

Mobile Computing And Android App Development

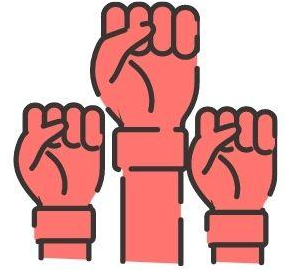
MINI PROJECT

BY:
ROHIT K
SAHANA H P

INVOTE



Right To Vote..!



**Cast your VOTE conveniently ONLINE
without the need of BALLOTS**

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INTRODUCTION

The Online voting system also known as e-voting is a term encompassing several different types of voting embracing both electronic means of counting votes. It can also involve transmission of ballots and votes via telephones, private computer networks, or the internet. Online voting is an electronic way of choosing leaders via a driven android application. The advantage of online voting over the common “queue method” is that the voters have the choice of voting at their own free time and there is reduced congestion. It also minimizes on errors of vote counting. The registration should be done prior to the voting date to enable data update in the database. However, not just anybody can vote. For one to participate in the elections, he/she must have the requirements. For instance, he/she must be a registered citizen i.e. must be 18 and above years old. As already stated, the project ‘Online Voting’ provides means for fast and convenient voting and access to this system is limited only to registered voters.

MOTIVATION

5 Reasons to choose online voting

- Vote at anytime from anywhere - Time saving
- Boosts Participation - Maximises the participation
- Less Physical infrastructure - No machines and paperwork required
- Fast and easy votes tally - Easy vote Management
- Safe and contactless - Good to be contactless

PROBLEM STATEMENT

Many problems are faced by the people in voting manually:

- Much time is required.
- As it has been observed that in some cases booth capturing has been reported.
- Reduces the chances of conflicts.
- Reduces the time for ballot counting and many others.

OBJECTIVES

- Online voting system is an Android application used to securely conduct votes and elections.
- Our System makes the use of Firebase as backend, for login, registration and for storage purposes which make our system highly secured and reliable.
- It also uses Firebase ML kit for face detection which allows us to vote, one person at a time.
- This application also verifies biometric with the help of a fingerprint sensor.

DESIGN

This Application consists of different layouts where it satisfies all the test conditions with the source of android libraries present in the android studio.

- Welcome Screen
- Home Screen
- Registration screen
- Login Screen
- Fingerprint screen
- ID Verification screen
- Face Detection Screen
- Voting Screen
- Closing screen

