This is the sequence diagram for delete interest category for the admin. Here the admin can delete the interest category. Admin will send the details of interest to be deleted using the website. Then this detail will be send to server. If success, pass the success message. If error, pass the error message.

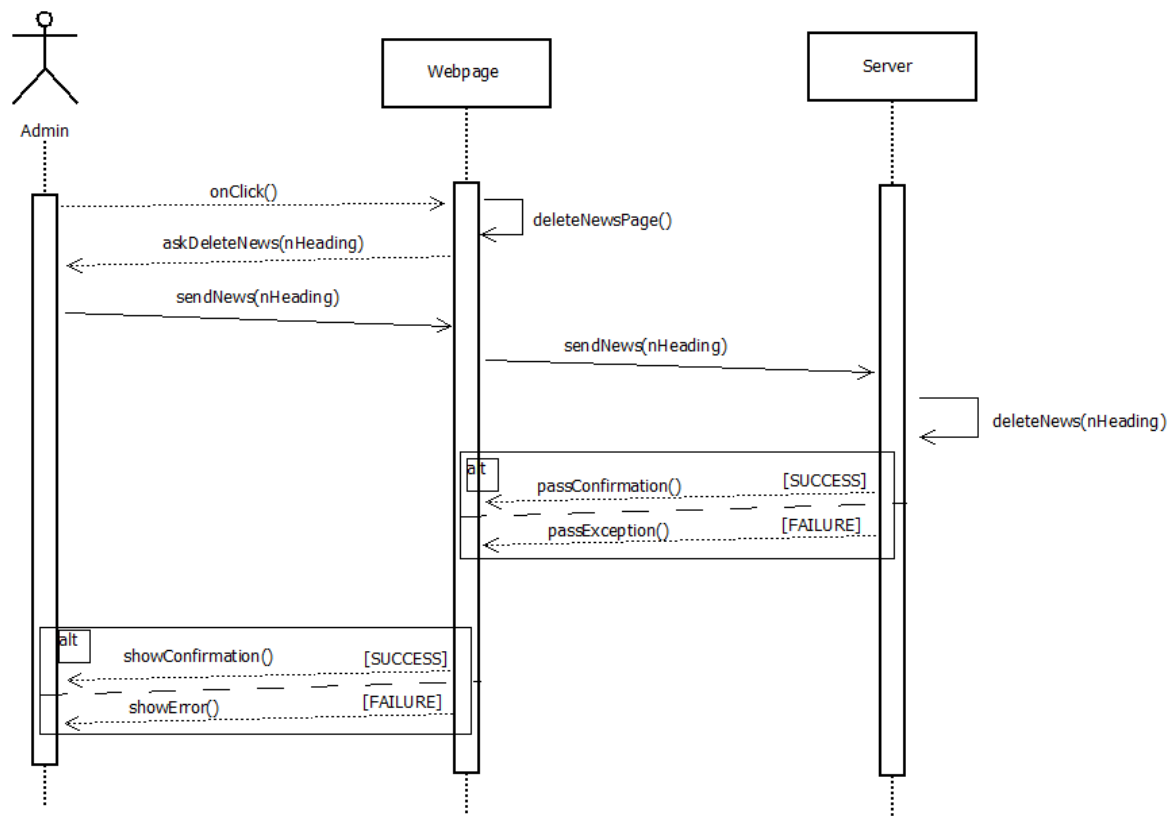


Figure 4.7: Screenshot of the sequence diagram for use case delete news

This is the sequence diagram for delete news for the admin. Here the admin can delete the news. Admin will send the details of news to be deleted using the website. Then this details will be send to server. If success, pass the success message. If error, pass the error message.

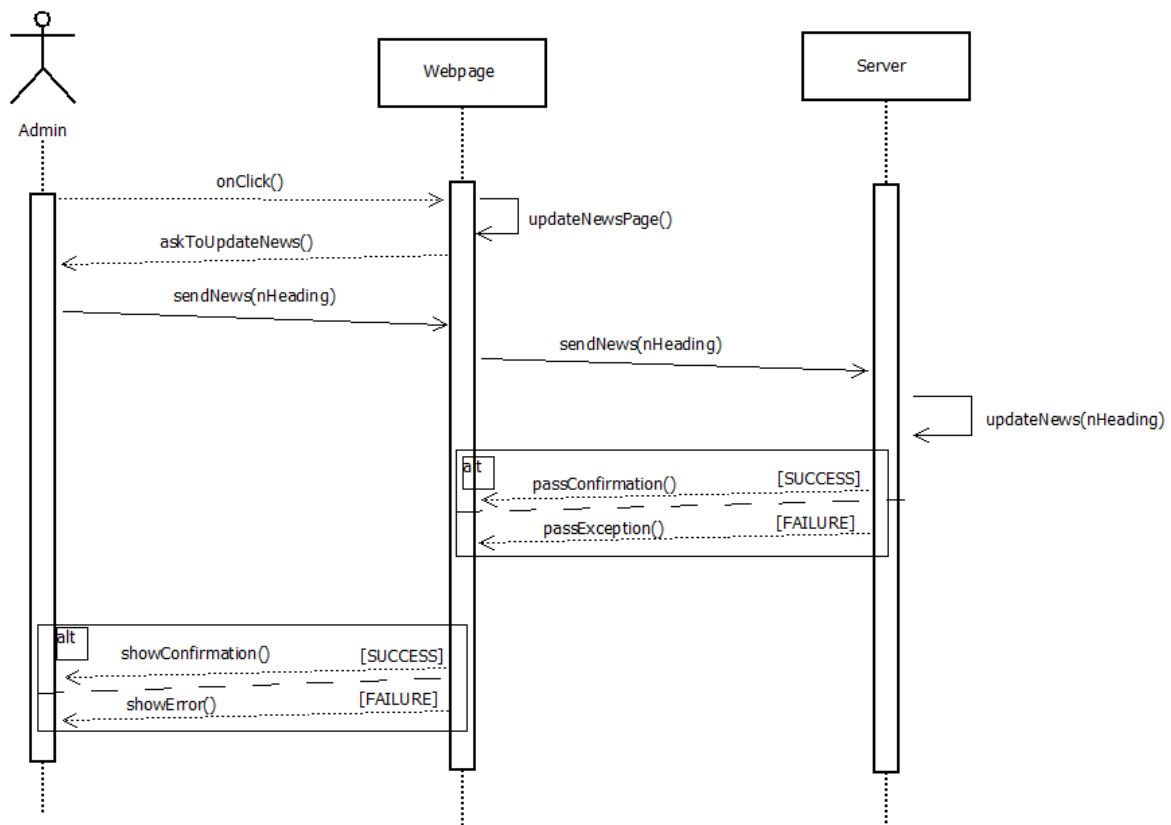


Figure 4.8: Screenshot of the sequence diagram for use case update news

This is the sequence diagram for update news for the admin. Here the admin can update the news which is already there. Admin will send the details of news using the website. Then this detail will be send to server. If success, pass the success message. If error, pass the error message.

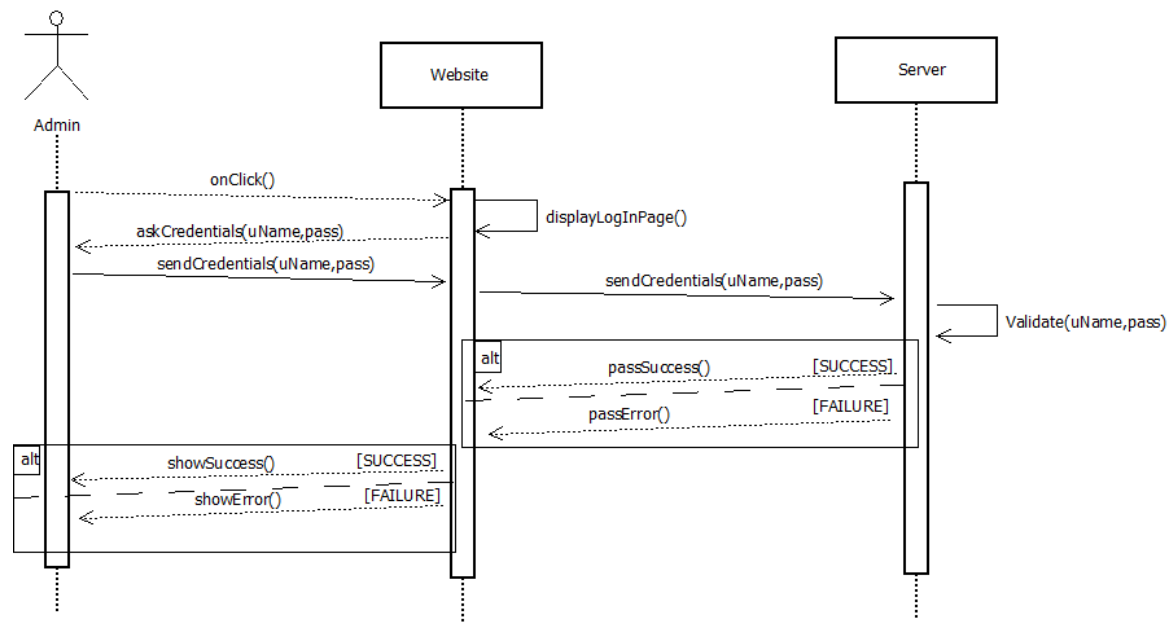


Figure 4.9: Screenshot of the sequence diagram for use case Log in

This is the sequence diagram for login to admin page. Here the admin can login using the credentials. Then this detail, will be send to server. If success, pass the success message. If error, pass the error message.

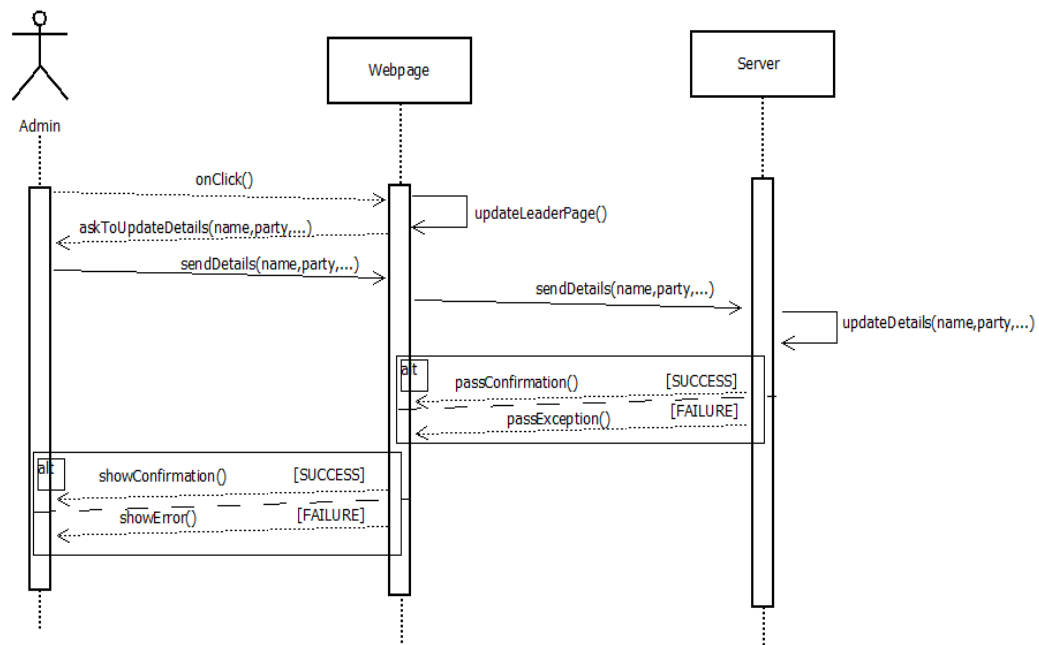


Figure 4.10: Screenshot of the sequence diagram for use case update leader details

This is the sequence diagram for updating the leader details. The admin can update the leader details. For any leader the details can be updated in the website and the details will be displayed in the application.

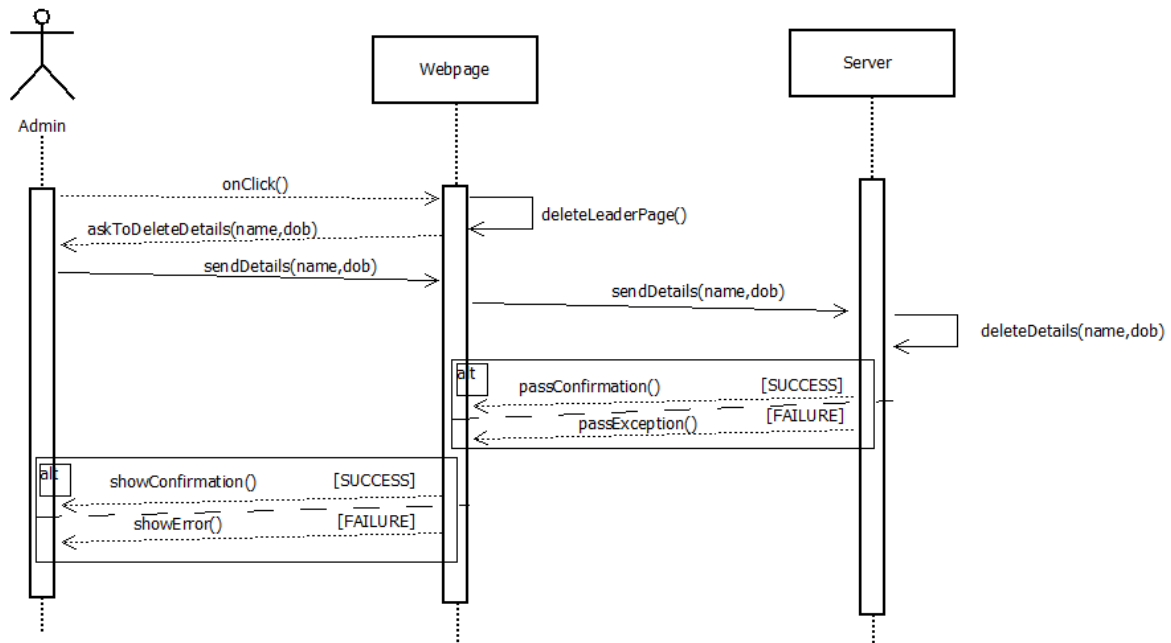


Figure 4.11: Screenshot of the sequence diagram for use case delete leader details

This is the sequence diagram for deleting the leader details for the admin. Here the admin can delete the leader details which is already there. Admin will send the details of letter to the website. Then this detail, will be send to server. If success, pass the success message. If error, pass the error message.

