

# **Project Demonstration & Documentation**

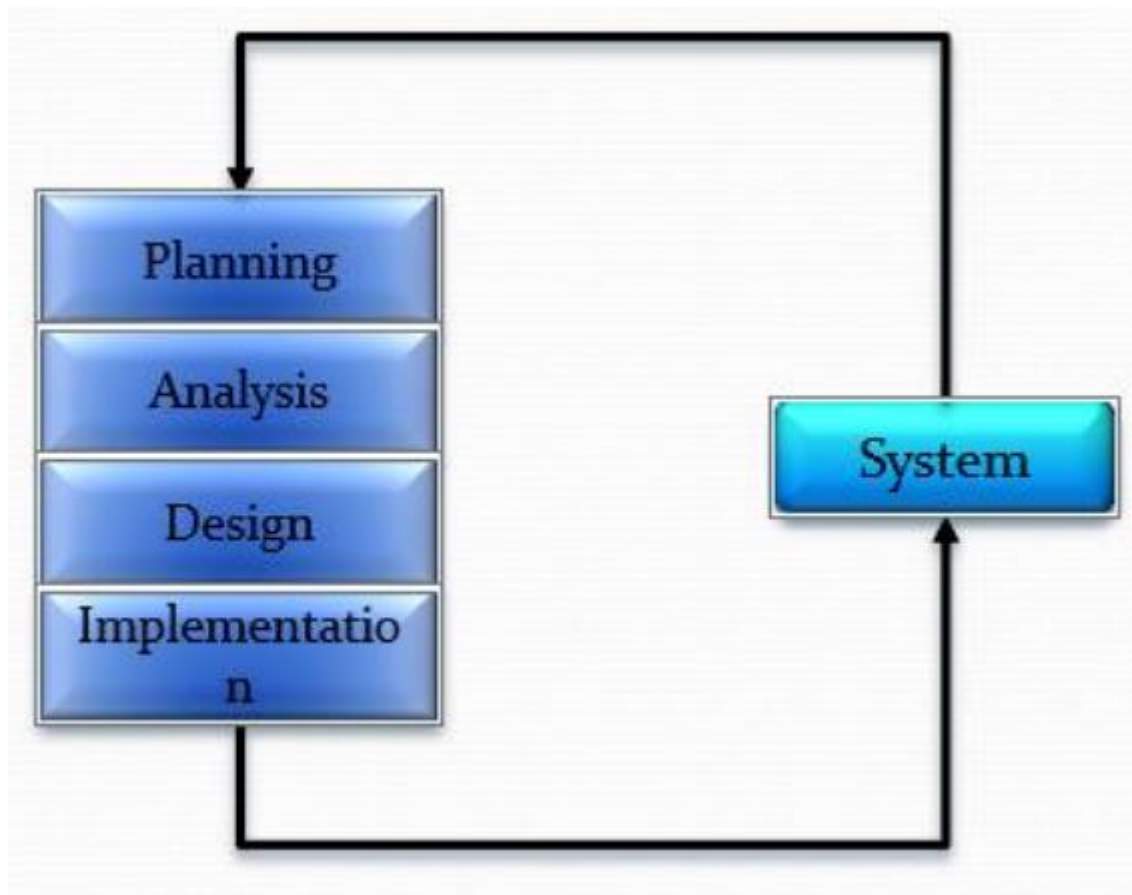
## **Project Documentation – Step By Step Project Development Procedure**

Team ID	NM2023TMID04400
Project Name	Biometric Security System for Voting Platform

### **Project Specifications**

#### **Development Method :**

- In this project, a useful and secure e-voting system will be introduced. This project needs a lot of method and technique to make the system achieve the target.
- For the system in this project, this project going to develop an android software that able to use by smartphone which are match requirements.
- A fingerprint recognition for biometric authentication also will be used in this system.



## Tools to use

### Hardware :

Operating System	Windows 10 Pro 64-bit
Processor	AMD Ryzen 3 2200G with Radeon Vega Graphics @ 3.50 GHz
RAM	16GB DDR4-2400MHz
Graphic Card	NVIDIA GeForce GTX 1050 Ti

### Software

1. Android Studio
2. Android Firebase (Website).

## System Planning

- System planning is a very important part to start every project, especially development a new software system. In the planning phase of a project, the project will be evaluated.
- The goal, outcome and requirements of the system will be identified. This can make the project member have a basic understanding about system and user requirements.
- Besides, the project management also a part of planning phase. The work plan and project schedule will be decided. To ensure project member can work effectively with the plan.
- Therefore, system planning should clearly define the scope and purpose of the project to make sure the project can work smoothly.

## **User Requirements**

- User shall read and understand the vote title and option.
- User shall make a choice for the vote.
- User shall use fingerprint to authenticate.
- The functional requirement of this project will be the system need to provide basic function of voting system such as create voting event, vote, calculate result, show result.
- Moreover, the system shall be able to authenticate the user identity when user try to login and fingerprint biometric authentication when submitting vote.
- In addition, the user's phone number is required when register, after that the system should send a one-time code to user's phone by SMS message.

