SMART POLLING BOOTH

PROJECT PROPOSAL

Group 03

OUR TEAM

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ARE YOU SATISFIED WITH THE CURRENT VOTING PROCESS ?

DIFFICULTIES AROUND CURRENT VOTING PROCESS

- Difficult to eliminate Invalid votes
- Not having proper ways to identify and verify the voters to avoid cheating
- No Efficient way to get time-to-time analysing process
- Manual voting systems need high cost for labourers, papers

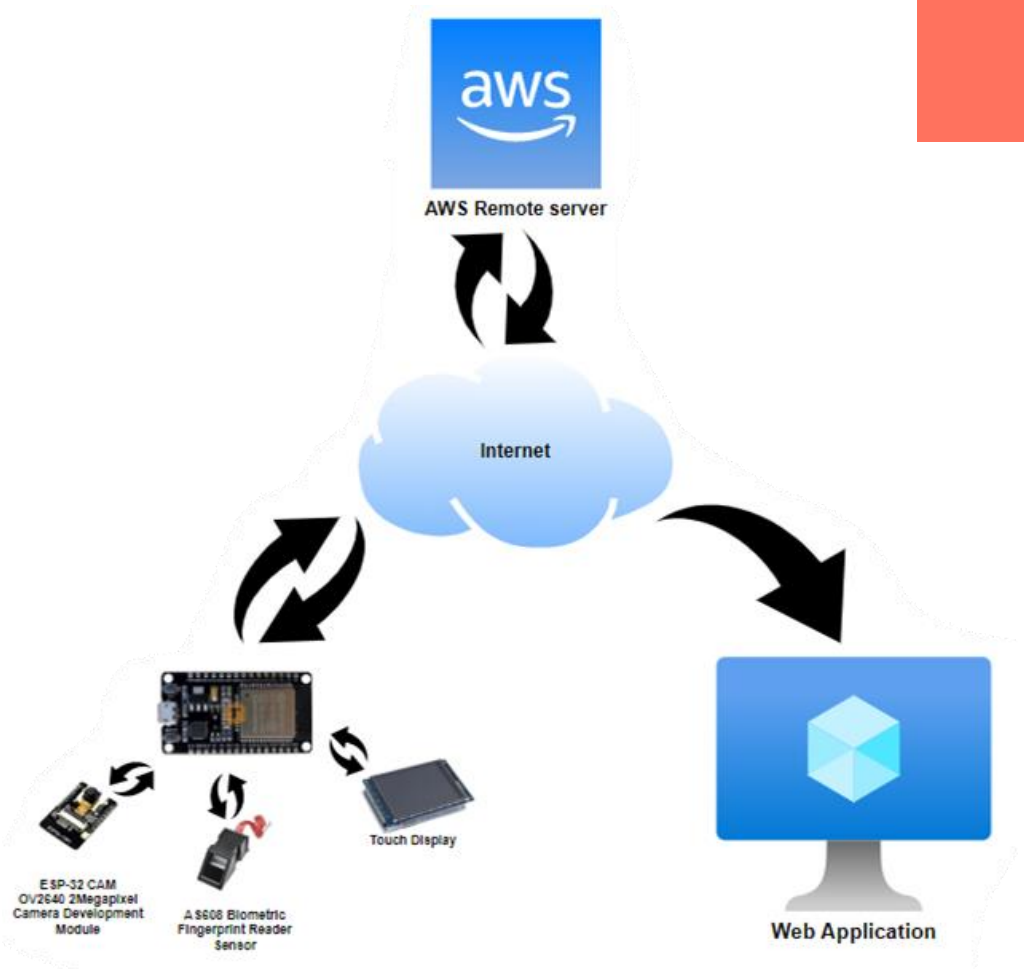
SOLUTION WE ARE SUGGESTING

Introducing a **Smart Polling Booth** with

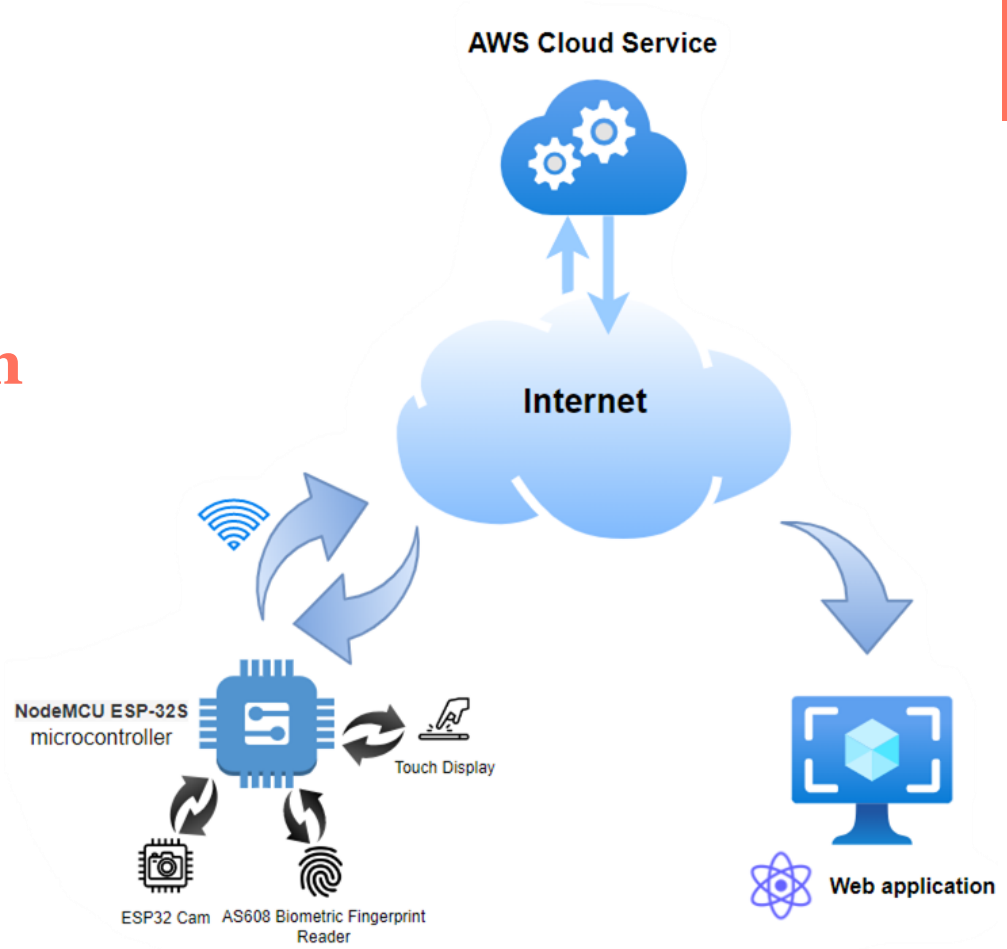
- Using both **fingerprints** and **face recognition** to verify the identity of the voters who are uniquely eligible to give votes.
- Allowing only to make their votes if the vote is valid.
- Facilitating to monitor the voting process time-to-time.
- Reducing the cost going for papers, labourers.

SOLUTION
ARCHITECTURE

High-level system organization



Flow of data through the system



Security & privacy features

- Remove the access for the unauthorized parties from the web application
- Limit the access even for admins in order to secure the privacy of the voters
- Restrict the access to the personal data of the voters
- Sound buzzer if something went wrong or malicious thing happen
- Use asymmetric encryption when data uploading and downloading

TECHNOLOGY STACK

Software

For front end developing for admins

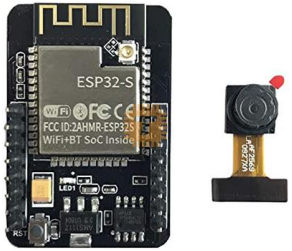
For BackEnd developing

For Version Controlling

Hardware

NodeMCU ESP-32S WiFi Bluetooth Dual Mode IoT Dev Board

AS608 Biometric Fingerprint Reader Sensor



