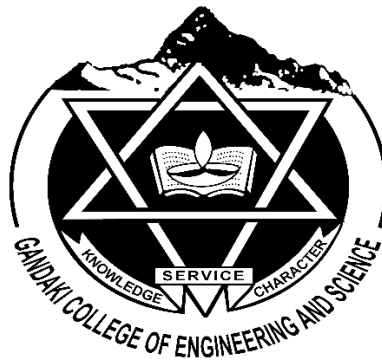**A Minor Project-II Proposal on**

VOTER

Submitted in partial fulfillment of the requirements for the degree of
Bachelor of Engineering in Software Engineering at Pokhara University

By

AASHISH ACHARYA

ASHISH PAUDEL

SUMAN ADHIKARI

Department of Research and Development

GANDAKI COLLEGE OF ENGINEERING AND SCIENCE

Lamachaur, Kaski, Nepal

(May, 2023)

A Minor Project-II Proposal On

VOTER

Submitted in partial fulfillment of the requirements for the degree of
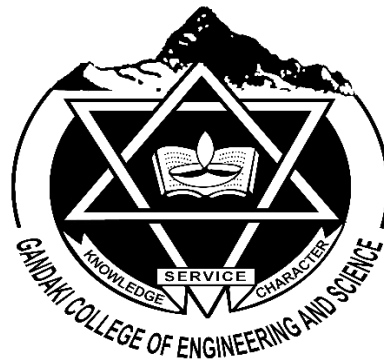Bachelor of Engineering in Software Engineering at Pokhara University

By

AASHISH ACHARYA

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SUMAN ADHIKARI

Supervisor

Er. Amrit Paudel

Department of Research and Development

GANDAKI COLLEGE OF ENGINEERING AND SCIENCE

Lamachaur, Kaski, Nepal

(May, 2023)

APPROVAL CERTIFICATE

This project entitled "Voter" prepared and submitted by Aashish Acharya, Ashish Paudel and Suman Adhikari under the supervision of **Er. Amrit Paudel** in partial fulfillment of the requirements for the Degree of Bachelor of Engineering in Software Engineering has been examined and is recommended for approval and acceptance.

Date of Evaluation: May 18, 2023

……………………………………

Supervisor's name

(**Er. Amrit Paudel**)

…………………………………

Er. Rajendra Bahadur Thapa

(Acting Coordinator)

Research Management Committee

Gandaki College of Engineering and Science

ABSTRACT

The Voter is a mobile application designed to facilitate voter registration, provide information about elections, and allow voters to cast their votes using a mobile device. Some countries and regions have implemented such apps, with the aim of increasing voter turnout and making the voting process more convenient for citizens which can be used in organizations like banks, hotels, resorts, schools, party palaces, etc. Mobile apps can be used in elections in various ways, including to facilitate voter registration, provide information about candidates and issues, and allow voters to cast their votes using a mobile device. Voter is a mobile app that uses QR codes to scan voters is one way to verify a voter's identity and ensure that they are eligible to vote. The app could require voters to scan a QR code at the polling place or another location, which would confirm their identity and provide access to the ballot. To use such an app, voters would likely need to register in advance and provide personal information, such as their name, address, and identification number, which would be linked to their unique QR code. The use of QR code-based voter mobile apps is an emerging area of interest and research, and their effectiveness and security will likely depend on the specific implementation and context in which they are used. In other cases, mobile apps may be used to provide voters with information about the candidates running for office and their positions on various issues. This can help voters make informed decisions and participate more fully in the democratic process.

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CHAPTER 1
INTRODUCTION

1.1. BACKGROUND

Voter mobile apps are a type of software designed to facilitate voter registration, provide information about elections, and allow voters to cast their votes using a mobile device. Some countries and regions have implemented such apps, with the aim of increasing voter turnout and making the voting process more convenient for citizens. A voter mobile app that uses QR codes to scan voters is one way to verify a voter's identity and ensure that they are eligible to vote. The app could require voters to scan a QR code at the polling place or another location, which would confirm their identity and provide access to the ballot. Overall, the use of QR code-based voter mobile apps is an emerging area of interest and research, and their effectiveness and security will likely depend on the specific implementation and context in which they are used.

1.2. STATEMENT PROBLEM

Creating mobile apps for a voting system can be challenging due to a variety of technical, security, and logistical issues. Here are some of the potential problems that can arise. Such as Security risk, Authentication and verification, Accessibility etc. Voting systems must be secure to prevent hacking, manipulation, or other types of fraudulent activity. Mobile apps are particularly vulnerable to security risks, as they can be accessed remotely and may rely on third-party platforms and networks that are beyond the control of the app developers. One of the biggest challenges in creating mobile apps for voting is ensuring that voters are authenticated and verified. Using of this system may become costly because of hiring education person and hardware required to run this system but it gives high security in the future.