DEPENDENCIES

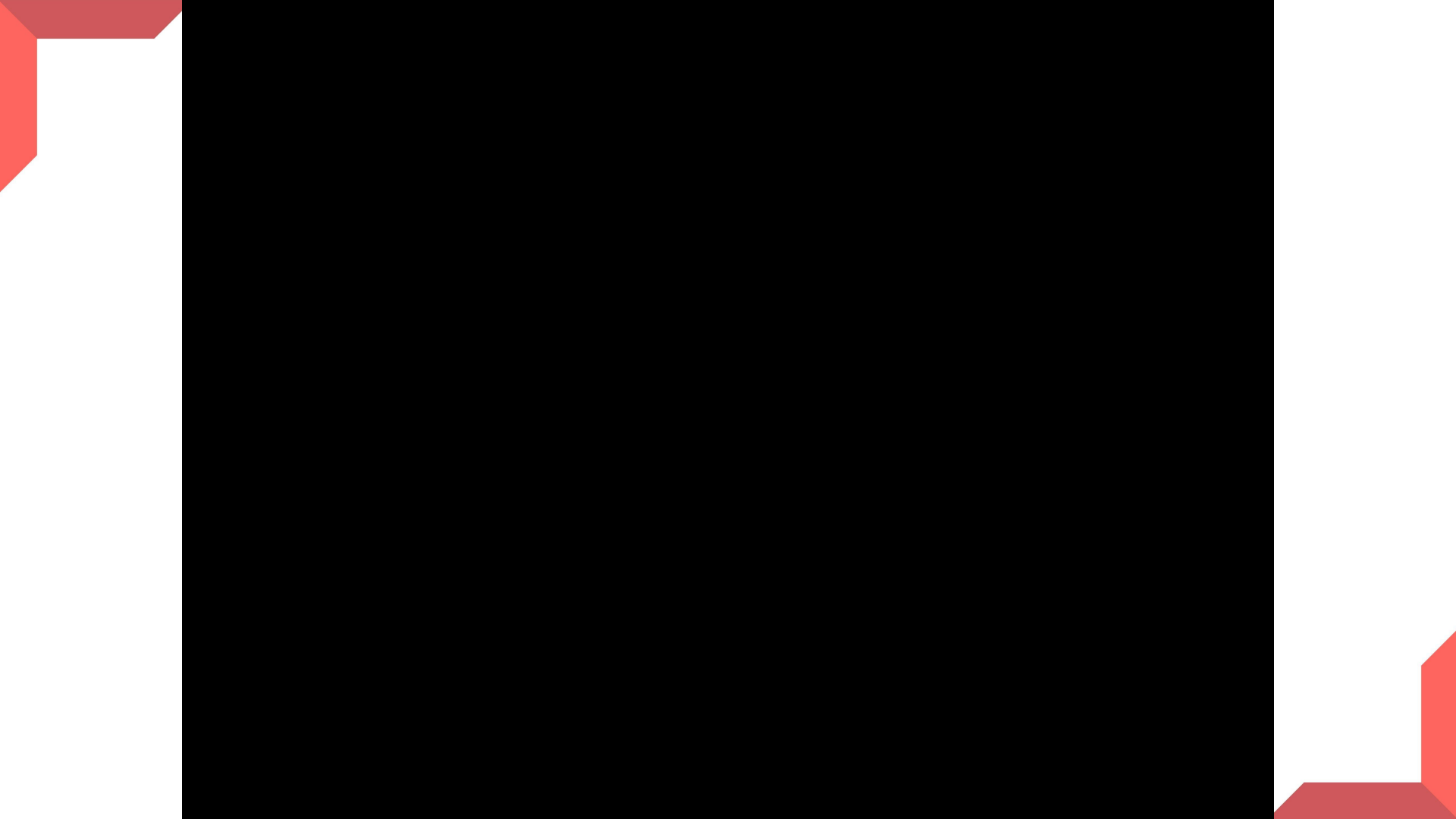
- Various Layouts such as
 - Constraint Layout
 - RecyclerView
 - CardView
- Firebase services such as
 - Authentication for Login/Signup
 - Realtime Database to store data
- Glide for image processing such as Face recognition

IMPLEMENTATION

The process of the implementation:

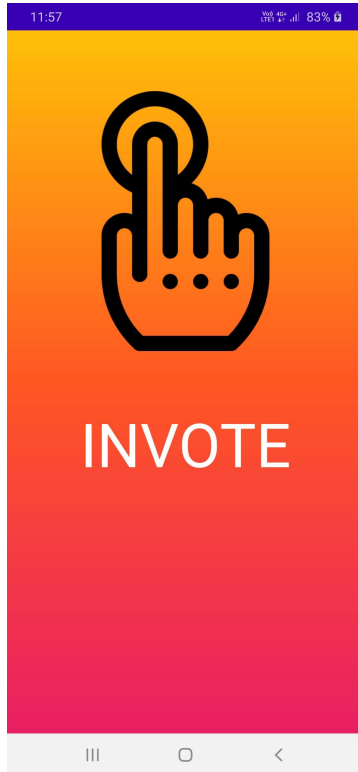
- New user registration/Old user login
- Fingerprint for voting
- Voter ID for verification process
- Face recognition for uniqueness
- Party selection for casting the vote.
- Submitting it to the database.

