PROJECT SYNOPSIS
On

"Online Voting System"

Submitted By

Abhi Srivastava(2426MCA1873)

Anand Patel (2426MCA1755)

Alok Kumar (2426MCA1291)

Session: 2024-25

Under the supervision of

Ms. Divya Singhal
ASSISTANT PROFESSOR OF
Department of Computer Application
KIET GROUP OF INSTITUTION, DELHI-NCR,
MEERUT ROAD,GHAZIABAD

INDEX

ONLINE VOTING SYSTEM

Introduction

"ONLINE VOTING SYSTEM" is an online voting technique. It is based on the other online services like "ONLINE RESERVATION SYSTEM" .In this system people who have citizenship of INDIA and whose age is above 18 years can give his\her vote online without going to any polling booth.

In "ONLINE VOTING SYSTEM" a voter can use his\her voting right online without any difficulty. He\She has to fill a registration form to register himself\herself. All the entries is checked by the Database which has already all information about the voter. If all the entries are correct then a User id and Password is given to the voter, by using that Id and Password he\she can use his\her vote. If conditions are wrong then that entry will be discarded.

Statement about the problem

Internet has led to discussion of e-democracy and online voting. Many peoples think that the internet could replace representative democracy, enabling everyone to vote on everything and anything by online voting . Online voting could reduce cost and make voting more convenient. This type of voting can be done for e-democracy, or it may be used for finalizing a solution, if many alternatives are present. Online voting make's use of authentication, hence it needs security, and the system must be able to address obtaining, marking, delivering and counting ballots via computer. Advantage of online voting is it could increase voter turnout because of convenience, and it helps to reduce fraud voting.

SCOPE:

A Scope survey suggested more than two thirds of the general election polling stations failed basic access tests. Ms. Scott said the country's voting system "isn't working for other voters either," demonstrated by "scores of people queuing outside polling stations" at the recent general election.

"Over the last decade there has been next to no improvement in the overall accessibility of polling stations or postal voting " There is a pressing need for clearer accountability over how elections are delivered, to help improve the accessibility of current voting methods, as well as expanding these to include alternative methods. " Unless this happens disabled people will continue to struggle to exercise their right to vote " In a digital age where people can vote by text for the XFactor and shop and bank online, our voting system really needs to catch up."

Although Scope's report highlights a significant problems, the proposed solution – online and text voting – would bring its own major problems. Both have been tested out in the UK in a series of pilots with mixed results. Although the pilot series was often popular with the public, it has also been unpopular with many IT security experts who doubt the security of such voting methods, the systems were often unreliable and they were far more expensive than traditional voting methods. They also did not raise turnout significantly. For a good recent summary of the case against these sorts of new voting methods.

OBJECTIVE

The most crucial factor for a system like e-VOTE to be successful is to exhibit a Voting Protocol that can prevent opportunities for fraud or for sacrificing the voter's privacy

The Voting Protocol that will be designed and implemented for the e-VOTE system will combine the advantages of existing protocols and techniques, while at the same time it will aim at eliminating most of the identified deficiencies and problems. The related attributes that the eVOTE system will fully support, and against which it will be extensively tested and validated, are listed below. These attributes can be also considered, according to the literature, as a set of criteria for a "good" electronic voting system that can easily enjoy the trust and confidence of the voters and process organizers.

Reasons for particular topic choose

- Specify the voting period dates, quorum specifications, security options (such as secret ballot or open voting), voter registration preferences (pre-defined voter list vs. self registration), and voter weighting. (Mouse-Over help is right there)
- Create Issues. Every ballot consists of issues and answers, even if you're conducting an election and it contains only a single issue, “Choose from this slate of candidates”. Issue types include “Yes/No, Pick one, Choose no more than..., Choose exactly..., Choose at least..., Popularity contest (pick your favorites, in order), and Write-in your own answer”.
- Create Answers. In many cases, your 'Answers' are actually 'Candidates'. For each issue, insert as many answers/candidates as necessary. Each answer may have a description, an associated profile and/or picture.
- Pre-Register your Voters Upload a list of eligible voter email addresses. These are only used for security purposes to authenticate your voting members. (see our 'Email Policy')
- Pay Online Pay the subscription fee (see our Pricing Page).
- For those members who do not have internet access, we offer a hybrid voting system to accommodate a combination of paper and online ballots. Hybrid Elections
- Finally, Get-Out-The-Vote by sending out an email to your members with the link that we provide.