1.3. OBJECTIVES

This project will fulfill the following goals: -

> ➢ To provide a secure and efficient way to perform voting based on QR code with the help of ID cards by using a mobile application.

1.4 IMPLICATIONS

Voting systems must be secure to prevent hacking, manipulation, or other types of fraudulent activity. Mobile apps are particularly vulnerable to security risks, as they can be accessed remotely and may rely on third-party platforms and networks that are beyond the control of the app developers. Creating mobile apps for a voting system requires careful planning, technical expertise, and a deep understanding of the unique challenges and risks associated with electronic voting.

CHAPTER 2
LITERATURE REVIEW

Manually Voting System in Nepal

> ➢ In Nepal, the manually voting system is used for conducting elections. The manual voting system makes the voting process simple and easy. The voters go to their respective polling stations and cast their votes manually. The ballot paper is used for casting the vote, and the voters mark their preferred candidate with a cross or tick.

> ➢ However, the manual voting system has some limitations. The counting process can be time-consuming, and errors can occur during the counting process. Moreover, the manual voting system is vulnerable to electoral fraud, and there have been instances of vote rigging in the past.

> ➢ Electronic voting systems can potentially increase the efficiency and accuracy of the voting process, but they also come with their own set of challenges, such as security concerns and accessibility issues. So , online voting comes here with high efficiency, accuracy and higher security.

CHAPTER 3
TOOLS AND METHODOLOGY

3.1. REQUIRED TOOLS

- ➢ Visual studio code: For IDE
- ➢ Flutter Framework: develop application.
- ➢ Dart: For back-end development
- ➢ MS-Word: For preparing the proposal
- ➢ Firebase, SQLite: For managing database
- ➢ GitHub: For Collaboration and version control

3.2. APPROACH USED

FIGURE 3.2 : AGILE MODEL

The Agile model is an iterative and incremental software development approach that emphasizes flexibility, collaboration, and rapid prototyping. The Agile model is characterized by its iterative and incremental approach to development. Instead of developing a complete solution upfront, Agile projects are divided into smaller, more manageable chunks called sprints. Each sprint typically lasts two to four weeks and involves a specific set of requirements or user stories. The Agile model is often used in software development projects that are complex, dynamic, or require a high degree of flexibility. It is particularly well-suited for projects where requirements are likely to change over time or where there is a high degree of uncertainty or risk. the Agile model is a flexible and collaborative approach to software development that emphasizes rapid prototyping, continuous feedback, and customer involvement. It can help teams develop high-quality software that meets customer needs while adapting to changing requirements and market conditions.

3.3. DESIGNS

3.3.1. USE CASE DIAGRAM

FIG 3.3.1: USE CASE DIAGRAM

Use Case UC1: Voter

      Primary Actor: User

      Pre Condition : User must be authenticated.

      Post Condition : System shows the action for Scanning ID.

      Basic Flow:

- System show the Scanning ID secton.

- User choose the candidates.

- System shows the UI according to the actions

      Alternative Flow:

If actions are failed then system shows the error message.

Use Case UC2 : Admin

      Primary Actor: Admin

      Pre-Condition: Admin must login.

      Post Condition: System shows list of Options.

      Basic Flow:.

- Admins create new poll .

- Admin add the new candidates.

- System shows the UI according to the actions.

      Alternative Flow:

- If actions are failed, then system shows the error message.
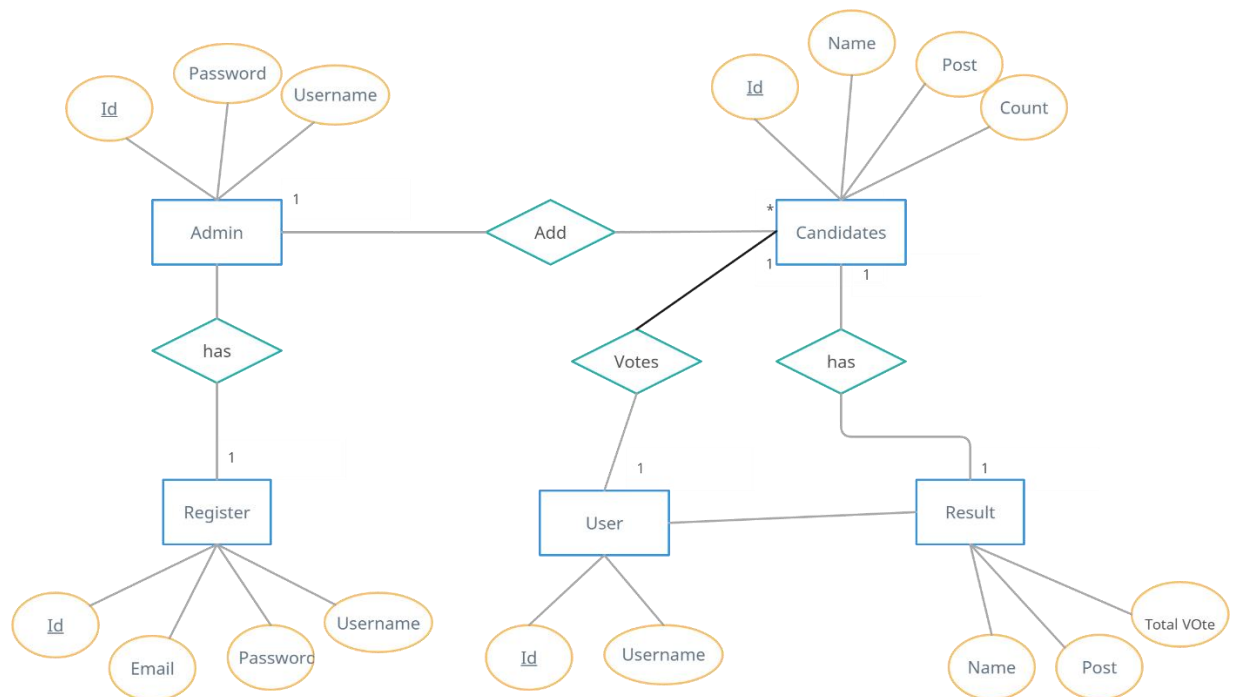
3.3.2. ENTITY RELATIONSHIP DIAGRAM

