

# Android Voting System

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**Abstract**— Android Voting System is an Android app that is used to securely conduct votes and elections. As it is a digital platform, it abolished the need to vote using ballot paper or physically in person and user can easily vote using the Aadhar Card credentials. They also protect the probity of the votes by avoiding voters from voting repeatedly. Our System Make use of Firebase as a background, login, registration and maintenance purposes which makes our system more secure and reliable. Java-based programming language can be used for application development. Issues or disputes are entered into the system by the administrator. People can no longer vote and say yes or no. One voter can cast only one vote in a dispute. Each vote cast is stored on a valid dispute website. After submission of the votes the system calculates the total vote count. Thus, the app helps the authorities get the right number of votes for the voters.

## 1. INTRODUCTION

Android Voting System is an Android system that allows the user to vote remotely without going anywhere. Android Voting System is effortless to use and simple to use for casting votes online safely and efficiently. This application allows the user to create an account with their phone number, which will be used to sign in again, the account creation will be done after the One Time Password confirmation that has sent to the mobile number officialized by the ISP and after the verification of Aadhaar card details for more accurate vote counts without any fraud so that the process can be go on without any issue.

### a. The main purpose of AVS include:

For Android Voting System (AVS) Provides advanced voting services to voters with fast, timely and easy-to-vote voting. AVS includes Reducing the costs incurred by the Electoral Authority during voting to pay for the largest number of secretaries hired for the success of the hands-on program. AVS is used to ensure that only registered members will vote which helps keep AVS free of repeated votes and aids in Redundancy application.

The Android voting system will need to be very accurate or cost-effective in order to produce an effective electoral management system. A growing voter numbers like individuals will have an easier time casting their ballots, particularly those who live outside the country who can vote without having to face the hassle of using AVS using their Aadhaar card.

### b. Scope of AVS:

It focuses on studying the existing voting system and making sure that reading the votes of the people is important, without bias in the voting process.

This will also produce:

A little effort and a lot of hard work, such as key costs and focus on creating, managing and using a secure web polling site. It will increase the number of voters as people will find it easier to vote, especially for people living out of town.

## 2. Existing System

As a democratic country, a country faces heavy expenses in conducting the election as it is a hectic process it takes lot of time and man power to conduct elections.

The existing system serves as the voters comes to the polling booth, where voting in-charge verifies voter's eligibility and then the voter cast their vote with the help of EVM (Electronic Voting Machine) to the deserving candidate in their perspective.

The organizing of this system takes a lot of time, money and manpower and the results also takes a long time in declaration, while the proposed system overcomes the above-mentioned issues in the existing system.

### 3. PROPOSED SYSTEM

In order to prevent the difficulty of the existing system, the proposed system is heavily modified in many ways. This project aims to reduce paperwork and save time to produce more accurate results from the Android Voting System (AVS). The program provides the best user interface. Successful voting can be done through the proposed system.

#### Advantages of Proposed System: -

Android Voting System is a corresponding fast approach to cast vote and is highly authentic, approximate results from flexible user interface and quite efficient outcomes. The system can be used anytime and from anywhere because the application content is not geo-restricted which means just log in with your credentials and you can cast vote easily.

This system excludes the use of manual voting process that takes a lot of time, money and man power to successfully cast the votes by election commission. Nobody has right to vote on behalf of another person or party more than once, one user can cast his/her vote only one after registration.

Reduces human involvement and time saving which makes this algorithm cost as well as both time-efficient.

Admin can get instant results of the particular party.

The system is flexible, secured and trouble-free to use.

### 4. FEASIBILITY STUDY

Analysis of the possibilities begins once the terms have been defined. It starts with producing a wide range of possible solutions, which may provide as a reference to implementation of proposed system. Here it is where innovation and thinking come into play.

Analysts have to think of new ways to do things - they have come up with new ideas. No need to sign in to the system for details right now. Users should be able to estimate project expenses and see how proposed program would integrate in company with the help of solution. At this point, it's crucial not to put in too much work merely to find out whether the project isn't appropriate or if initial purpose has to be changed. It is important to ensure that new system that we are going to utilize is both functional and cost-effective. There are a variety of ways to calculate likelihood of an event: -

#### a. Economically Feasibility:

The progress of suggested app is very economical. Only by creating an atmosphere with appropriate supervision can real progress be made. It's expensive into perspective which you have removed voting booth set and the paperwork completely. This system also works on time because voting is done by voters anywhere in the world.