METHODOLOGY & FEASIBILITY

Two significant initiatives to examine the feasibility of electronic voting (including electronic voter registration) recently took place in the United Kingdom. The first, launched in October 2001, was a Seven month study conducted by a range of central and local governments as well as private agencies to examine the possibilities of implementing electronic voting. This study looked at the potential for, as well as the implications of, implementing various forms of electronic voting and vote counting, including via the Internet. The research findings in the report The Implementation of Electronic Voting in the UK, published by the Local Government Association of the U.K., were meant to pave the way for Britain's first "enabled" general election by 2008. The report concludes that the implementation of e-voting may introduce greater flexibility as well as convenience into the electoral process, and would also help modernize the Electoral System.

Testing method

1. **Time framework of I-voting:** I-votes may be given during 7 days from 10th day until 4th day before the Election Day.

2. **Possibility to recast I-vote:** during the I-voting period a voter can recast his/her I-vote in which case the last cast I-vote counts.

3. **Precedence of the ballot paper voting:** if a voter goes to the polling place during advance polls and casts his/her vote using paper ballot (having I-voted prior to that), then the Ivote is cancelled. After that voter can not recast his vote electronically or by using a paper ballot. On Election Day the I-vote cannot be changed.

4. **Similarity of I-voting to regular voting:** I-voting adheres to the election acts, general election principles and customs. Thus, it is uniform and secret, only eligible voters may vote, every person may cast only one vote, it should be impossible for voter to prove the way he/she voted. The collecting of votes is secure, reliable and verifiable.

The voter must be able to cast his/her vote freely and without outside coercion or influence. Incitement to e-voting by offering a computer for that purpose or influencing voters in any other way is prohibited, among other things, no collective I-voting events (opening of e-voting offices or service desks, etc.) shall be Organised insofar as such activities may be considered violation of the freedom of voting. An e-voter shall vote himself/herself. Using another person’s ID card (or mobile-ID) for voting and transfer of the card's PIN codes to another person is prohibited. In order to avoid security risks only a trusted computer should be used, either owned by the voter or a person the voter can trust.

Data flow Diagram :

A Data Flow Diagram (DFD) is a graphical representation of the flow of data within a system. It shows how data moves between different components (processes, data stores, and external entities) and describes the inputs, processes, and outputs of the system.