FIGURE 3.3.2: ENTITY RELATION DIAGRAM
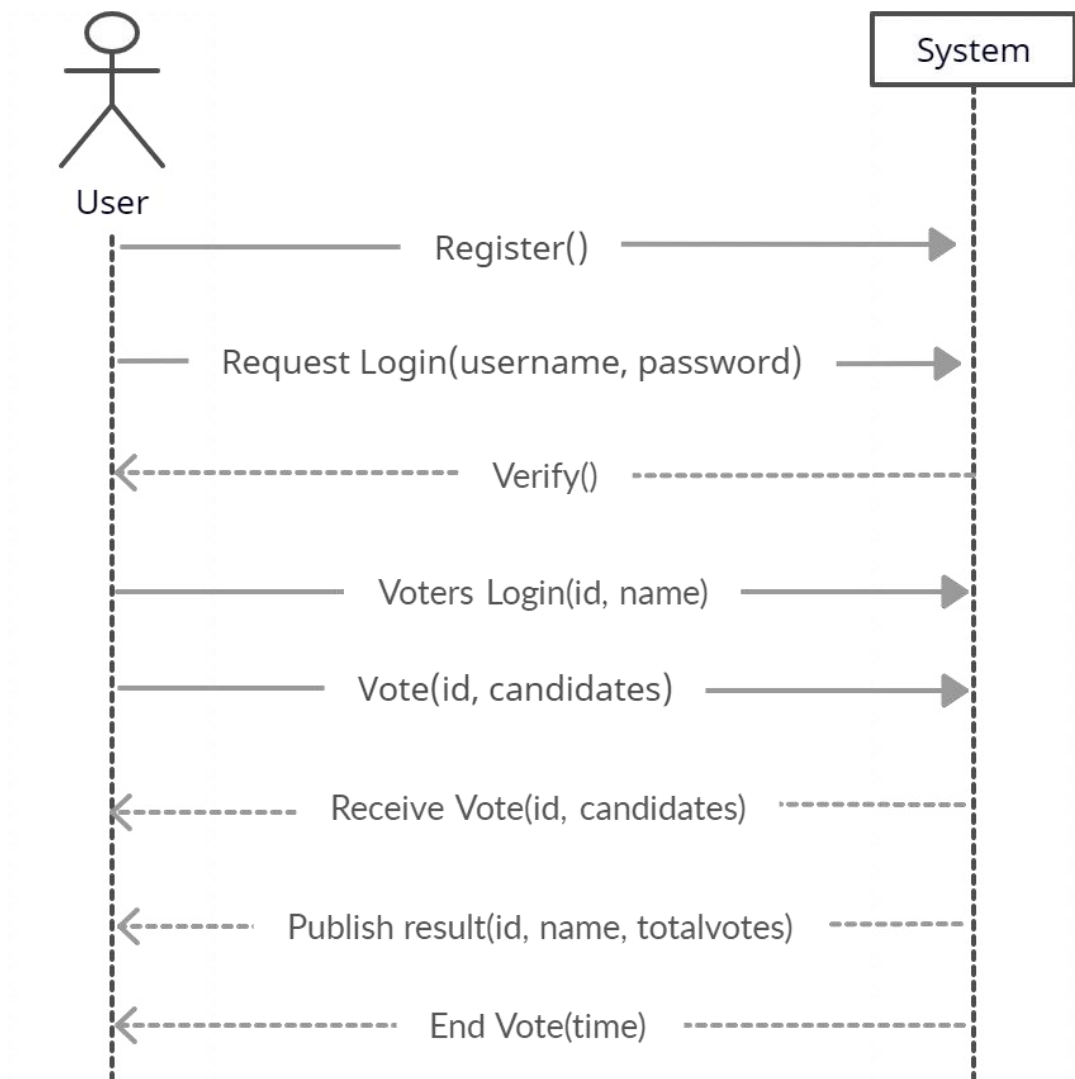
3.3.4 SYSTEM SEQUENCE DIAGRAM

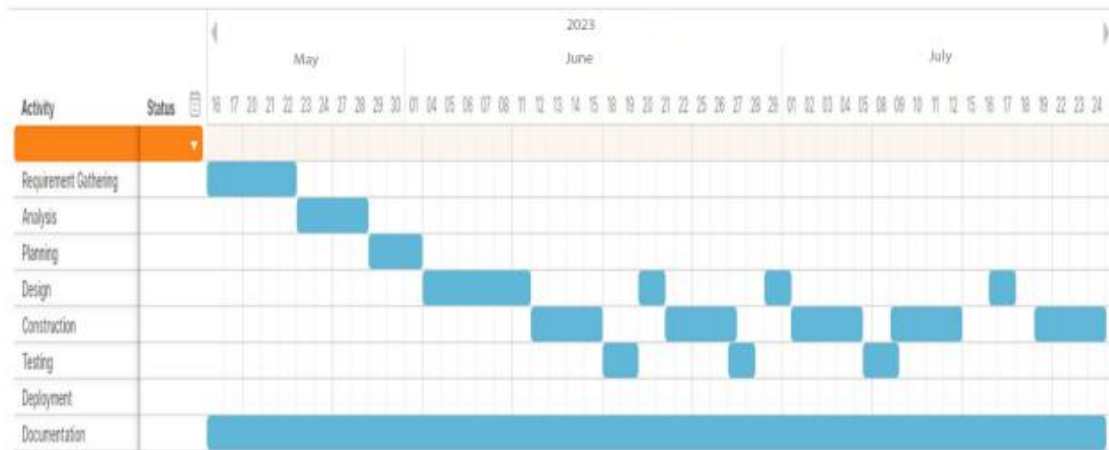**FIGURE 3.3.3: SYSTEM SEQUENCE DIAGRAM**