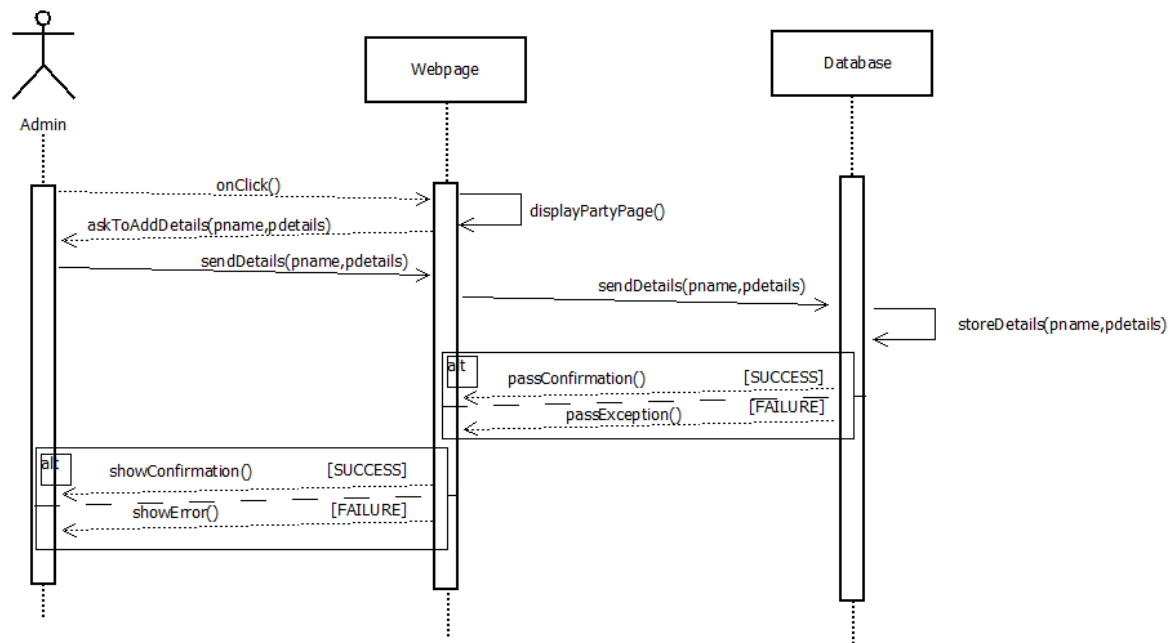


Figure 4.12: Screenshot of the sequence diagram for use case add party details

This is the sequence diagram for adding the party details by admin. Here the admin can add the party details using the website. Admin will send the details of party using the website. Then this details will be send to server. If success, pass the success message. If error, pass the error message.



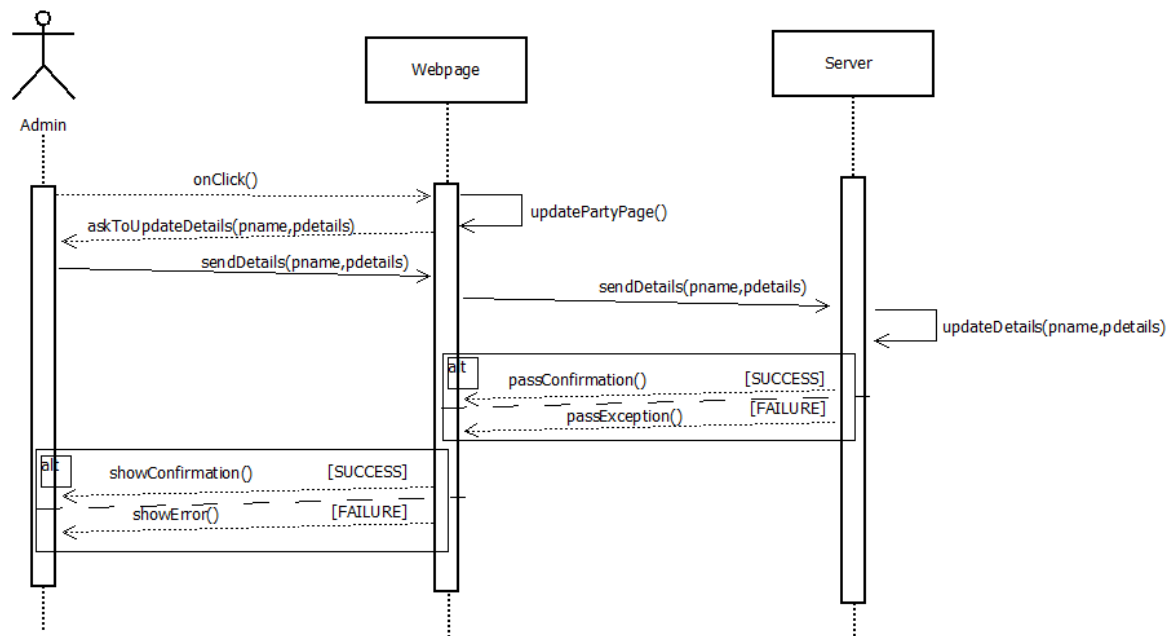


Figure 4.13: Screenshot of the sequence diagram for use case update party details

This is the sequence diagram for update party details for the admin. Here the admin can update the party details which is already there. Admin will send the details of party using the website. Then this detail will be send to server. If success, pass the success message. If error, pass the error message.

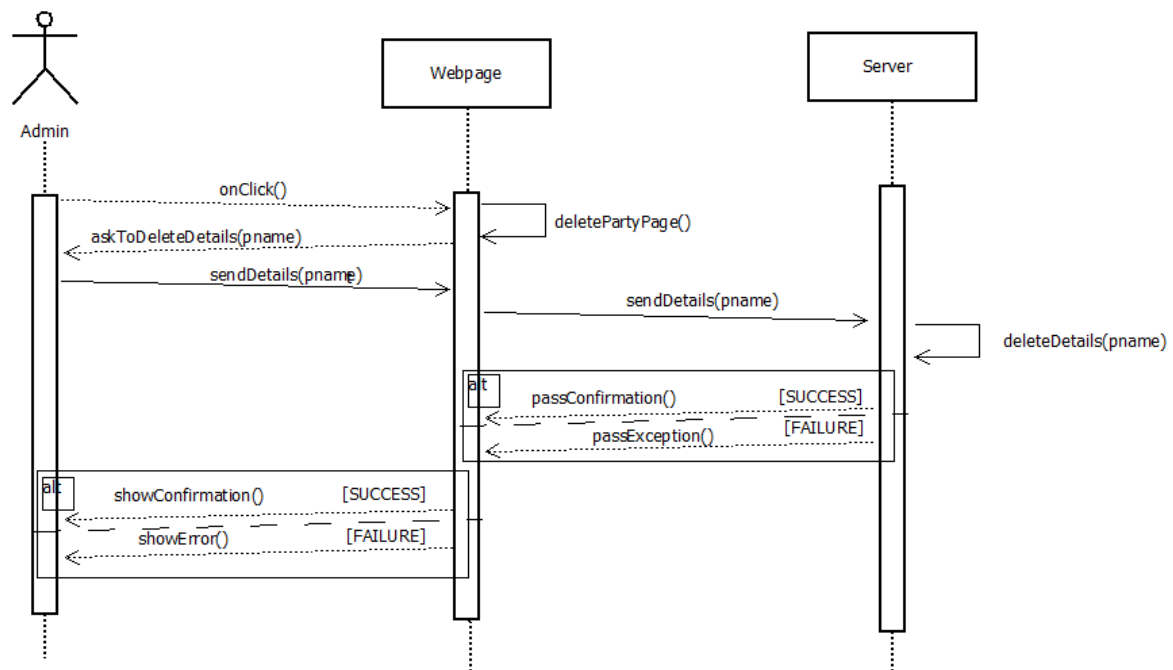


Figure 4.14: Screenshot of the sequence diagram for use case delete party details

This is the sequence diagram for deleting the party details for the admin. Here the admin can delete the party details which is already there. Admin will send the details of party using the website. Then this detail will be send to server. If success, pass the success message. If error, pass the error message.

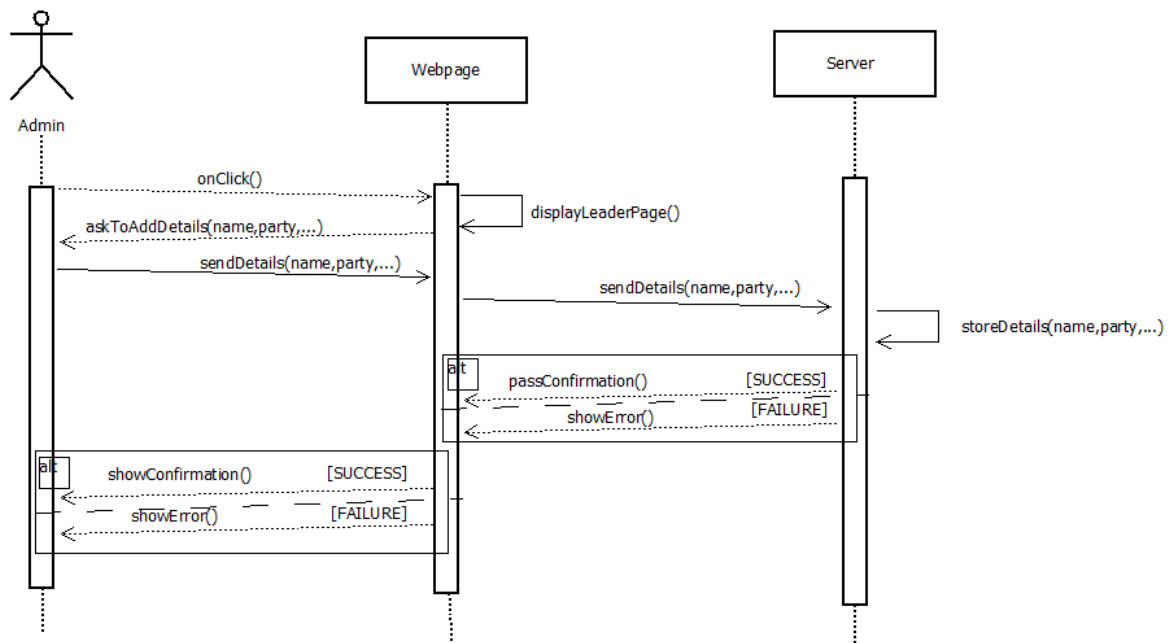


Figure 4.15: Screenshot of the sequence diagram for use case add leader details

This is the sequence diagram for add leader details for the admin. Here the admin can add the leader details. Admin will send the details of leader using the website. Then this detail will be send to server. If success, pass the success message. If error, pass the error message.

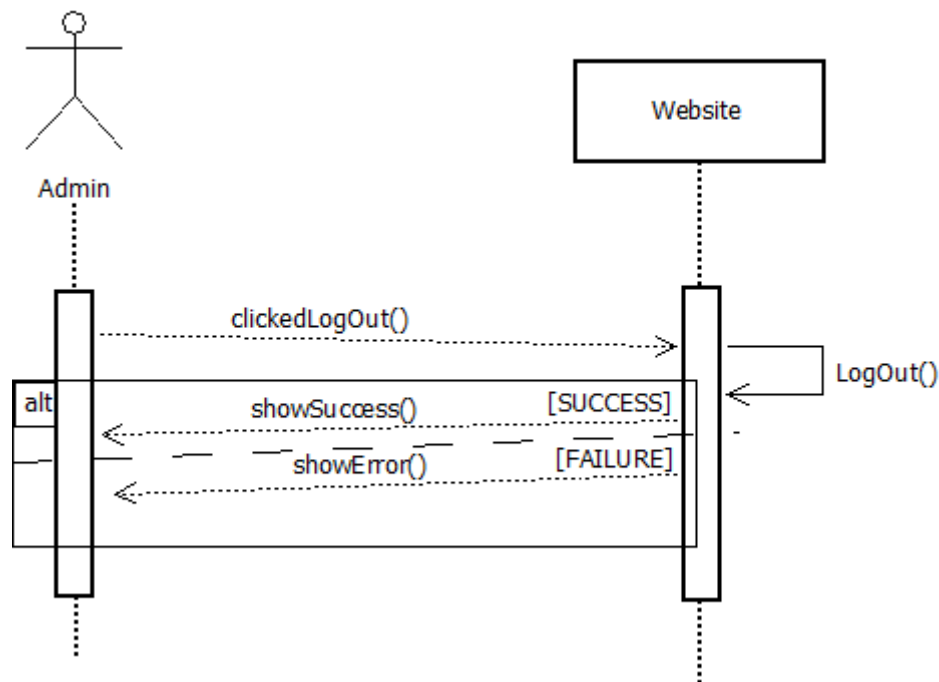


Figure 4.16: Screenshot of the sequence diagram for use case Log out

This is the sequence diagram for logout for the admin. Here the admin will logout from the website. If success, pass the success message. If error, pass the error message.