Key Components of a DFD

1. **External Entities (Sources and Sinks):**

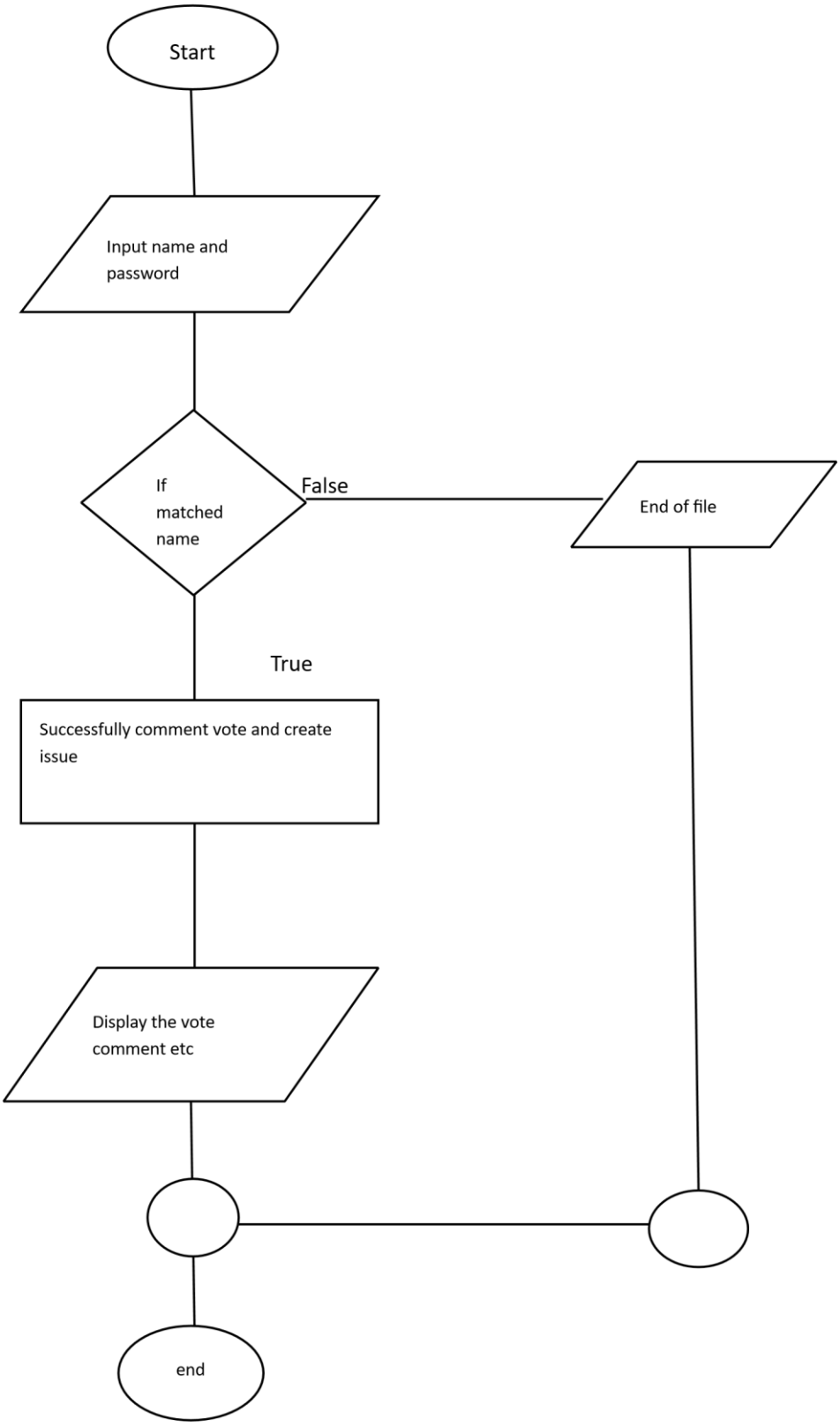
Represented as rectangles, these are outside the system but interact with it by providing inputs or receiving outputs (e.g., users, organizations).

2. **Processes:**

Represented as circles or ovals, these describe activities that transform inputs into outputs (e.g., authentication, vote casting).

3. **Data Stores:** Represented as open-ended rectangles, these show where data is stored within the system (e.g., databases, files).

4. **Data Flows:** Represented as arrows, these indicate the direction of data movement between entities, processes, and data stores.


Start
Input name and password
If matched name
False
End of file
True
Successfully comment vote and create issue
Display the vote comment etc
end

ER DIAGRAM

In software engineering, an entity–relationship model (ER model) is a data model for describing the data or information aspects of a business domain or its process requirements, in an abstract way that lends itself to ultimately being implemented in a database such as a relational database. The main components of ER models are entities (things) and the relationships that can exist among them.

1. Entities

Entities are objects or concepts that represent data to be stored in the database. They are depicted as rectangles.

- **Types of Entities:**
  - Strong Entity: Exists independently of other entities (e.g., Voter, Candidate).
  - Weak Entity: Depends on a strong entity for its existence and is depicted with a double rectangle (e.g., Vote Details).