DEMONSTRATION

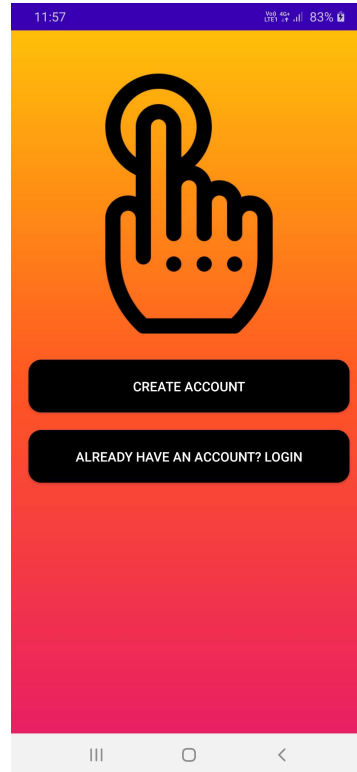


RESULTS

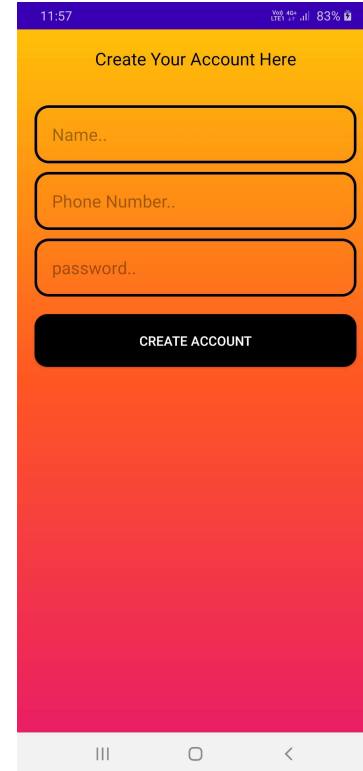
Welcome



Home

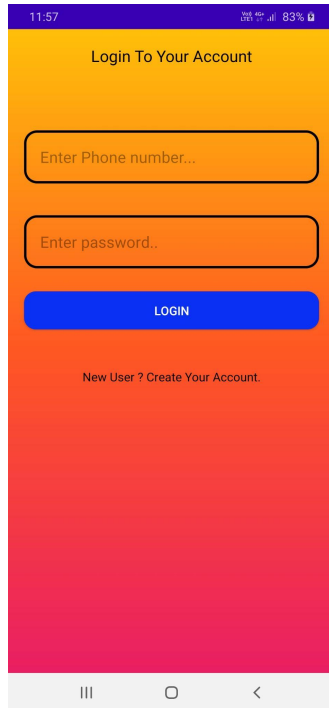


Registration



RESULTS

Login



11:57 83%

Login To Your Account

Enter Phone number...

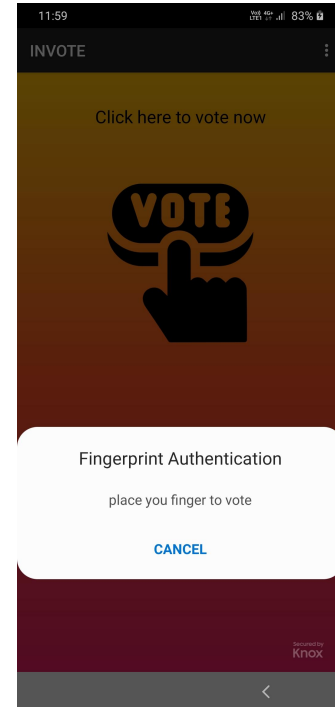
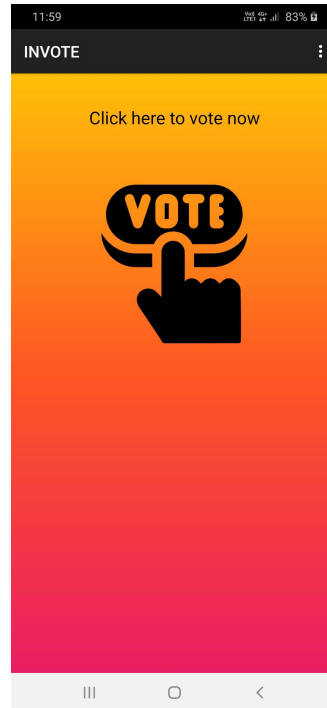
Enter password..

LOGIN

New User ? Create Your Account.