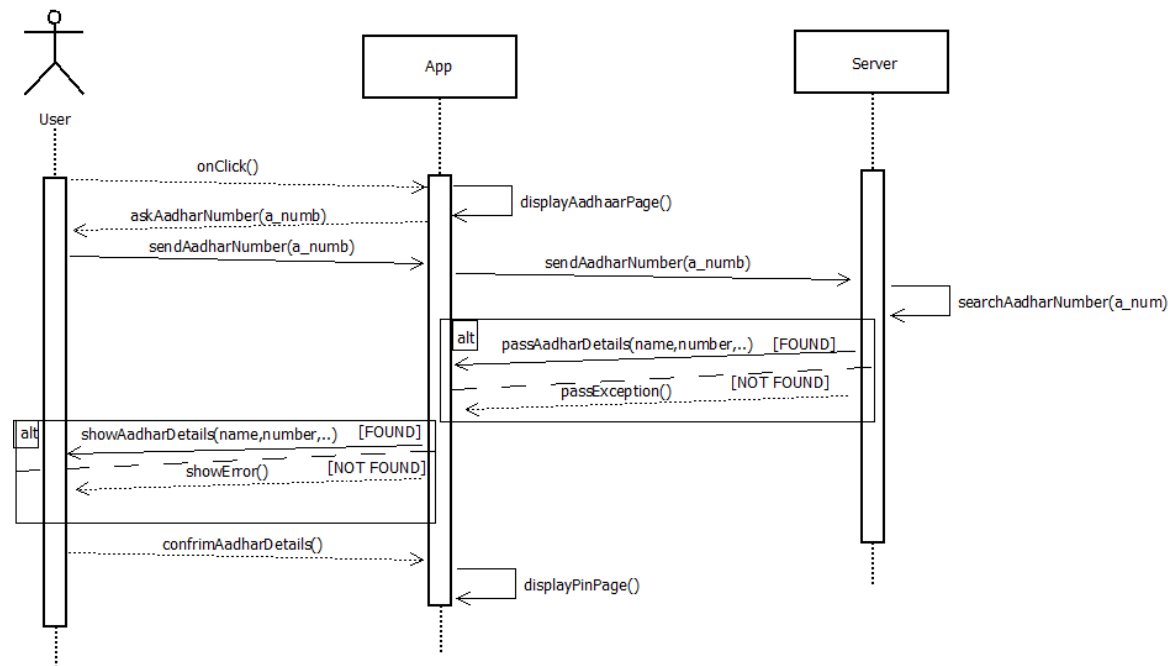


Figure 4.17: Screenshot of the sequence diagram for use case register Aadhar

In the above figure, the sequence diagram for registering the Aadhar has been demonstrated. Here the user is an external entity. The user enters the Aadhar details when the user opens the app for the first time. Then the user enters the Aadhar details and the details get checked from the database. If valid the user gets authenticated else an error message is shown.

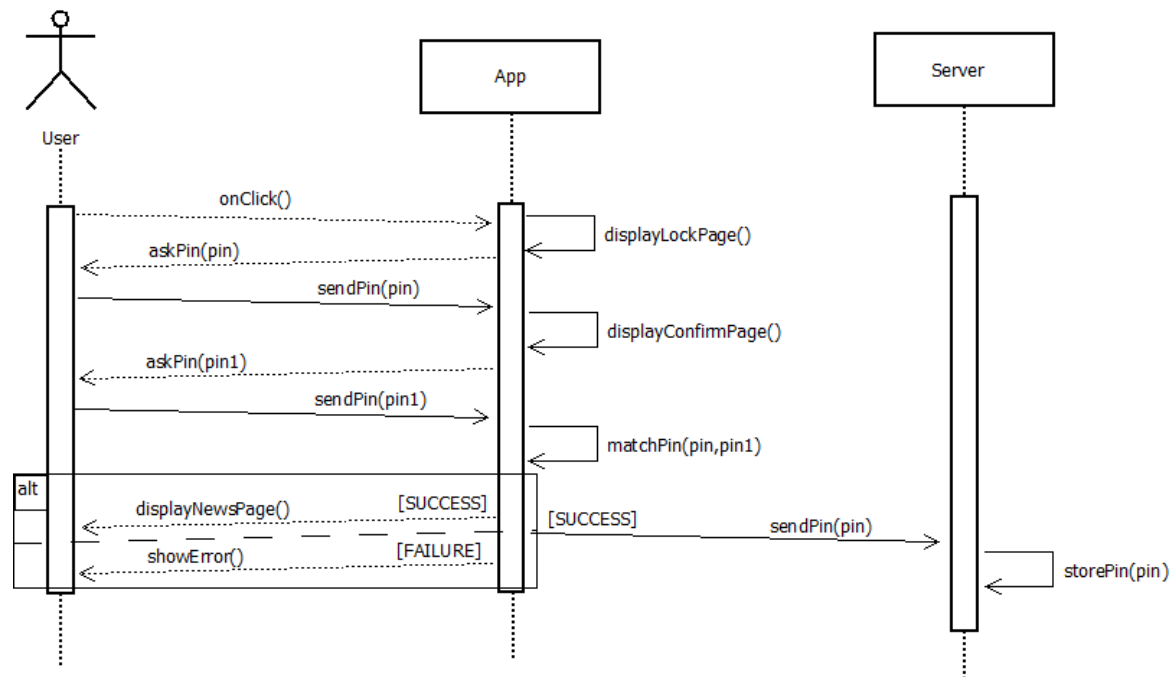


Figure 4.18: Screenshot of the sequence diagram for use case set 4-digit pin

In the above figure, the sequence diagram for setting the 4-digit PIN has been demonstrated. Here the user is an external entity. The user is asked to set a pin when he enter the app for the first time. When the user enters the login page, the app asks for a pin. Upon entering the pin the user is again asked to enter the pin. When the user enters the correct pin then the news suggestion page is opened else an error message is display.

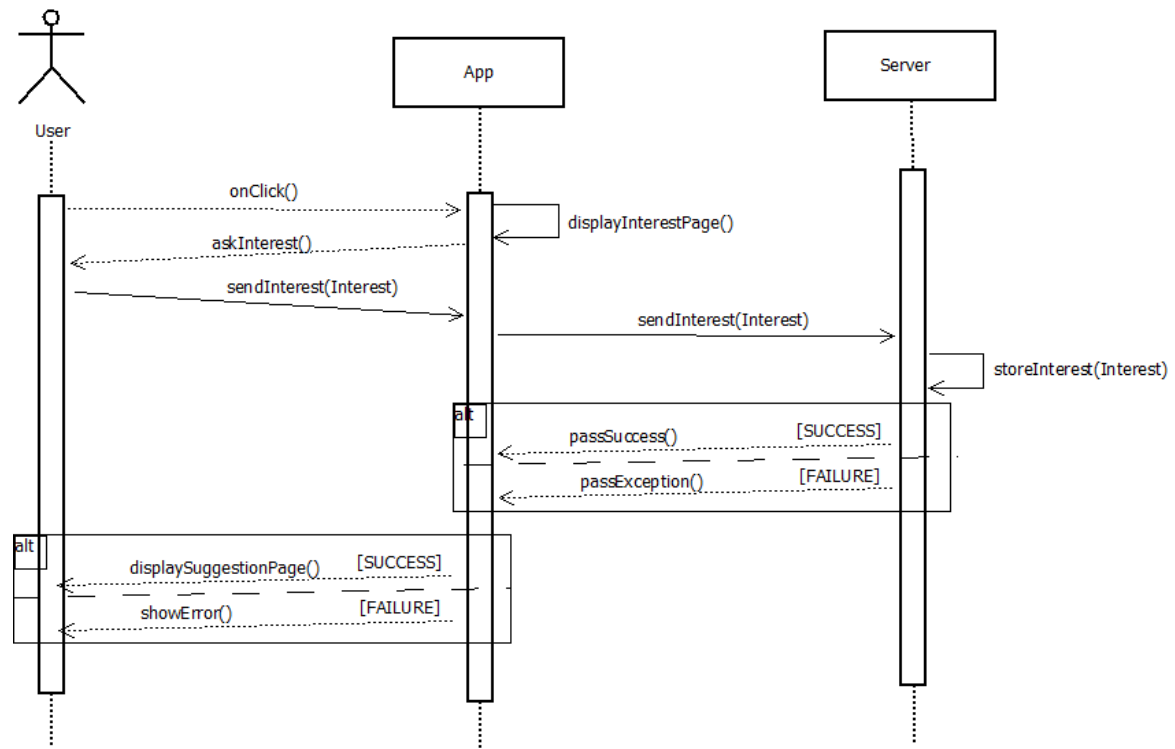


Figure 4.19: Screenshot of the sequence diagram for Suggestion page

The above figure shows the suggestion page. To see the suggestion the user needs to choose the interest in which field he is interested. Once the interest has been chosen then the user can view the suggestion.

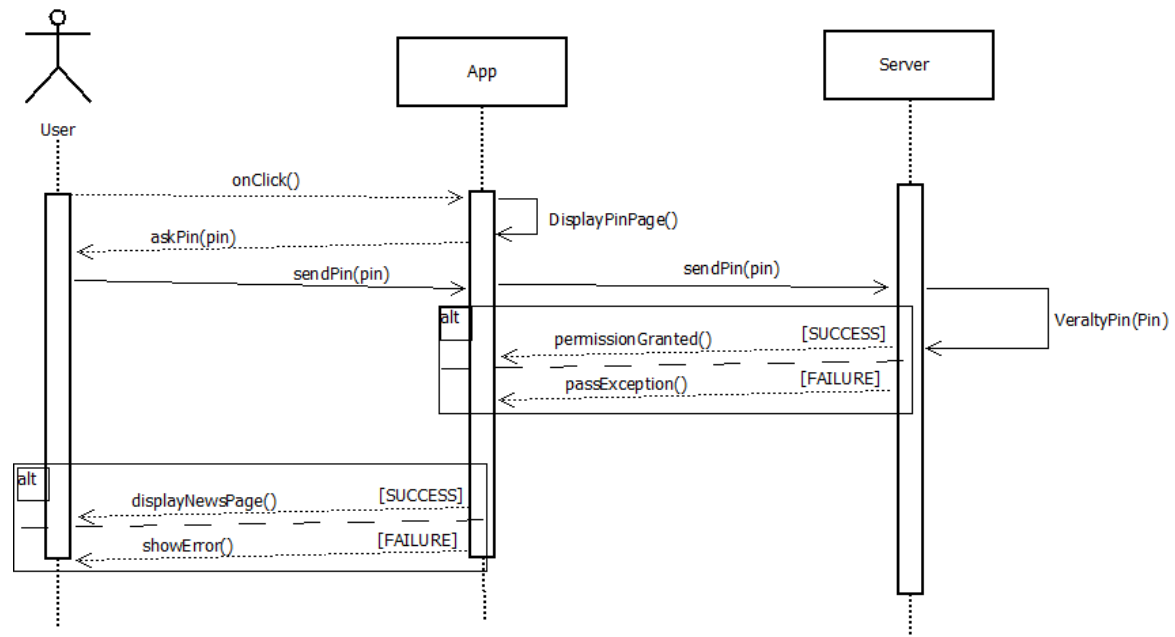


Figure 4.20: Screenshot of the sequence diagram for use case view news

In the above figure, the sequence diagram for the view news has been demonstrated. Here the user is an external entity. The user when presses the button to view the news. The details of his preference are checked in the database remotely. They according to the save preference the news are being fetched from the database also located remotely via the server. The news then get displayed on the screen of the application



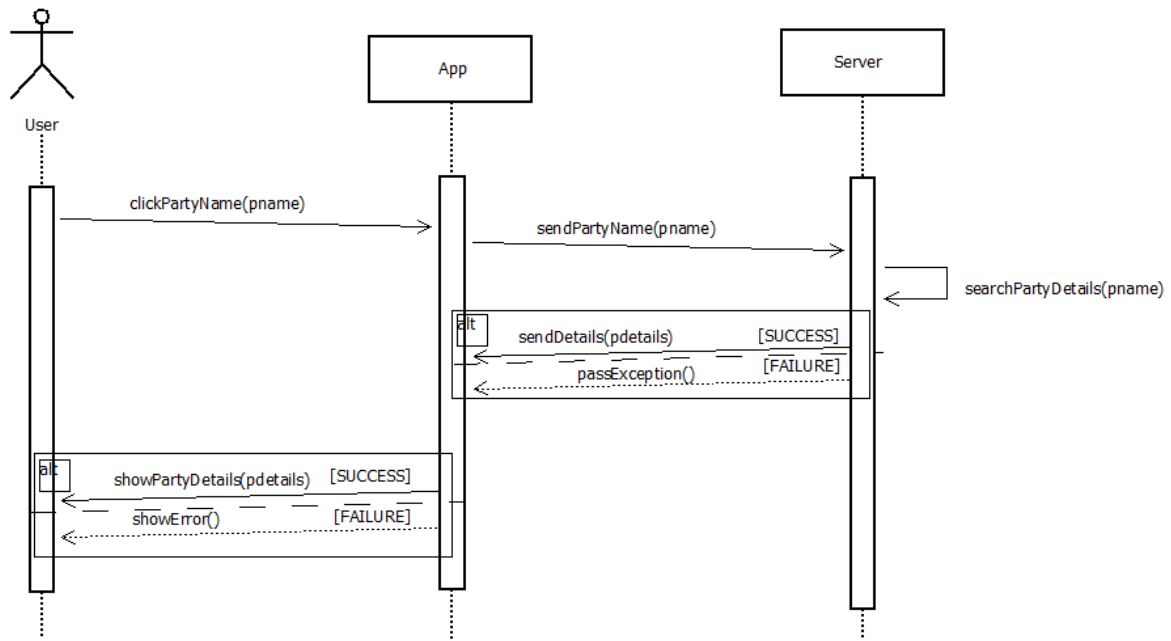


Figure 4.21: Screenshot of the sequence diagram for use case view party details

In the above figure, the sequence diagram for the follow leader has been demonstrated. Here the user is an external entity. The user when presses the button to view the party details. The details are being fetched from the database located remotely via the server. The details get displayed on the screen of the application