#### b. Technical feasibility:

There are no extra hardware or software requirements for program's technical requirements or any online service.

In addition to determining if new technologies can be integrated into current systems, technical testing should determine if organization possesses necessary resources to do so. Google Firebase and the Internet are used to run this app.

#### c. Operational Feasibility:

Because of its basic yet appealing user interface, system software is exceptionally user-friendly and quick to accomplish things. The technology may be used by anybody without the requirement for additional training. Voter information accuracy is among important aspects of technical performance, and whether system can be configured to keep this information up to date and when using online services.

#### d. Behavioral Feasibility

The following queries are included in this list:

- Whether there is adequate user assistance?
- Is the suggested system safe?

When the project is conceived and completed, it will be lucrative since it accomplishes its goals. The idea is deemed morally viable after thorough consideration of all facets of human behavior. Users will not be harmed by the Android Voting System (AVS).

**5. DATA COLLECTION:**

Data collected is information collected from the Android app on the site. It can be considered as a ballot paper and the website is a ballot box, like a ballot paper in ballot boxes. The mobile phone needs internet service because the system was connected to a Firebase data collector. Firebase Database is part of the data calculation. Collected data will be calculated on the website before it appears the same application but only admin can view the result in the app and the website linked to the app.

**6. ARCHITECTURE DIAGRAM:**

**a. Data flow diagram:**

A data flow diagram is visual representation of how data moves from one place to another, from the input to the output. Also known as a bubble chart or data flow graph, this is the most basic data flow diagram. There are many different levels of accessibility that may be represented using the data flow diagram. A number of adjustments are made to the information as it passes through program. DFD is a system definition that is not visible. At any degree of inaccessibility, the data flow diagram could be utilized for describing a system or piece of software. For the sake of simplicity, we'll call these levels "information flow" and "performance data." Because of this, DFD may be used to construct an efficient modeling as well as data - flow model. Analyzing a system using DFDs may help you get a better understanding of how it works. Classifying DFDs makes it possible to distinguish and analyze bigger systems even better. Conventional DFDs are just that: standard DFDs. Any and every input, outputs, sources and sinks, may be recognized and shown in a content diagram since it treats the whole system as a single process.

**LEVEL 0 DFD:**

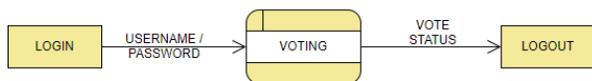


Figure 1: Level 0 Data Flow Diagram

**LEVEL 1 DFD:**

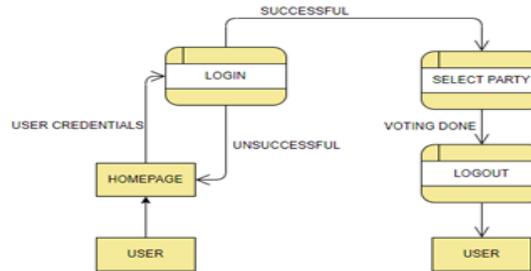
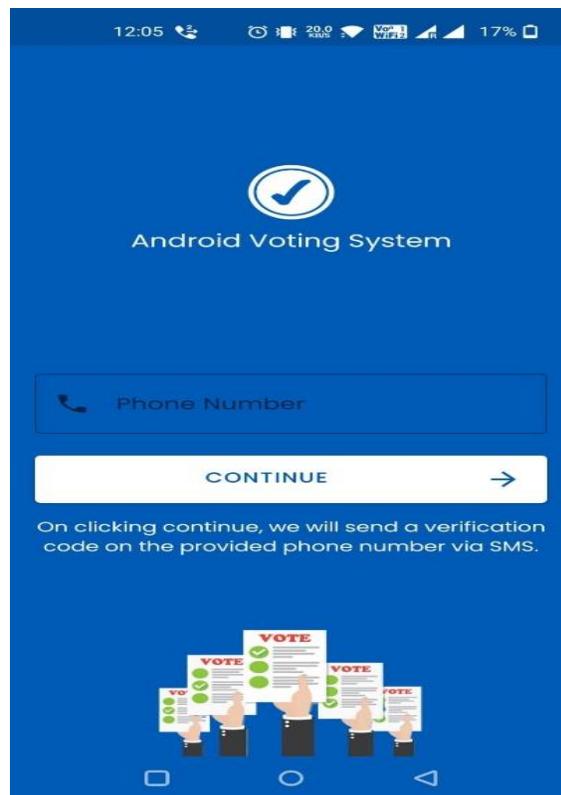