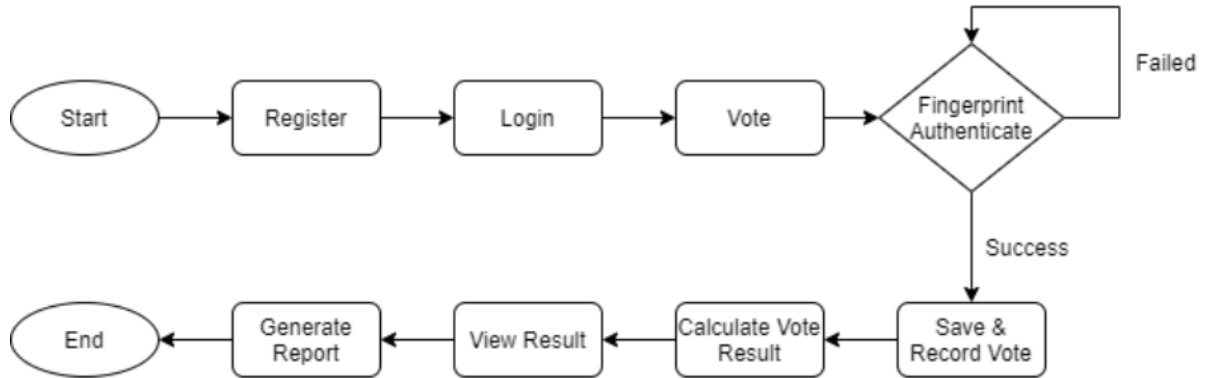
## **Project Analysis**

- In this project, the new system uses the fingerprint as biometric authentication for the voting system. This can solve the identity fraud problem of voting system.
- Besides, the system will develop as mobile application with android studio. Nowadays, most of the phone having fingerprint scanner, so can easily perform the fingerprint authentication for the system.

## **Project Design**

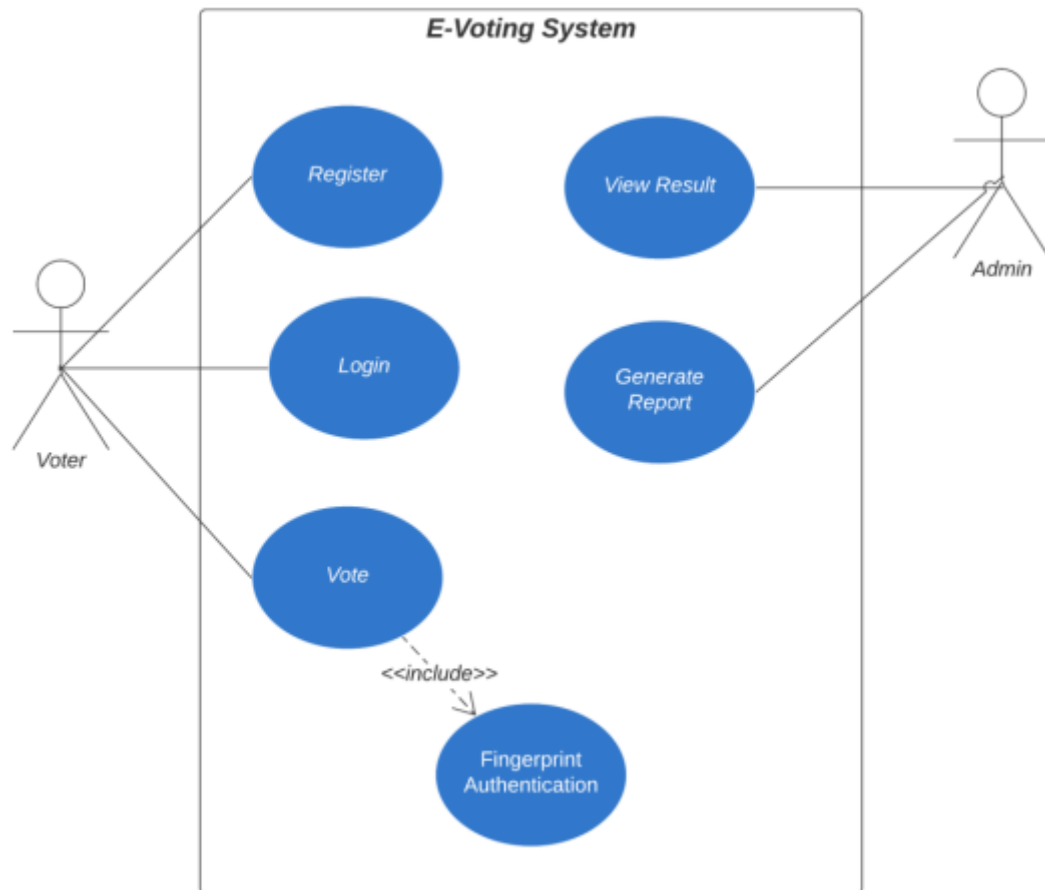
**Overview :**

- The fingerprint e-voting system will be designed for this project. The system is planned and designed to developed as mobile android application.
- The design of the application will discuss in this sub-chapter.



- The flow of the system should start on login or register of user. After that, a home page will be displayed, the user can select what to perform in this page.
- If user want to join a vote event, the user needs to perform a fingerprint authentication before submitting the vote. If the authentication is successful, the vote of user will be record and save into database.
- When the vote event closed, the system will calculate the vote result and generate a report.

**Use Case Diagram :**



- There are some functions and modules which are designed for this system. The user is able to perform all of the function, but there is some perform are need fingerprint recognition.

#### Activity Diagram :

- After login, system will detect it is voter or admin.

- The voter able to make their vote and verify by fingerprint authentication, the vote only recorded when fingerprint authentication is successful.
- The admin able to view the vote result and can choose either generate report or not.