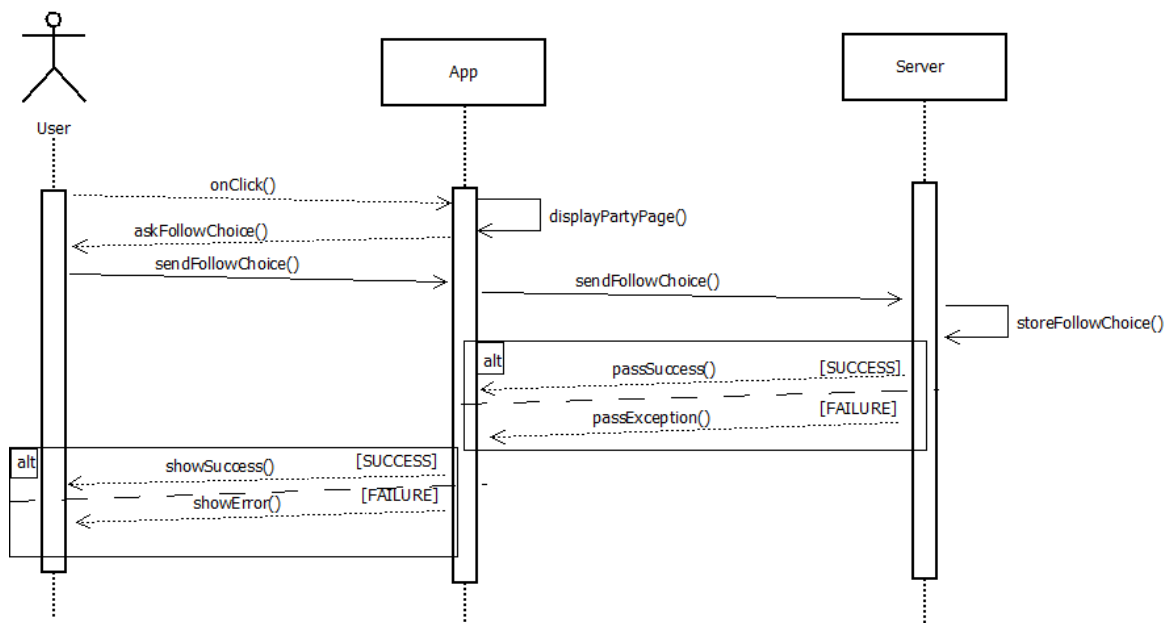


Figure 4.22: Screenshot of the sequence diagram for use case add follow leaders

In the above figure, the sequence diagram for the follow leader has been demonstrated. Here the user clicks on the follow button to follow a leader. This information gets saved to the database so that the user is not asked again. The user can follow more than one leader.

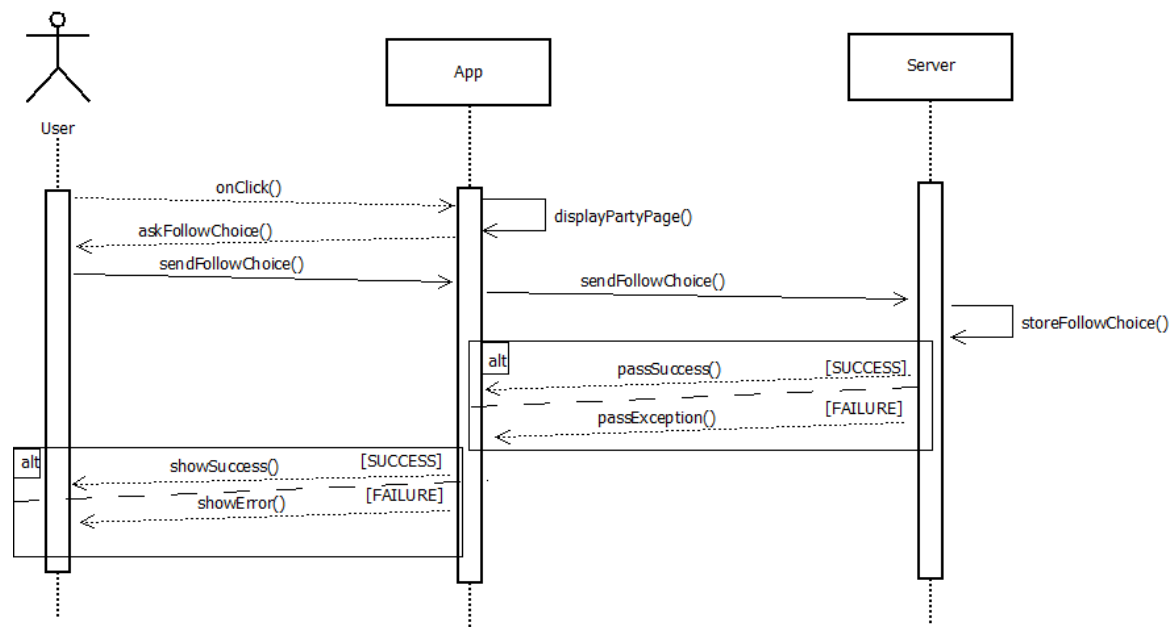


Figure 4.23: Screenshot of the sequence diagram for use case add follow parties

In the above figure, the sequence diagram for the follow party has been demonstrated. Here the user clicks on the follow button to follow a party. This information gets saved to the database so that the user is not asked again. The user can follow more than one party.

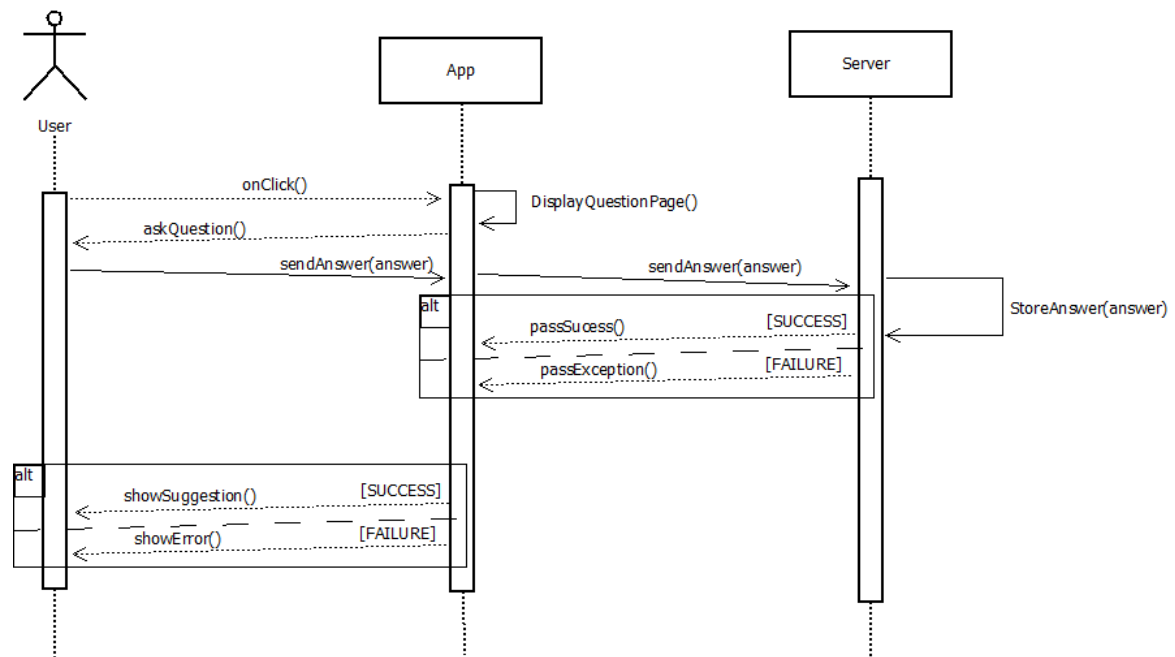


Figure 4.24: Screenshot of the sequence diagram for use case view suggestion

In the above figure, the sequence diagram for the View Suggestion of the candidate and the party has been demonstrated. Here the user is an external entity. When the user opens the application. He/She is displayed a page which asks the user to enter their suggestion for the candidate or the party news they want to see. Their suggestion also gets stored in the database so that every time the user opens the app then the suggested news get displayed. Any error that happened will be displayed to the user in the interface.

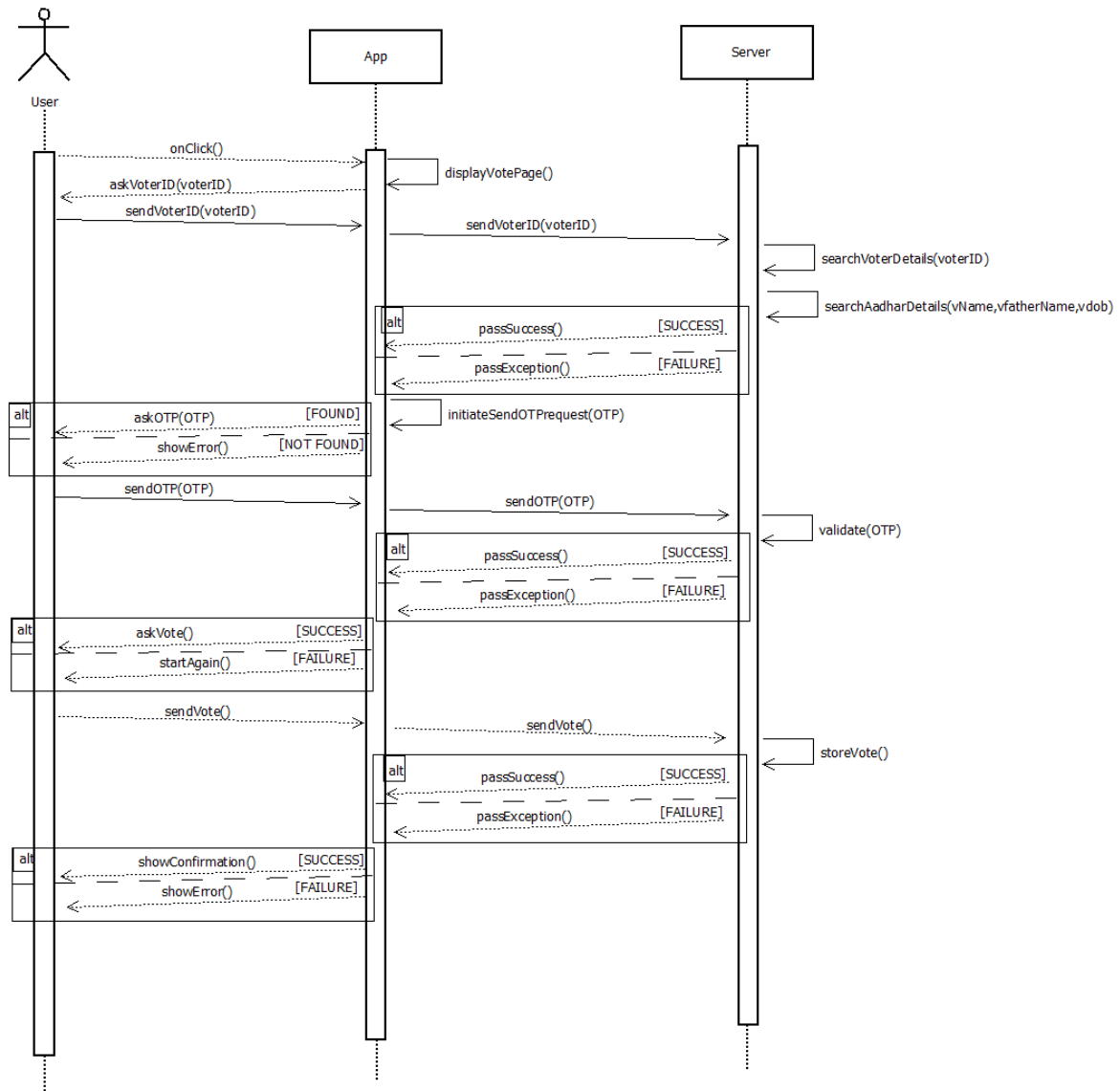


Figure 4.25: Screenshot of the sequence diagram for use case cast vote

The above diagram shows the sequence diagram for casting the vote. To do the voting the user needs to enter voter id. Then the voter details such as name, date of birth, father name and mother name is matched with the Aadhar database. After the verification, the OTP will be send to registered mobile number and Gmail. Once the OTP is verified then his vote is added successful.