This is a mobile app login screen. It features a purple status bar at the top with the time 11:57 and 83% battery. The main background is a gradient from orange to red. The title 'Login To Your Account' is centered. Below it are two rounded rectangular input fields for 'Enter Phone number...' and 'Enter password..'. A blue 'LOGIN' button is positioned below the password field. At the bottom, there is a link 'New User ? Create Your Account.' and a standard Android navigation bar.

Fingerprint Sensor



RESULTS

ID Verification

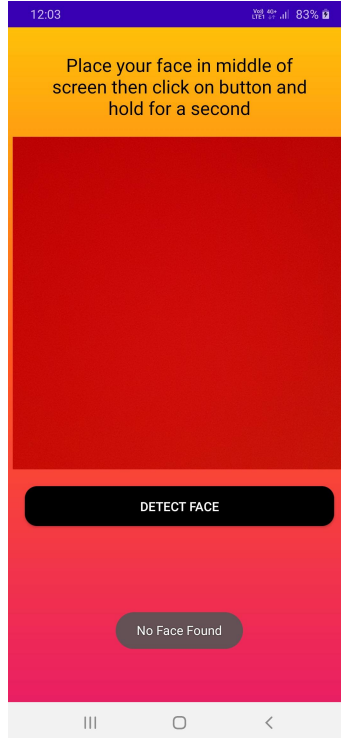
A mobile app screen with a purple status bar at the top showing the time 12:00 and 83% battery. The background is a gradient from orange at the top to pink at the bottom. It features a yellow rounded rectangle with the text "Enter Your Voter ID" and a black button labeled "SUBMIT".

12:00 83%

Enter Your Voter ID

SUBMIT

No Face Detected

A mobile app screen with a purple status bar at the top showing the time 12:03 and 83% battery. The background is a gradient from orange at the top to pink at the bottom. It features a yellow header with instructions, a large red rectangle, a black button labeled "DETECT FACE", and a grey button labeled "No Face Found".

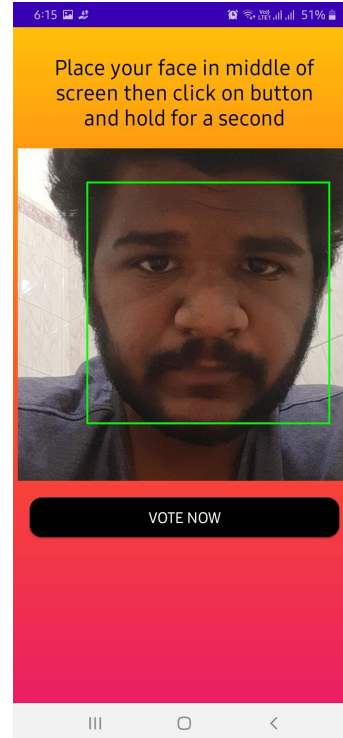
12:03 83%

Place your face in middle of screen then click on button and hold for a second

DETECT FACE

No Face Found

Face Detection

A mobile app screen with a purple status bar at the top showing the time 6:15 and 51% battery. The background is a gradient from orange at the top to pink at the bottom. It features a yellow header with instructions, a video feed of a man's face with a green bounding box, a black button labeled "VOTE NOW", and an Android navigation bar at the bottom.

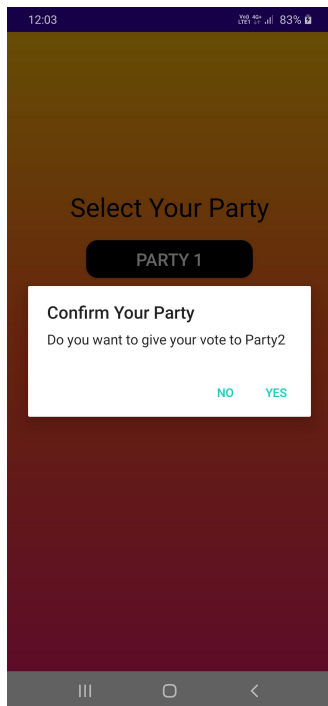
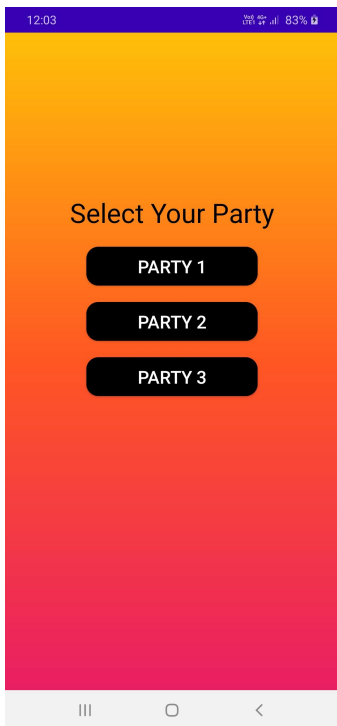
6:15 51%