ESP-32 CAM OV2640 2Megapixel Camera Development Module

Touch Display

BUDGET & BILL OF MATERIALS

Smart Polling Booth - Estimated Budget

Name	Qty.	Unit Price (Rs)	Price (Rs)
NodeMCU ESP-32S	1	2100	2100
AS608 Biometric Fingerprint Reader	1	3850	3850
ESP-32 CAM OV2640 2Megapixel Camera	1	2100	2100
3.5 inch 480x320 SPI TFT LCD Display Touch Screen	1	4650	4650
Prototype PCB Board Dual Layer FR4 50x70mm	1	180	180
Battery Holder Case for 3x18650	1	160	160
1.5V AA Battery	6	50	300
3V Mini Buzzer	1	80	80
Resistors, Wires and others			3000
Total			16420

PROJECT TIMELINE

WEEK 1-2

- Pitch the Project Idea

WEEK 3-5

- Creating Project Proposal
- Milestone 1 Evaluation

WEEK 6-8

- Develop Frontend
- Milestone 2 Evaluation

WEEK 9-11

- Develop Backend
- Milestone 3 Evaluation

WEEK 12-13

- Integration of Frontend & Backend
- Implement the Hardware part

WEEK 14

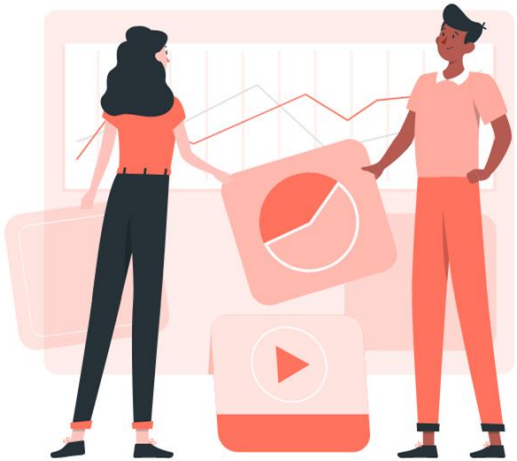
- Add Extra features

WEEK 15

- Testing
- Demo
- Final Evaluation

DEMONSTRATION PLAN

- First insert data of fingerprints and face recognition into the server
- Then load the relevant voters' data to the polling booth.
- When a voter arrive at the polling, check the identity via our polling booth.
- If he/she eligible to give a vote, then system will allow to make the vote.
- Finally votes will be analyzed through server and direct the results to the web application.



WE ARE ON

GitHub Project Repository

https://github.com/cepdnaclk/e18-3yp-smart-polling-booth

GitHub Project Page

https://cepdnaclk.github.io/e18-3yp-smart-polling-booth/

Q & A

THANK YOU!!!!!