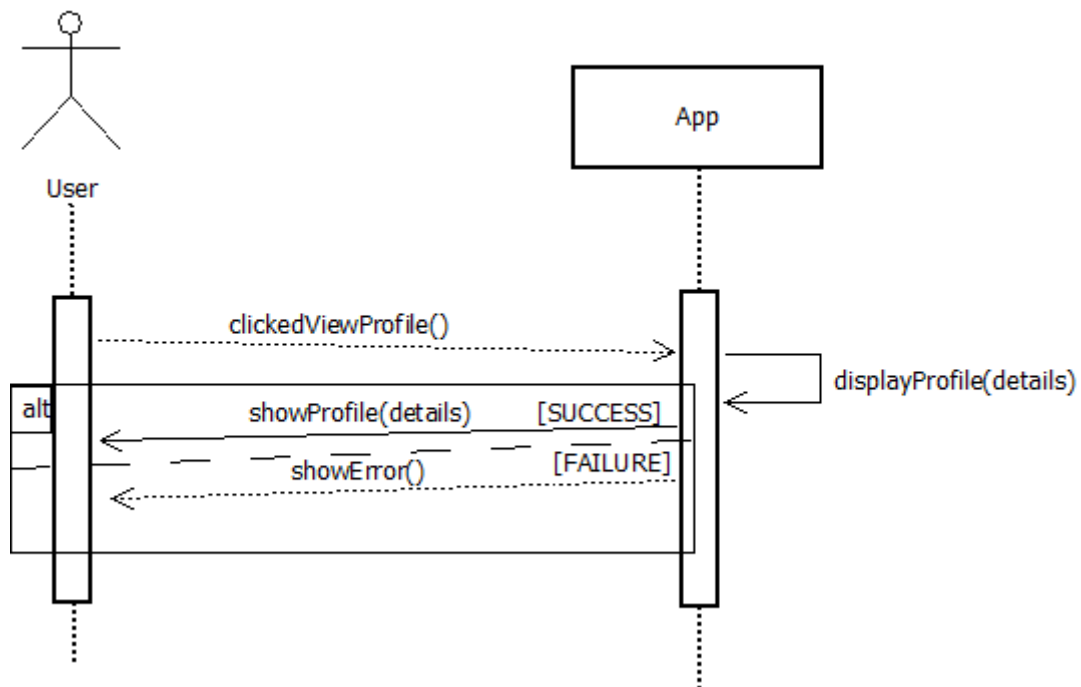


Figure 4.26: Screenshot of the sequence diagram for use case view profile

In the above figure, the sequence diagram for the View Profile of the user has been demonstrated. Here the user is an external entity. When he/she interacts with the app by clicking the user profile menus, the user is greeted with a menu that shows the details of the user who has signed into the application. The application displays the information that is stored locally on the phone and in case of any arbitrary error, the app will display an error.

## 4.2 Testing:

Testing on emulator:

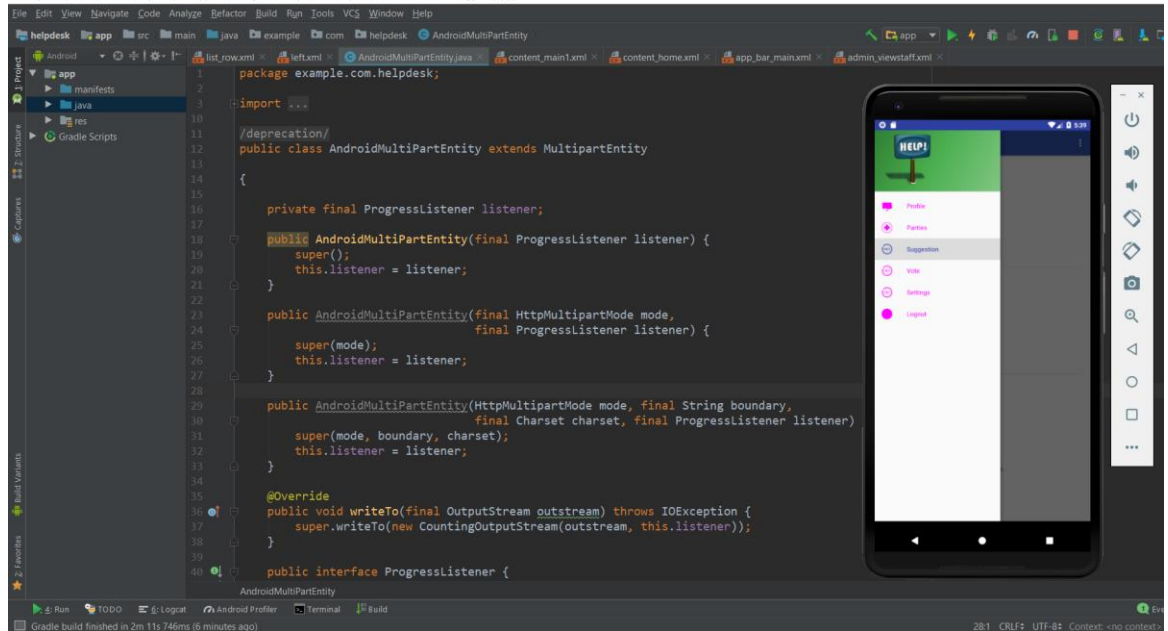


Figure 4.28 shows the testing on emulator.

Figure 4.28 depicts the screenshot of testing of android application on emulator (virtual device). The virtual device on which application is being tested is running on Android Oreo (8.0). The base Android version for this project was taken as Android Kitkat (4.4).

### Testing on physical device:

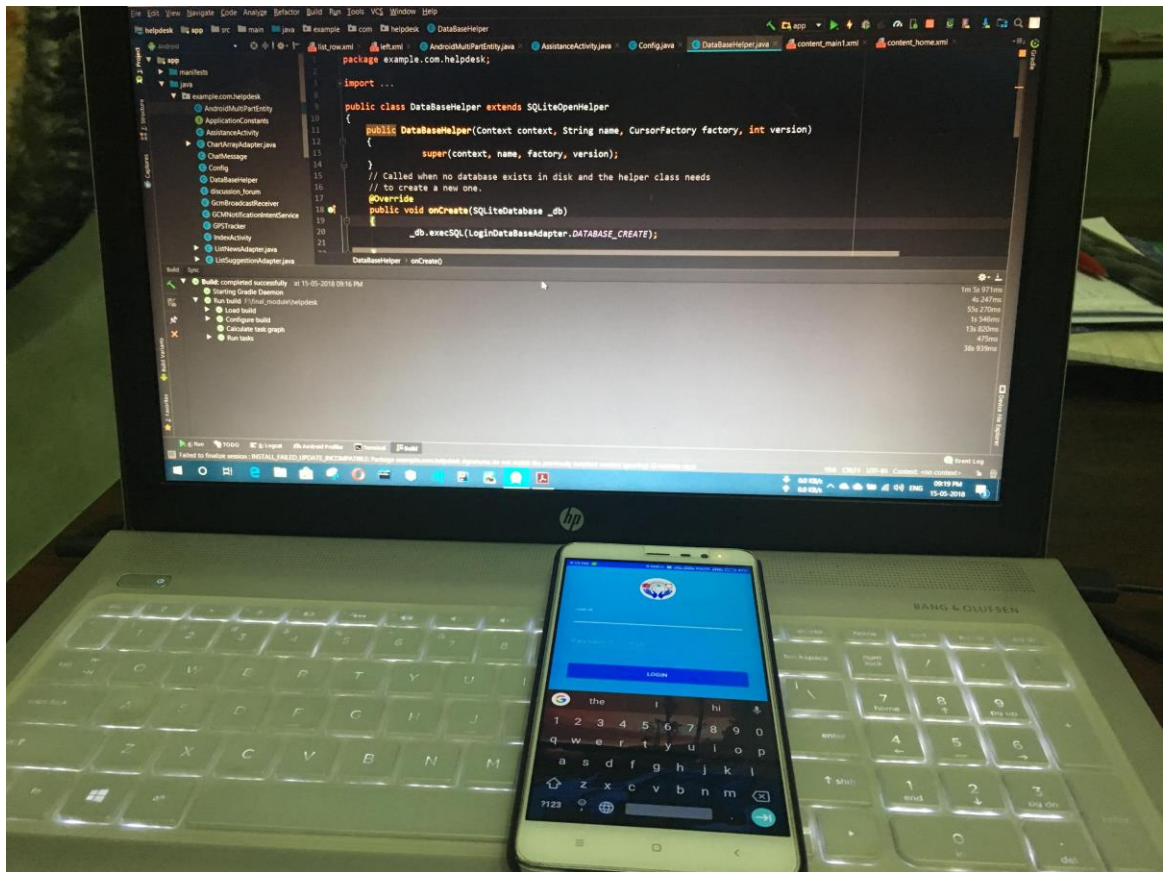


Figure 4.29 shows the testing on physical device.

Figure 4.29 shows the screenshot of testing of application on a physical device. The device was first plugged in to the computer. USB debugging on the device was turned on. The android application was then installed on the device with the help of android studio.

### 4.3 Analysis:

In order to develop the application completely, a sequence of steps will be followed. The first step is to analyze what is the current technique and methods available currently for election analysis and voting. This is called literature survey where all possible type of development related to the project is studied. The next step is to gather the requirements. This step is very crucial as the gathered requirements will lead to development of



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diagrams and those diagrams will be converted into code. After analyzing the requirements as feasible, the next step is to design the diagrams. Use case, low level sequence and class diagrams will be designed one after the other. For development of diagrams, dia software will be used. The developed diagrams will then be converted into code. This is implementation part. For coding, android studio will be used where knowledge of Java and XML will be applied. For the admin, website development has to be done. For this, the knowledge of php and html will be used. Next step is to test the developed application and website. Developed application will be tested on both virtual device (android emulator) and physical device. Website testing will be done through browser and checking the databases. The last step is to write the project report.

#### **4.4 Conclusion:**

In this chapter, the problem-solving approach has been demonstrated. The preamble to this chapter has been stated. This chapter contains the design part of the project. The use case diagram and the sequence diagram for the whole application has been provided. The way of testing is done in physical and android device. The analysis is discussed. In the next chapter the costing of the project has been demonstrated.



## 5. Results

### 5.1 Website Result:



Figure 5.1 Screenshot of the home page

Home page is the page which is being displayed to the user when the website is being visited after entering the link. Home page consists of two different buttons – Home button and Login button.



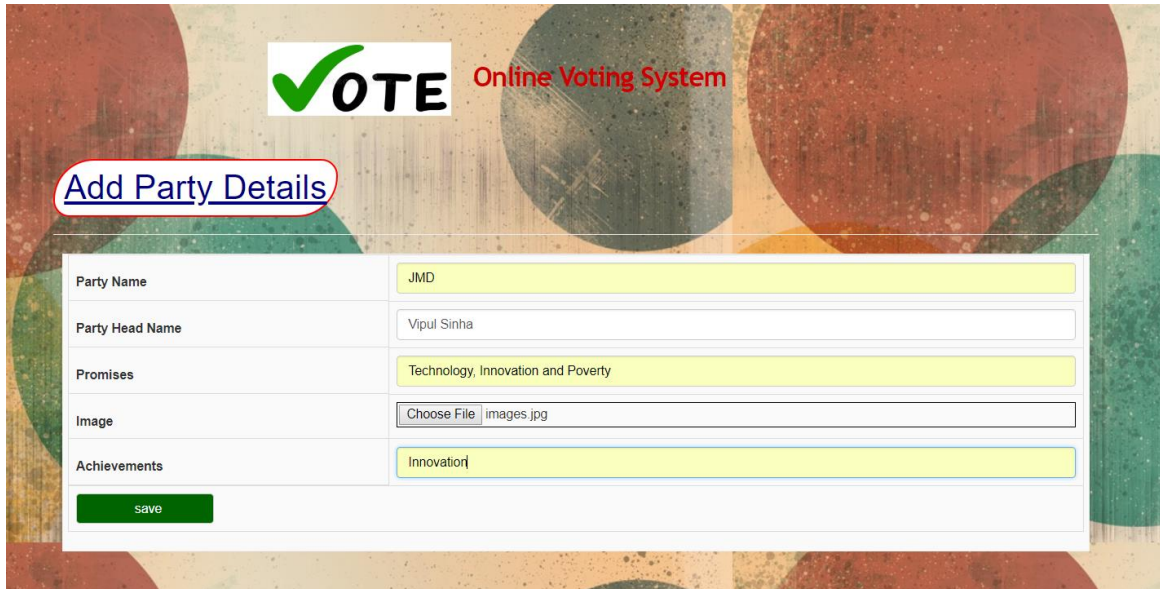
Figure 5.2: Screenshot of the login page

Login page is the page where the admin can login. It contains two different labels and its corresponding text fields. The two different labels are login id and password. It also consists of button which is login. As soon as the login button is entered, the admin moves on to the party details page.



Figure 5.3 Screenshot of the view party details page

Party details is the page from where party details can be viewed. Different parties symbol along with their political details are being displayed. It consists of 9 different buttons which are add parties, view parties, add leaders, view leaders, add news, Aadhar data, voters data, control election and logout.