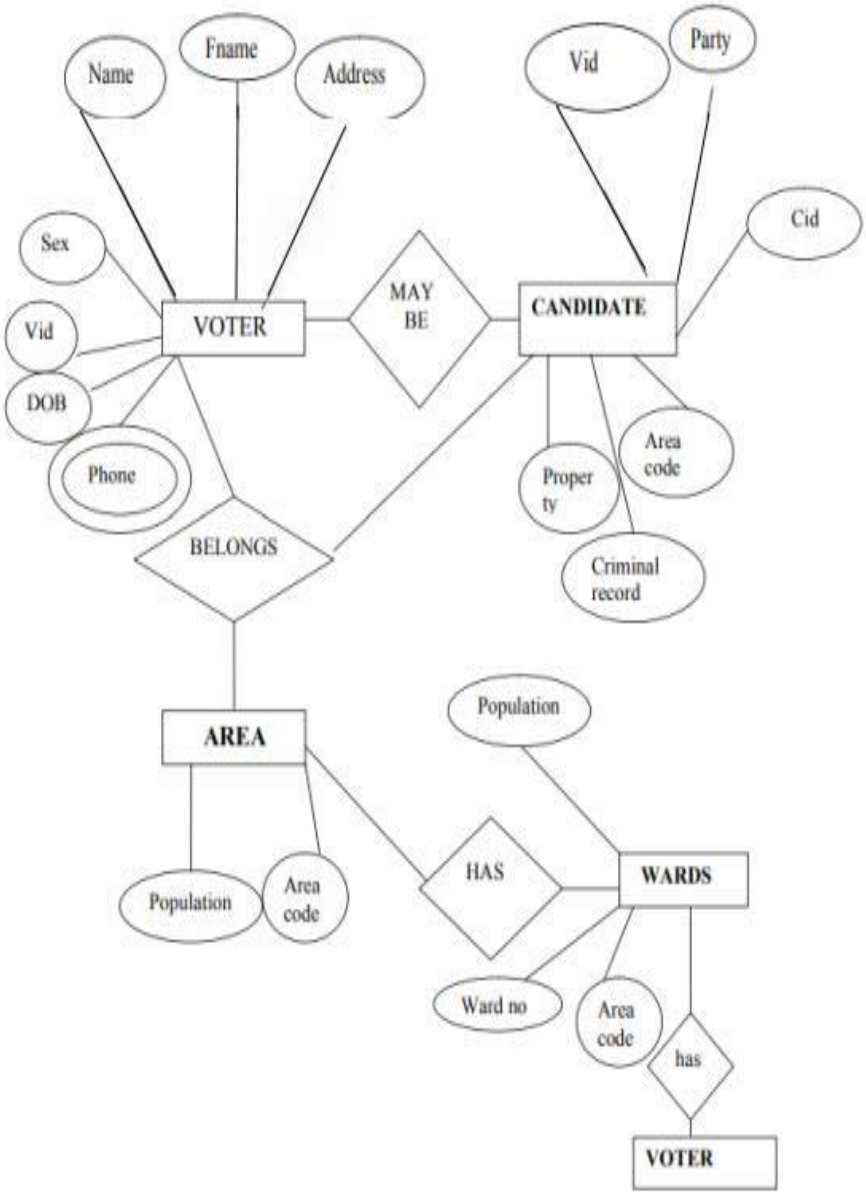
---

2. Attributes

Attributes are the properties or details that describe an entity. They are represented as ovals connected to their respective entities.

- **Types of Attributes:**
  - Simple Attribute: Cannot be broken down further (e.g., Name, Age).
  - Composite Attribute: Can be divided into smaller sub-parts (e.g., Full Name → First Name, Last Name).
  - Derived Attribute: Can be calculated from other attributes (e.g., Age derived from Date of Birth).
  - Multivalued Attribute: Can have multiple values (e.g., Phone Numbers).

Entity Relationship Diagram



Technology (Software Requirements):

Programming Languages

Frontend:

HTML5, CSS3, JAVASCRIPT

Frameworks React.js used for dynamic user interface.

Backend:

Framework used here is Node.js

Database :

MongoDB

Technology (Hardware Requirements):

Development Environment

Processor: Dual core CPU (intel i3, i7 or equivalent)

RAM: 8GB

Storage: 250 GB HDD (preferably SSD for faster access)

Graphics: Integrated graphics are sufficient. Network: Stable Internet connection.