Place your face in middle of screen then click on button and hold for a second

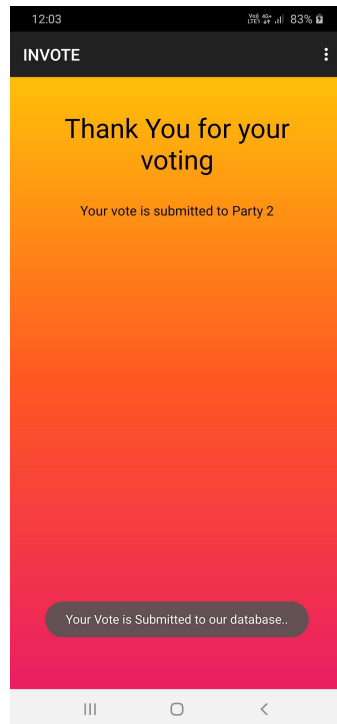
VOTE NOW

RESULTS

Select Party



Final Page

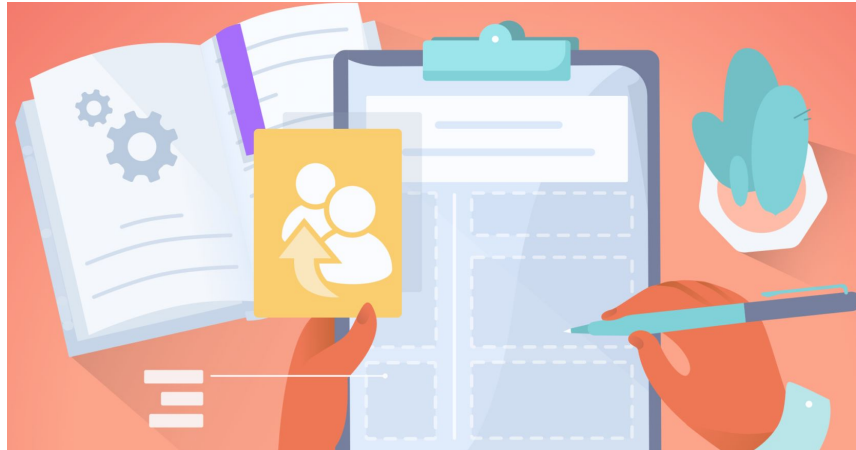


CONCLUSION / FUTURE ENHANCEMENTS

- This Online Voting system will manage the Voter's information by which voter can login and use his voting rights. The system will incorporate all features of voting system. There is a Database which is maintained on platform that is Firebase in which all the names of voter with complete information is stored.
- In this, user who is above 18 year's register his/her information on the database and when he/she want to vote he/she has to login by his id and password and can vote to any party only single time. Voting details store in database. Increase in participation, Decrease in cost and time of voting process.
- In future we will enhance our system by integrate AADHAAR Card detail API so that, we can match actual Biometrics of user with input biometrics and also, we will add face recognition feature with face detection that will make our system more reliable and also one more feature that shows the results of the particular election the voter participated in.

REFERENCES

- [1] - Android Based Application for E-Voting by snehal deshmukh
<https://www.ijser.org/researchpaper/Android-Based-Application-for-E-Voting.pdf>
- [2] - Fingerprint sensor on android studio emulator
<https://codinginflow.com/tutorials/android/use-fingerprint-sensor-on-android-studio-emulator>



THANK YOU