Party Name	JMD
Party Head Name	Vipul Sinha
Promises	Technology, Innovation and Poverty
Image	Choose File   images.jpg
Achievements	Innovation

save

Figure 5.4 Screenshot of the add party details page

Add party details is the page in which a new party can be added along with all of its necessary details. It consists of 5 different labels along with its text-fields. 1<sup>st</sup> label is for the party name where the name of the party has to be written in its text field. 2<sup>nd</sup> label is for the party head name where name of the head of the party has to be written in its text field. 3<sup>rd</sup> label is for the promises where all the promises that has been done by the party has to be written in its text field. 4<sup>th</sup> label is for the image where image logo of the party has to be chosen from the file and inserted. 5<sup>th</sup> label is for the achievements where all the achievements done by the party has to be written in its text field. At last, there is save button. As soon as the button is clicked, details of the party is being saved in the database. Then to check the details of the added party, click on the view parties button.

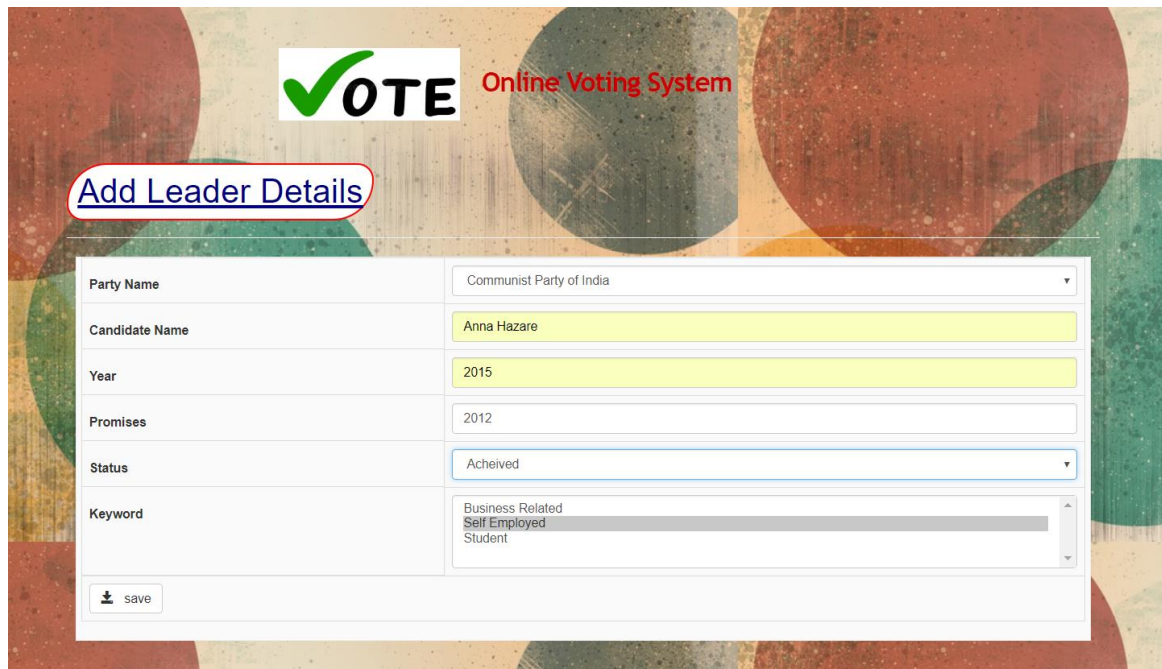


Figure 5.5 Screenshot of the add leaders page

In this page, details of the new candidate have been added. It consists of 6 different labels along with its text field. 1<sup>st</sup> label is for the party name where the name of the party has to be selected from the drop-down menu. 2<sup>nd</sup> label is for the candidate name where name of the candidate of the party has to be written in its text field. 3<sup>rd</sup> label is for the year of the promise which has to be written in its text field. 4<sup>th</sup> label is for the promises where all the promises that has been done by the candidate has to be written in its text field. 5<sup>th</sup> label is for the status where status of the candidate is being selected from the drop-down menu which contains achieved and pending. 6<sup>th</sup> label is for the keyword which is being written to make the search of the easier and faster. At last, there is save button. As soon as the button is clicked, details of the candidate is being saved in the database. Then to check the details of the added customer, click on the view leaders button.



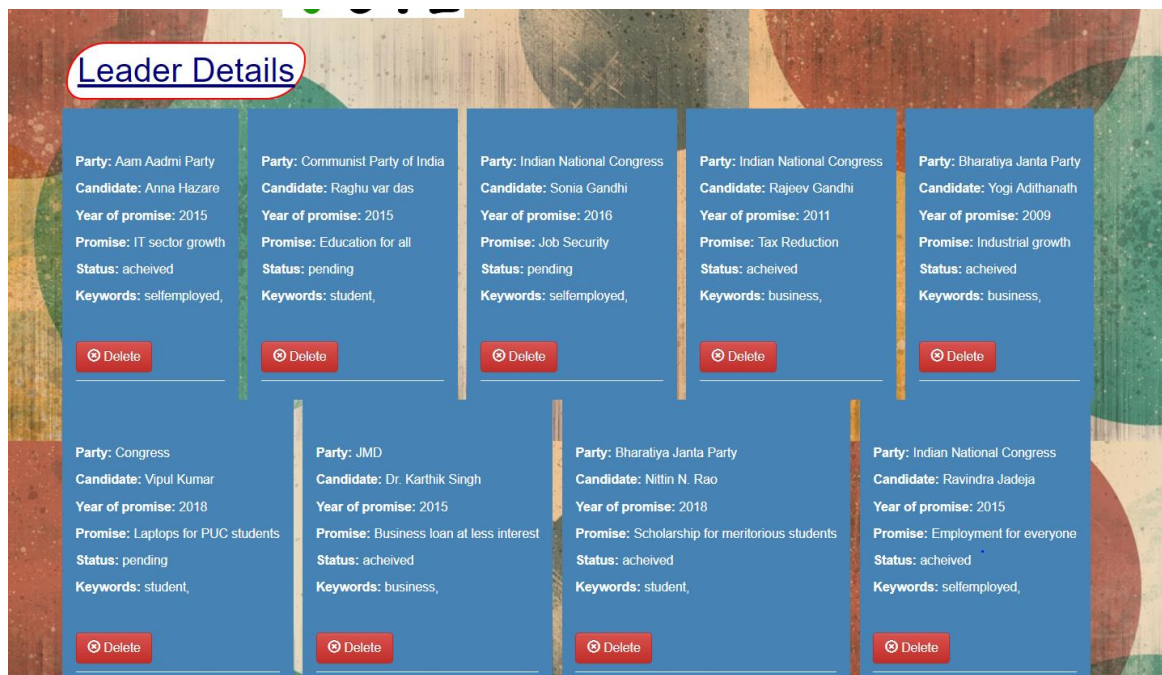


Figure 5.6 Screenshot of the view leaders page

This page contains the name of the all the leaders. It displays the name of the leaders along with their party name and details.

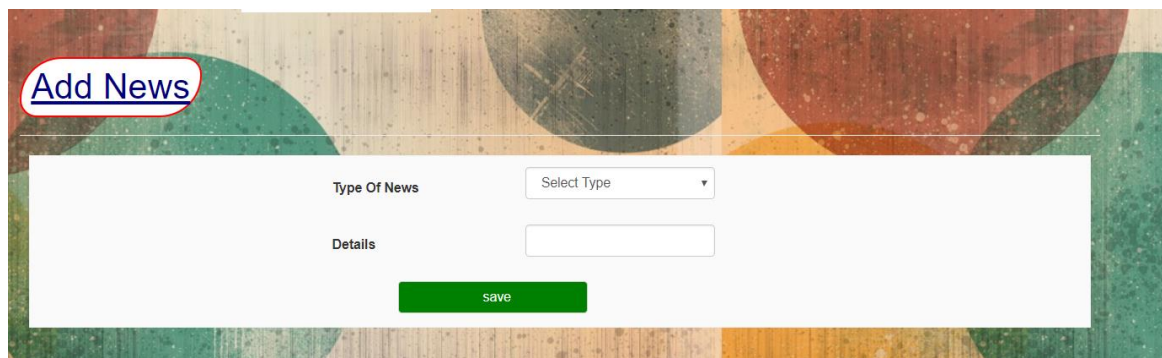


Figure 5.7 Screenshot of the add news page.

This page is basically for adding the news. This page consists of 2 different labels. 1<sup>st</sup> label is for types of news. It contains the drop-down menu from which the type of news has to be selected. It contains three different options which are announcement, other details

and candidate related. 2<sup>nd</sup> label is for the details of the news. In its text field, the details about the news has to be written.

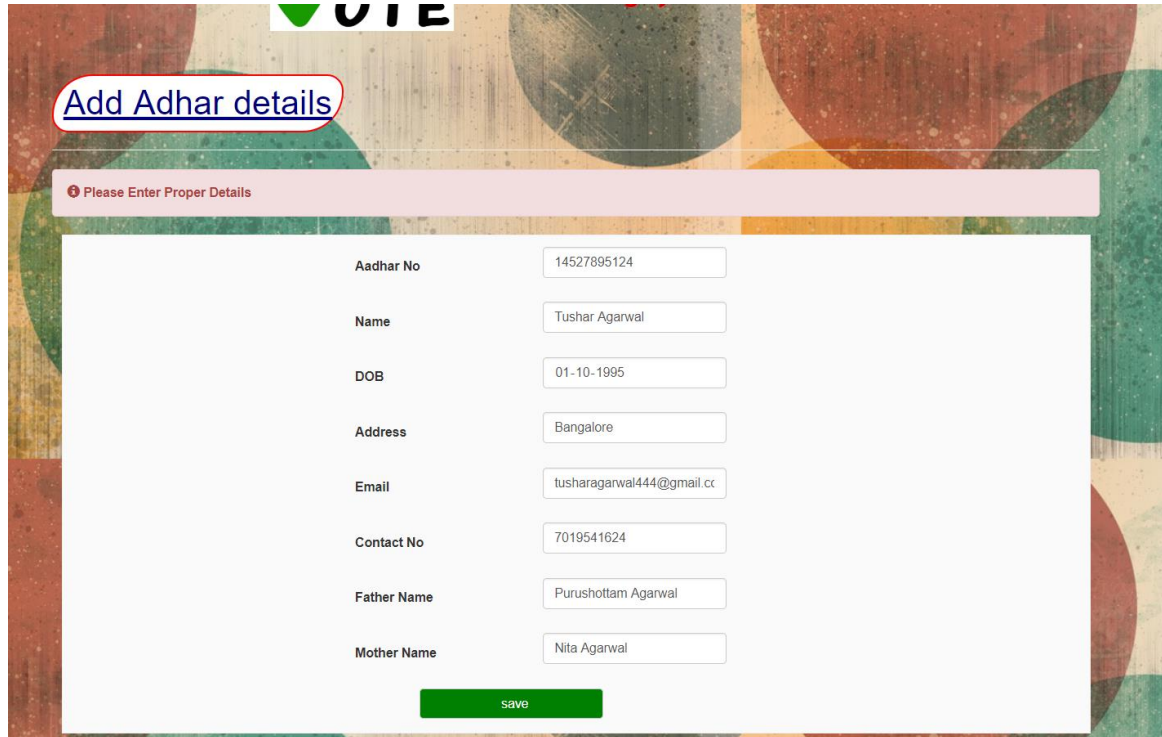
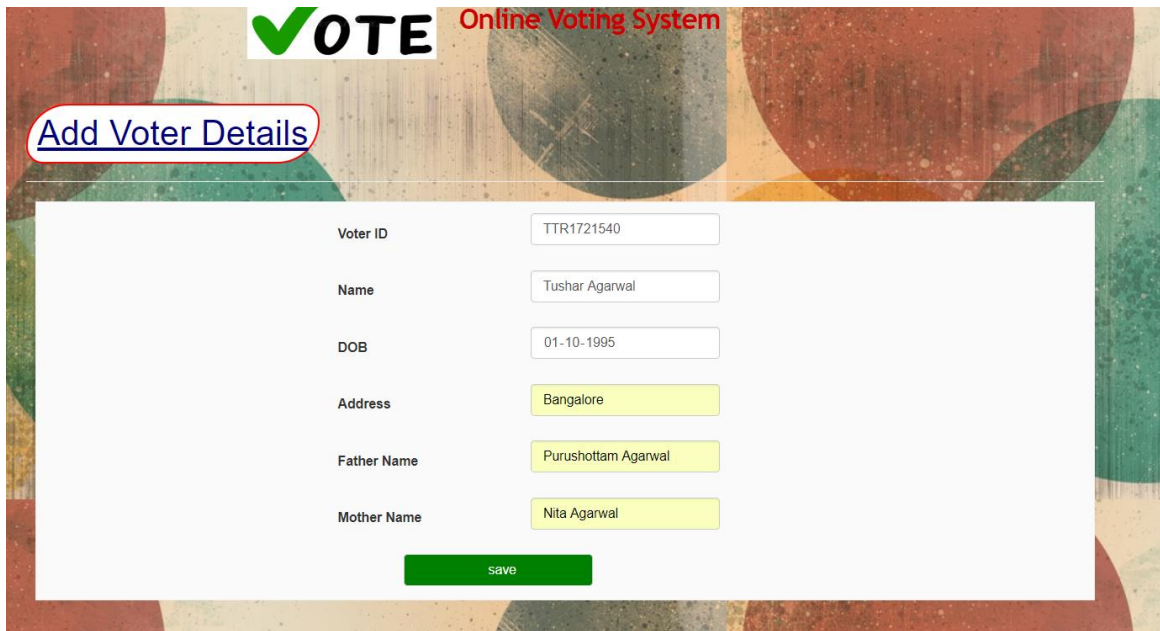


Figure 5.8 Screenshot of the Aadhar data page

This page is mainly to add the new Aadhar details of a person. It consists of 8 different labels. 1<sup>st</sup> label is for Aadhar number where Aadhar no. has to be added in the text field. 2<sup>nd</sup> label is for the name where name has to be entered in the text field. 3<sup>rd</sup> label is DOB which has to be written in the text field. 4<sup>th</sup> label is for address where address has to be written. 5<sup>th</sup> label is for email where email has to be written in the text field. 6<sup>th</sup> label is for contact no. where mobile number has to be entered in the text field. 7<sup>th</sup> label is for the father name and 8<sup>th</sup> label is for mother name which has to be entered in the respective text field. Then there is a save button. As soon as the button is clicked, the details of the Aadhar has been saved in the database.