Client Requirements

Processor: Dual core CPU

RAM: 4 GB

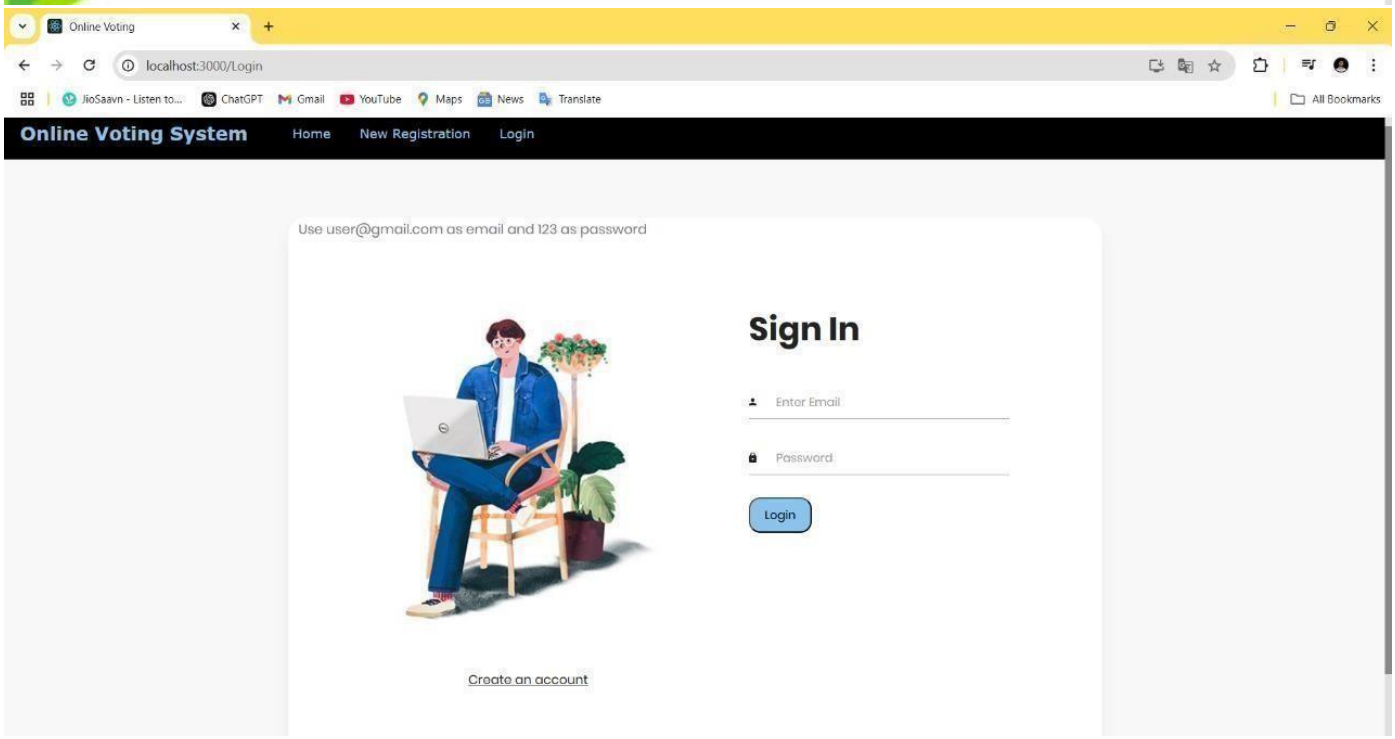
Storage: 16 GB available space