Figure 2: Level-1 Data flow Diagram

**7. RESULTS**

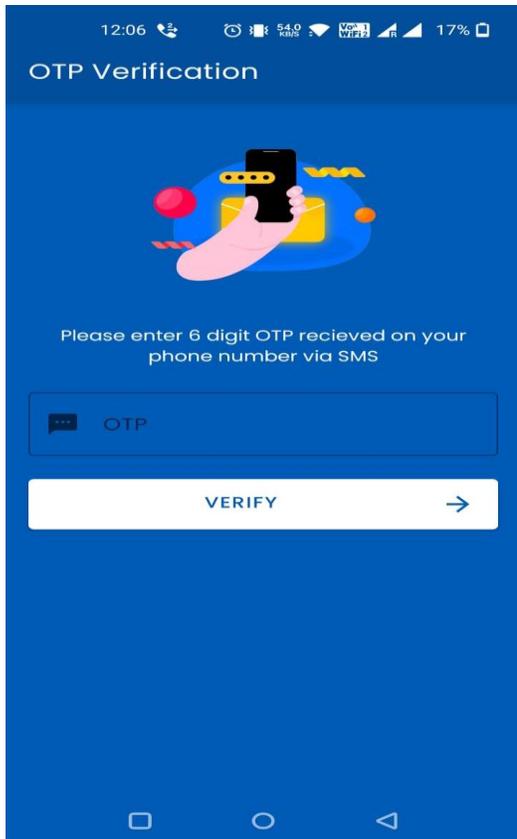
**a: User window:**

**Step 1: User Registration**

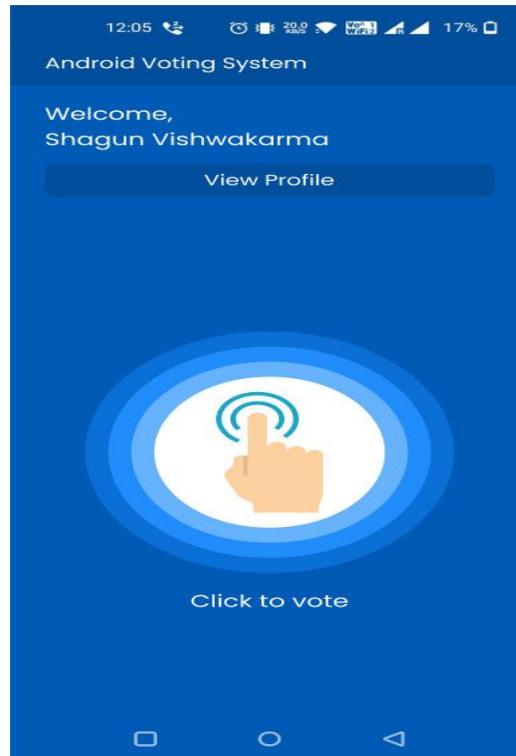


Here user have to enter his/her mobile number.

### Step 2: OTP Verification

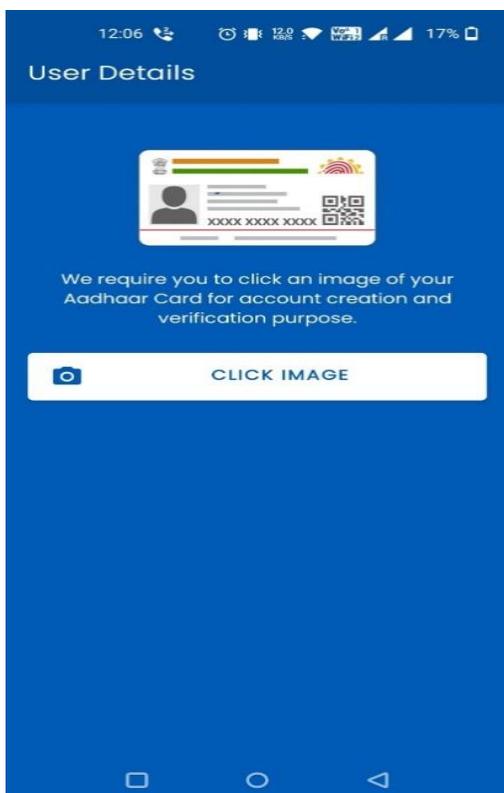


And then further proceeding window:



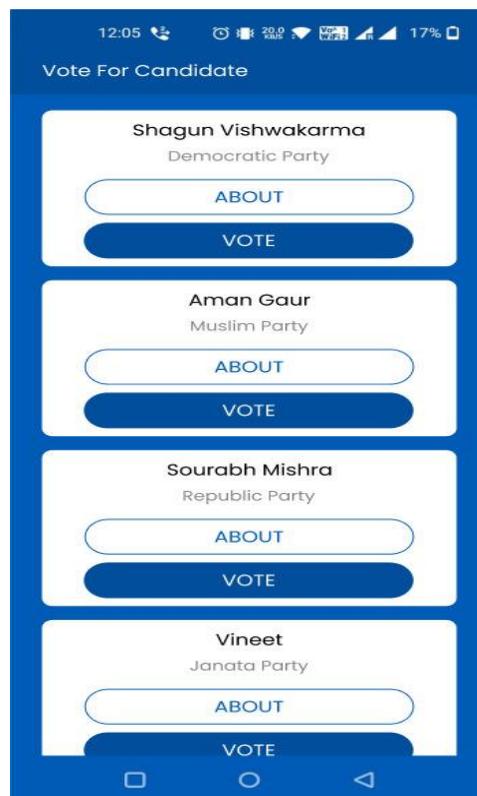
User have to enter the OTP received on the entered Mob No.

### Step 3: Aadhaar Card's Credential Verification



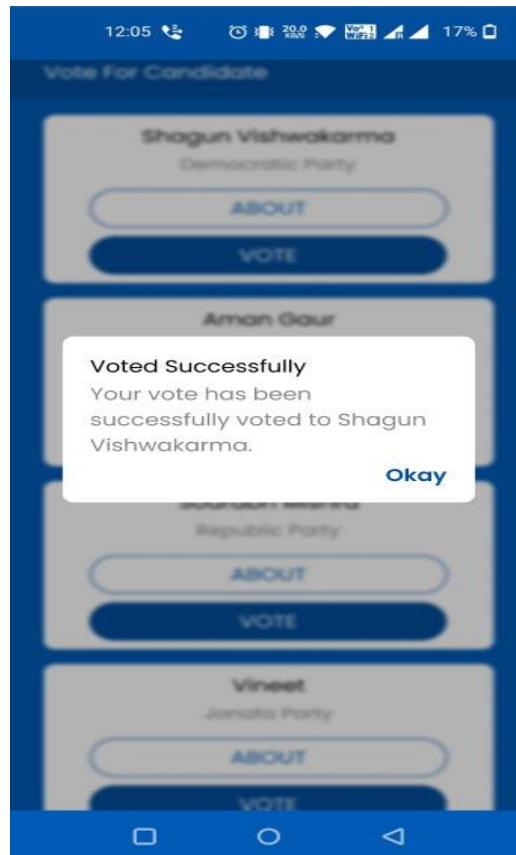
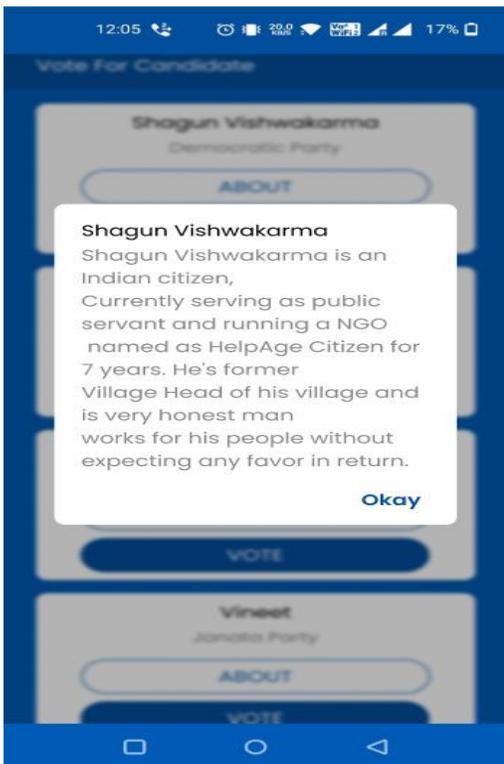
Here, user have to click the photo of the Aadhaar card and then the app will extract the name on aadhaar, aadhaar id and the date of birth on aadhaar card and will verify the voting eligibility and then store the info on firebase.