Voter ID	TTR1721540
Name	Tushar Agarwal
DOB	01-10-1995
Address	Bangalore
Father Name	Purushottam Agarwal
Mother Name	Nita Agarwal

save

Figure 5.9 Screenshot of the adding voter data page

This page is for adding the details of the voter who are eligible for casting vote. The page consists of 6 different labels. 1<sup>st</sup> label is voter id where unique id of the voter has to be added. 2<sup>nd</sup> label is the name of the voter which has to be entered in the necessary text field. 3<sup>rd</sup> label is DOB where date of birth of the voter has to be added. 4<sup>th</sup> label is for the address where voter's address has to be entered in the text field. 5<sup>th</sup> label is for the father name and 6<sup>th</sup> label is for mother name which has to be entered in the respective text field. Then there is a save button. As soon as the button is clicked, the details of the voters has been saved in the database.



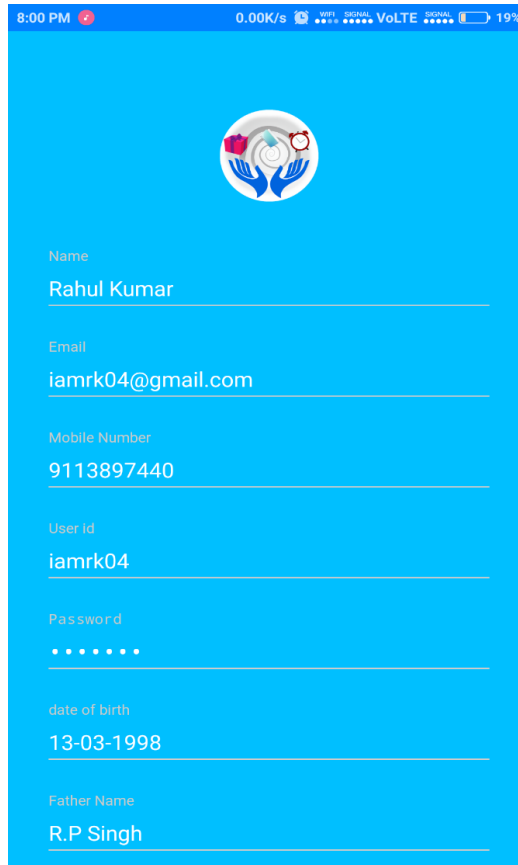


ondate	start	end	status
2018-05-13	07:00	22:00	started


Figure 5.10 Screenshot of the control election page and database also

This page is basically for adding the date of election along with the timings. There are 3 different labels. 1<sup>st</sup> label is for date of election where date of the election has to be entered in the text field. 2<sup>nd</sup> label is for the start time where the time at which election will start has to be written. 3<sup>rd</sup> label is for end time where the time at which election will end has to be written in the text field. There is a save button at last. As the button is clicked, the details are saved into the database.

## 5.2 Android Result:



8:00 PM 0.00K/s 5G VoLTE 19%



Name  
Rahul Kumar

Email  
iamrk04@gmail.com

Mobile Number  
9113897440

User id  
iamrk04

Password  
.....

date of birth  
13-03-1998

Father Name  
R.P Singh

Figure 5.11: Screenshot of registration page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the registration for the user is demonstrated. This page opens up when the user enters the app for the first time. The app asks the user to register for the first time. Unless and until the user enters all the mandatory fields the user is not redirected to next page.

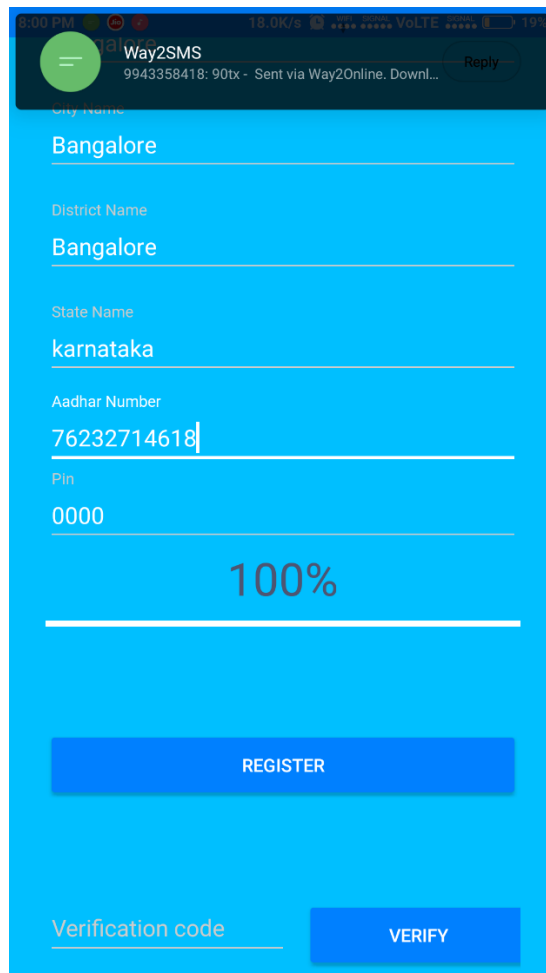


Figure 5.12: Screenshot of verification page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the registration page is continued. When the user provides all the details and enters the register button then the one-time password(OTP) comes into the cell and that has to be entered into the app and verified. Once it is verified then the user is welcomed with the main page else the login is barred.

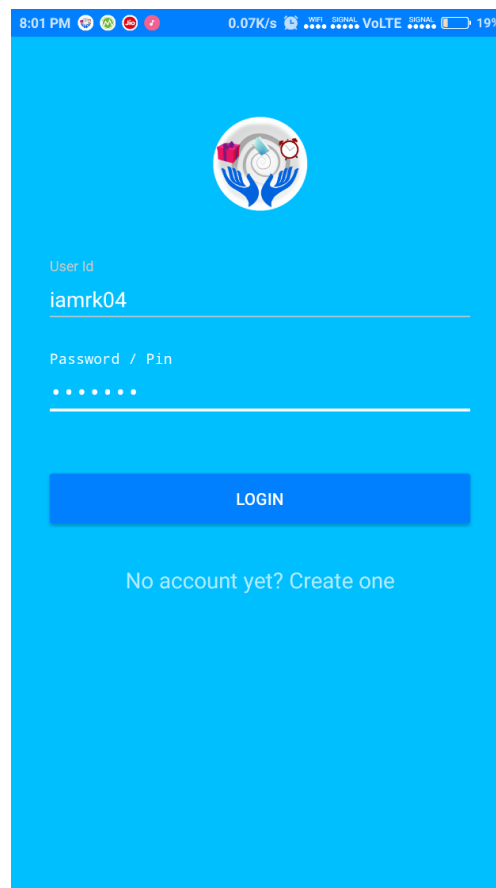


Figure 5.13: Screenshot of Login page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the login page is demonstrated. In this page the registered name and the password is entered. This information is send to the server once the user presses the login option. The data is checked with the data stored in the database. If the data entered matches with the data from the database, then the user is logged in else the login process fails.

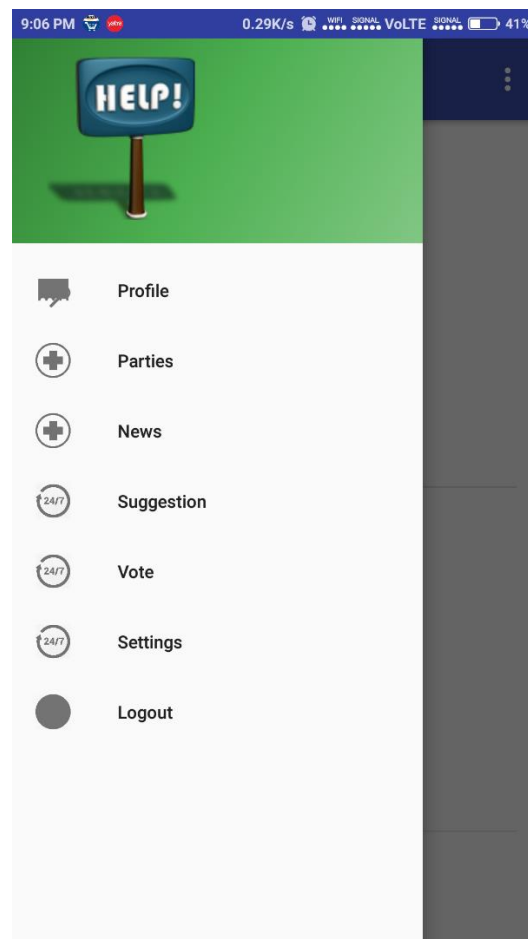


Figure 5.14: Screenshot of Menu page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the menus in the main view is demonstrated. The menus contain six options. The profile option shows the profile of the user that is logged in. The parties option shows the details about all the parties that are available. The suggestion option shows about the suggested parties that deal with particular topics. The vote option opens the voting section of the app. Here the user can vote. In the setting options the user has one option to update the email address. The logout option will redirect the app to exit and it will remove all the stored details of the current logged in user.

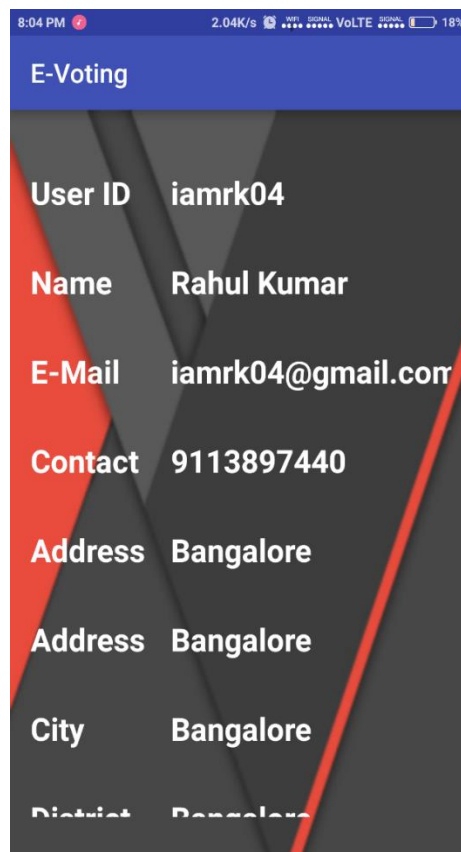


Figure 5.15: Screenshot of profile page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the user profile is demonstrated. In this profile the details of the current user are shown. This information is the information that was entered into the app when the app was launched at first.

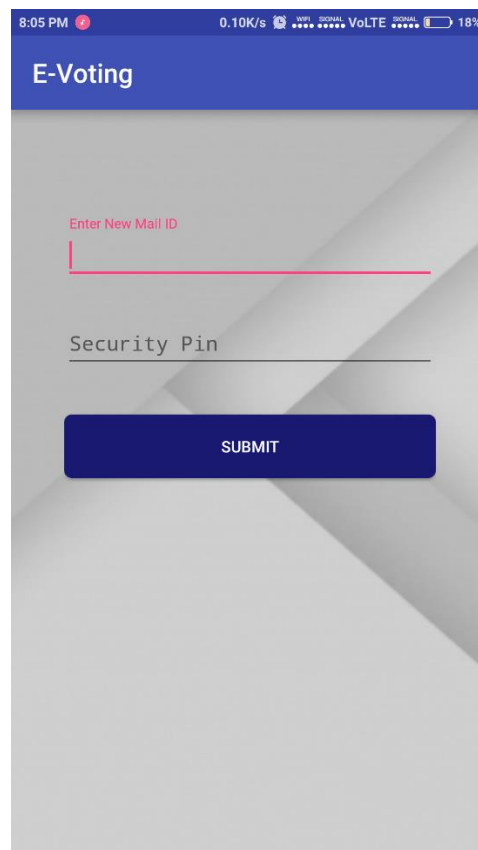


Figure 5.16: Screenshot of updating gmail page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the change email window is demonstrated. In this window the option to change the email address has been provided. The user can enter a new email id with the security pin. Upon pressing the submit button the pin is checked. If the pin is correct then the email address is updated.