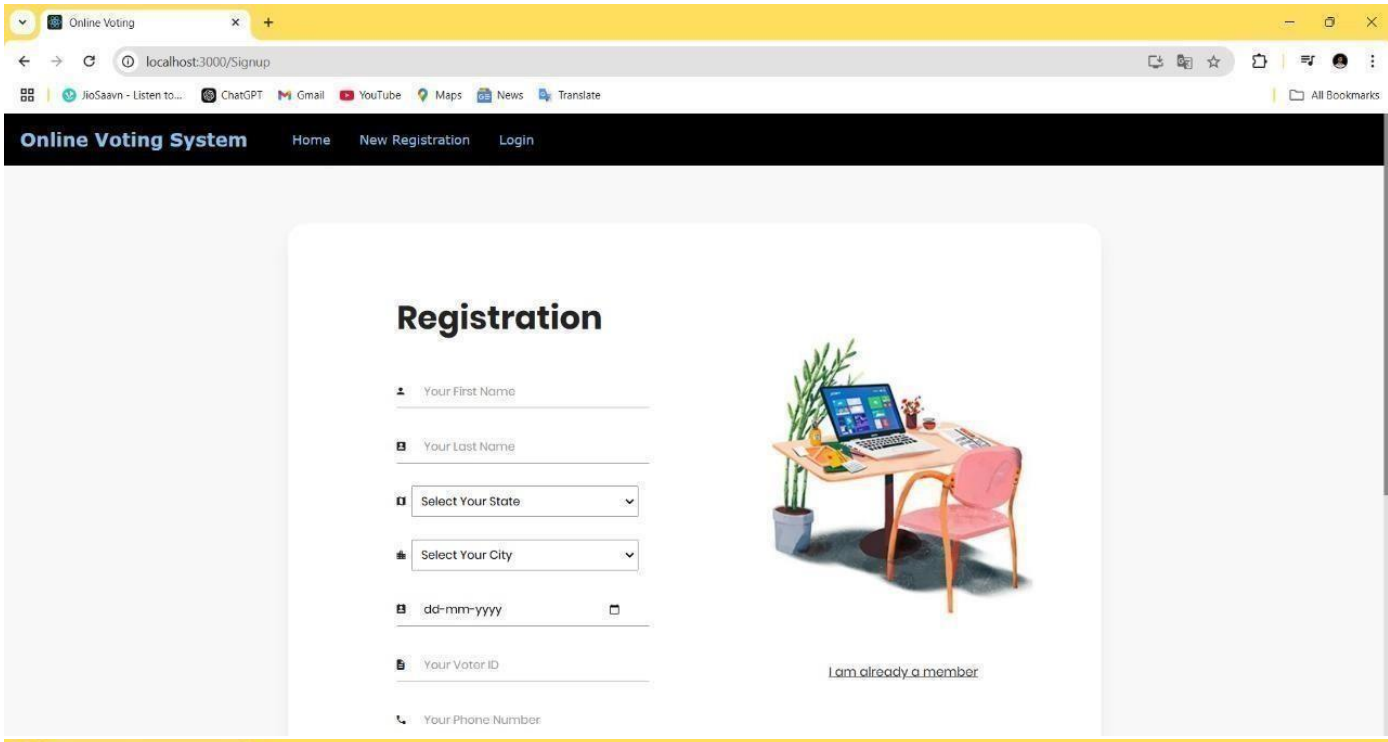
Operating System: Windows , MacOS or recent Linux distribution