CHAPTER 4

TIMELINE CHART

Figure 4.1 : Gantt chart
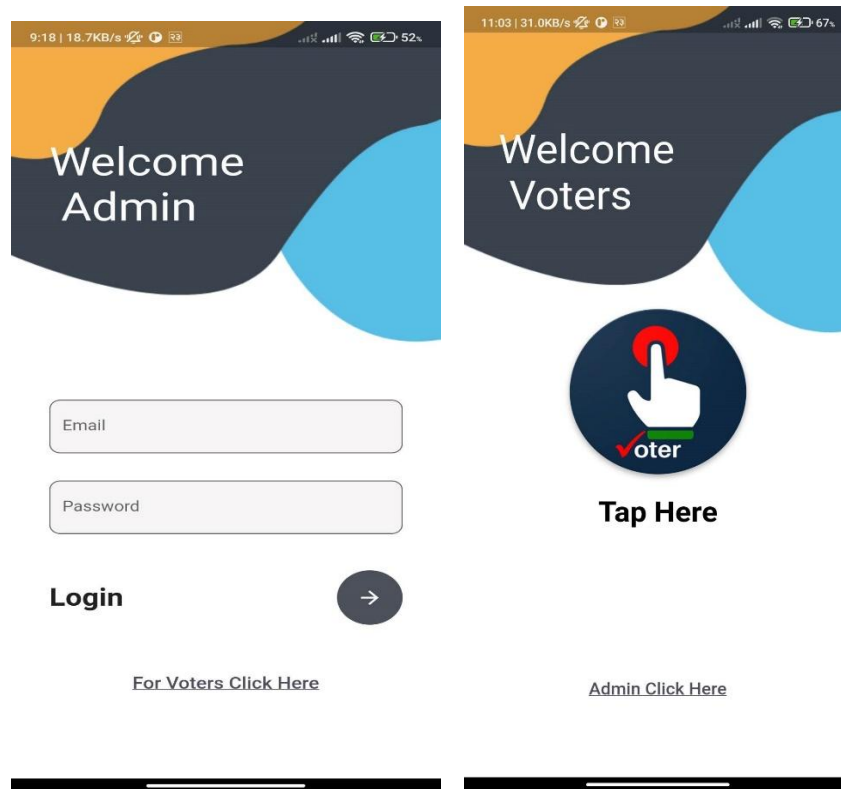
CHAPTER 5

WIREFRAMES

FIGURE 5.1 Wireframes

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