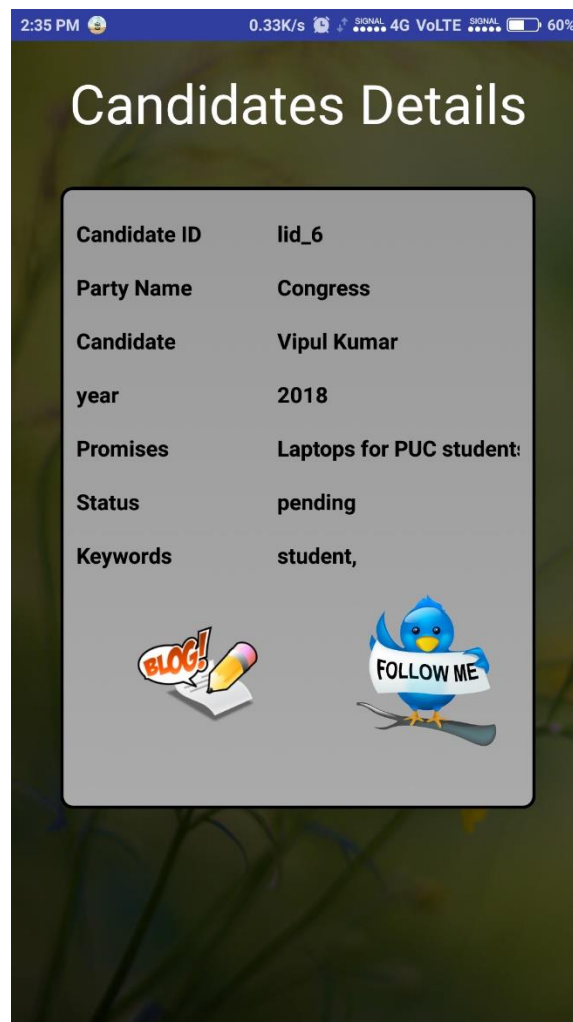


Figure 5.17: Screenshot of party details page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the party details page is demonstrated. This page contains all the party information.



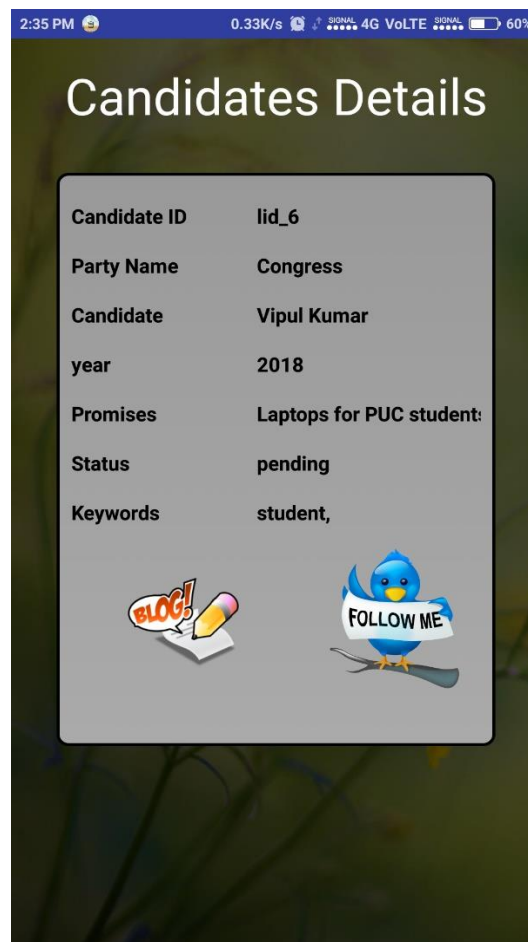


Figure 5.18: Screenshot of Candidate page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the party details page is demonstrated. This page contains all the party information. It includes the Party ID, Party Name, Leader, Logo and Achievements of every Party.

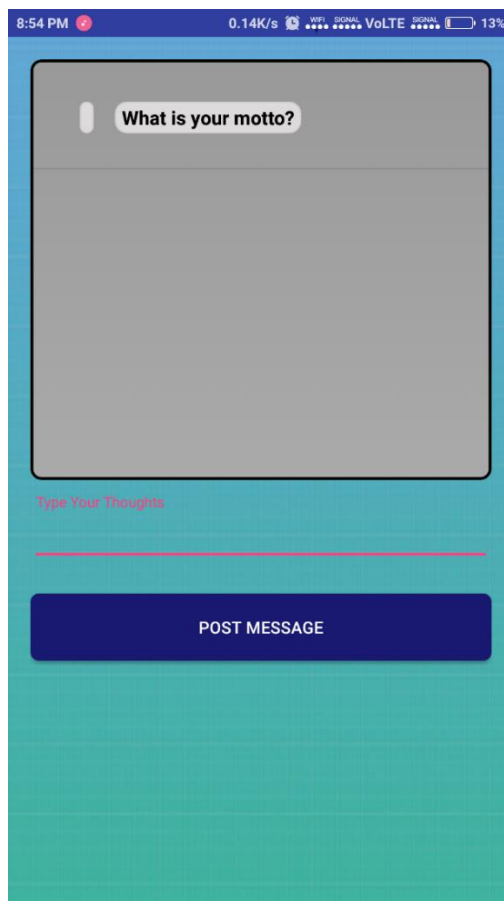


Figure 5.19: Screenshot of blog page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the user feedback window is demonstrated. In this window the user is asked for the motto and the thoughts he might have regarding the working of the Parties.

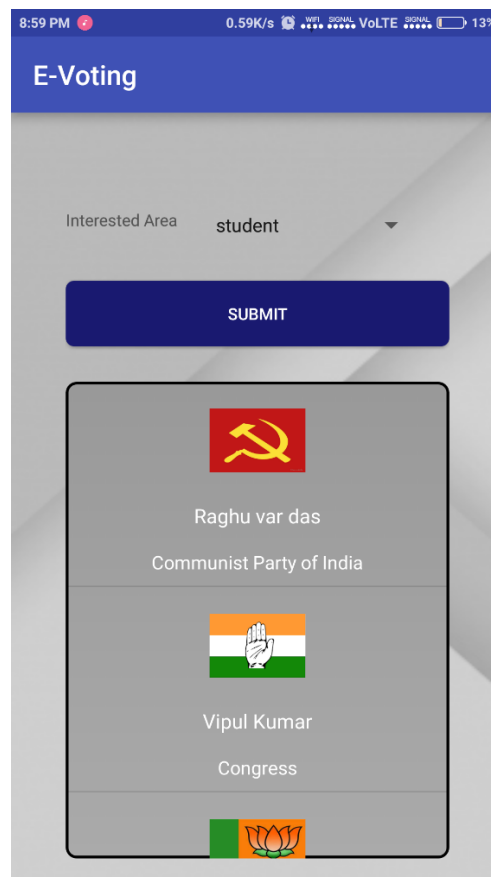


Figure 5.20: Screenshot of suggestion page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the suggestion window is demonstrated. In this window the category for the interested topic has to be provided. Once the user selects this and presses the submit button then the user is suggested with related parties dealing with that topic. In this case the parties that are dealing with student are being listed with their logo and the president of the party.

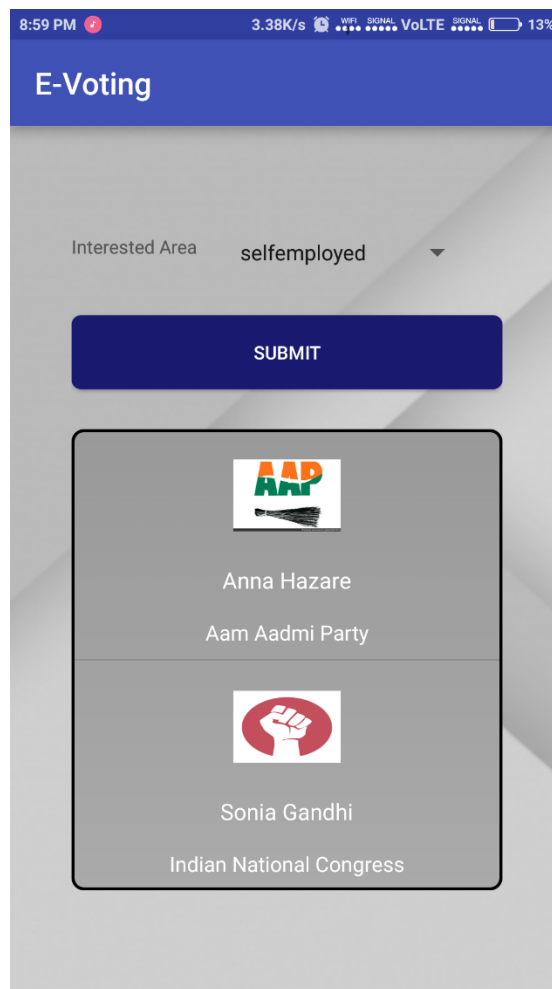


Figure 5.21: Screenshot of suggestion page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the suggestion window is demonstrated. In this window the category for the interested topic has to be provided. Once the user selects this and presses the submit button then the user is suggested with related parties dealing with that topic. In this case the parties that are dealing with self-employed are being listed with their logo and the president of the party.



Figure 5.22: Screenshot of voting page

In the above output snippet, the screenshot of the E-Voting app has been provided. This window is a part of the voting process. Here the candidate details window is demonstrated. This window contains the details of the party, their logo and the option to vote for them. Once the user selects the party he/she want to vote then the user clicks on the option provided and the user gets directed to the next page of validating his/her identity.

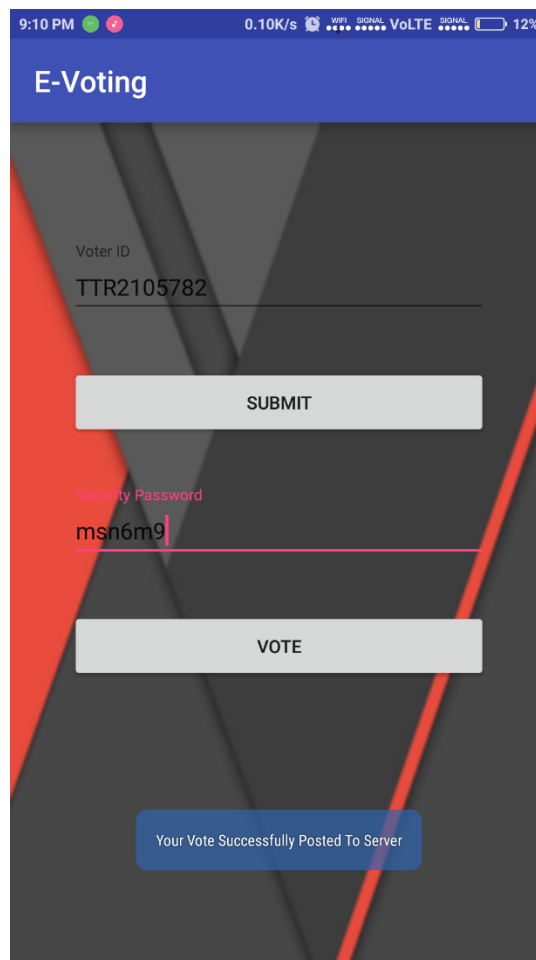


Figure 5.23: Screenshot of voting verification page

In the above output snippet, the screenshot of the E-Voting app has been provided. Here the voting process is demonstrated. The user need to enter the Voter ID and the corresponding security password that will be sent partially to his registered phone number and email account. Then the Voter ID and the security password is checked. If the combination is found to be correct then the Vote is granted else, it is not granted. The database is also updated that the user is voted.



Figure 5.24 shows the news page

In the above output snippet, the screenshot of the news section. News that is being added by the admin is displayed over here. Heading of the news along with details and a picture is uploaded by the admin in the database. All these details are fetched from the database and is displayed to the user.



## 6. Project Costing

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### 6.1 Introduction

From the all the previous chapters we designed, implemented and tested our project applying different cases. After implementation of software. Now in this chapter we estimate the total cost to design and implement the project. And also the labour cost will be estimated.

### 6.2 Project Cost

Making Cost:

- Cost of domain – 150 rupees for one month.
- Cost of server – 150 rupees for one month.

Labour cost:

For one month 40,000 for each member. Total four members had worked for 3 months. So, total is  $(40,000 * 3) * 4 = 4,80,000$ .

Grand total is  $4,80,000 + 300 = 4,80,300$ .

### 6.3 Summary

In this chapter, the details about the project costing has been given. This chapter also contains the information of the labour cost. The net total cost including the project cost and the labour cost has been provided.



## 7. Conclusions and Suggestions for Future Work

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This project is for online voting using an android application for people to decide about the suitable leader and the political party. Using this app, people can cast vote to the best suitable leader. The evaluation of social media, election campaigns and their details, the commitments announced by the leaders and the analysis of the work done by the various parties is the crux of the information required to elect a leader. This project provides that platform to select a leader and vote directly from their phones without having the need to visit a polling booth. Motivation behind this project was the fact that people lack information in terms of correctness as well as completeness in the summary of work done by the candidate. Also, a majority of educated group do not vote due to inability of visiting and standing in long queues on the polling day. This project aimed to provide citizens required information so that they could choose the best candidate and also could vote directly from home without having the need to visit a polling booth.

The scope of this project was to create a public awareness about politics. The app helps the citizens an application to make informed decision in electing most suitable candidate without having the need to visit polling booth. This project was completed by following a sequence of steps – literature survey, requirement analysis, design, implementation and testing. Above all this project provided a single platform for the entire election procedure.

One of the main idea in this project was e-voting and hence future work can be concentrated here by enhancing the security. IVR system could be incorporated in voting procedure to enhance the security. Blockchain is another good option to be implemented in the voting procedure. The future work will totally focus on the security aspects of online voting. To provide a security to the end user, a allotted time duration to citizens can be



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used for voting. By doing this, only citizens will be knowing when they are voting, and this could provide security to end user.