### Step 4: Dashboard

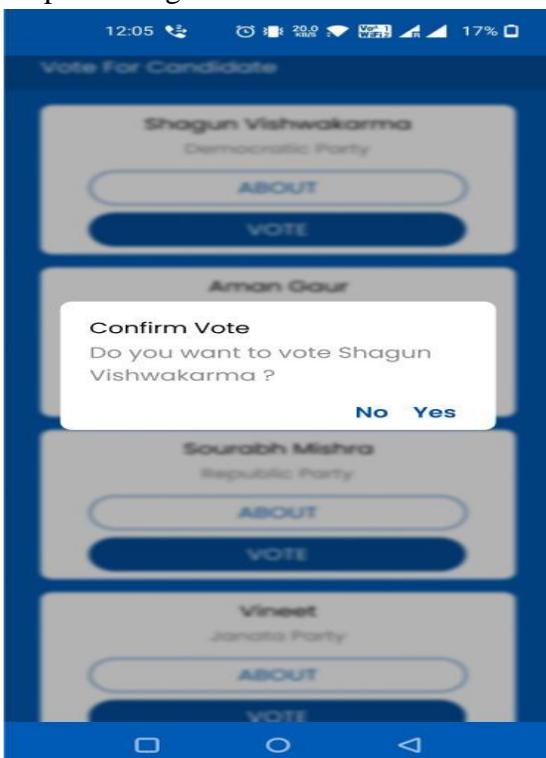


Dashboard which shows the Name of the elected candidate and name of the party he/she is standing, the about button shows the candidate's information about his/her past and activities in which he/she was involved and the vote button is used to cast the vote.

Information of the elected candidate:



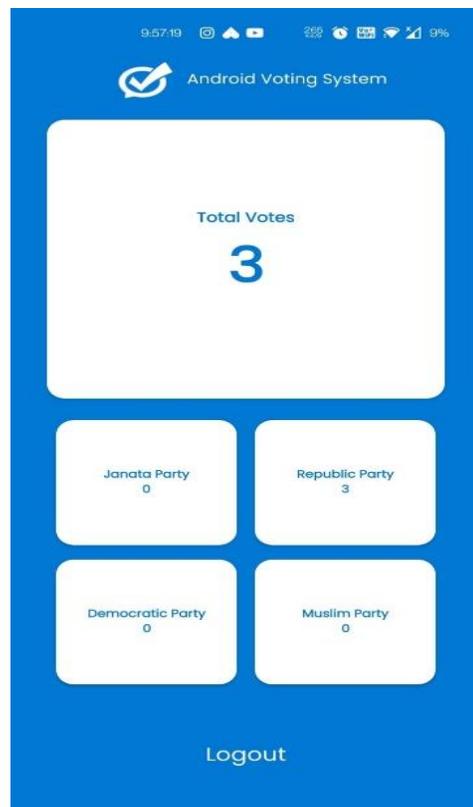
Step5: Voting Window



Successful Vote Casted Pop window

**a. Admin Window:**

Total Votes



## 8. CONCLUSION

This Android Voting app will store Voter information that a voter can access and exercise his or her voting rights. The system will cover all aspects of the voting system. Provides voter turnout tools for all parties. There is a Web site stored in the Firebase area where all the names, phone number, and the aadhaar information of fully registered voters are stored. It is a simple and secure forum and makes votes. It works in a cost-effective and economical way which leads to more voters as it is the right time. This system is much simpler compared to the booth and the user voting system as the voter is able to vote wherever there is no need to go to any designated polling station.

## 9. FUTURE SCOPE

When a person wishes to vote, he or she must log in using his or her id and password, and he or she may only vote for one party at a time. The website has a database of all the votes cast. The proportion of people voting rises higher while using android voting method. Voting can be made less expensive and more efficient by implementing these strategies. It's simple to utilize as well as requires just a few minutes to set up. In the future we will upgrade our system by integrating the AADHAAR card QR code detection and will get registered our application so that we can store and can fetch and match the user input credentials and, in order to match user Biometrics, we will add a face recognition feature too which will make this system more authentic.

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