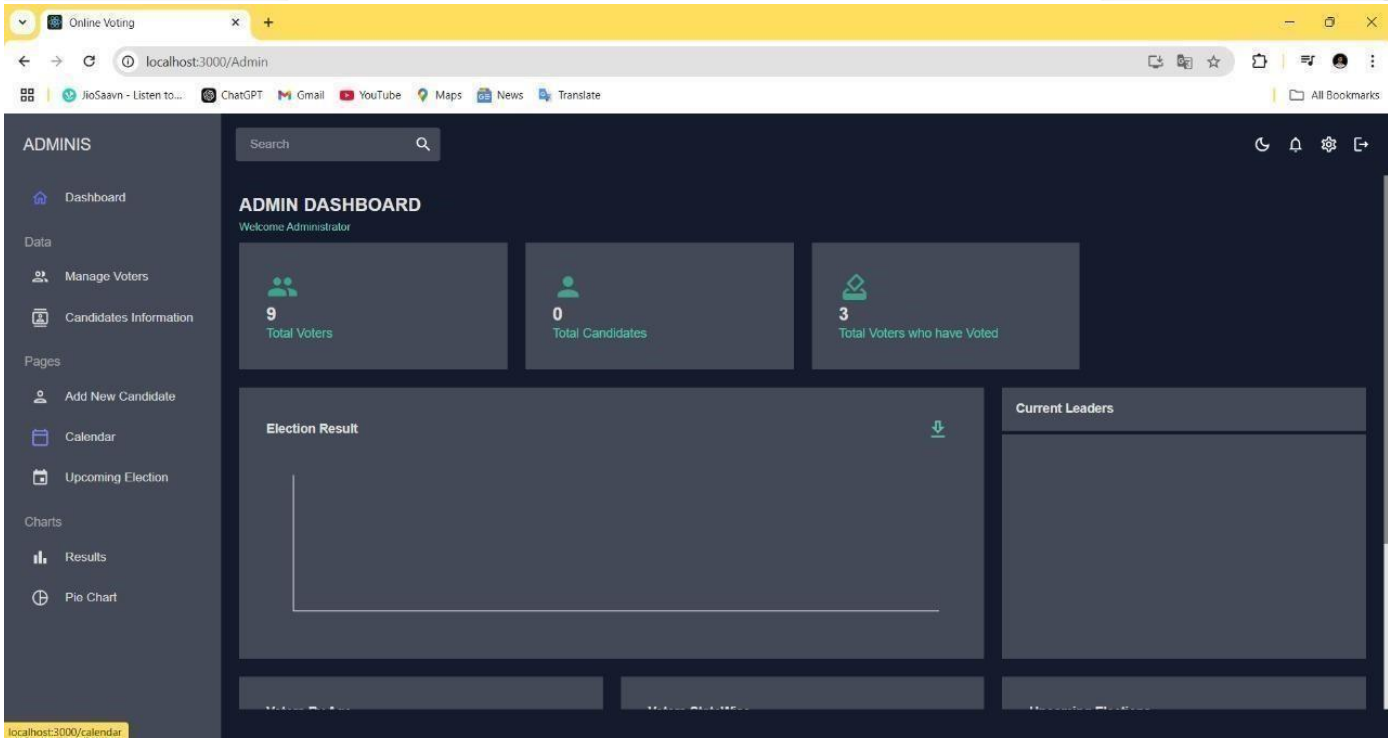
Browser: Latest versions of major browsers (Chrome, Firefox, Opera, Safari, Edge)

Gantt chart of Online Voting System

Project Review (Output of the code):




Online Voting
localhost:3000/Signup
JioSaavn - Listen to...
ChatGPT
Gmail
YouTube
Maps
News
Translate
All Bookmarks
Online Voting System
Home
New Registration
Login
Registration
Your First Name
Your Last Name
Select Your State
Select Your City
dd-mm-yyyy
Your Voter ID
Your Phone Number
I am already a member


Online Voting
localhost:3000/Admin
JioSaavn - Listen to...
ChatGPT
Gmail
YouTube
Maps
News
Translate
All Bookmarks
ADMINIS
Search
Dashboard
Data
Manage Voters
Candidates Information
Pages
Add New Candidate
Calendar
Upcoming Election
Charts
Results
Pie Chart
ADMIN DASHBOARD
Welcome Administrator
9
Total Voters
0
Total Candidates
3
Total Voters who have Voted
Election Result
Current Leaders
localhost:3000/calendar

CONCLUSION

Online voting system is developed by using as front end (HTML,CSS,JAVASCRIPT) and React.js for a Dynamic user Interface. Mongo Db for database in back end to computerize the process for check in and out system This project covers only the basic required to sum up, developing a information system on "online voting system" for was a matter of essence.

BIBILOGRAPHY

1. Alvarez, R. M., Hall, T. E., & Trechsel, A. H. (2009). Internet voting in comparative perspective: The case of Estonia. PS: Political Science & Politics, 42(3), 497-505 https://doi.org/10.1017/S1049096509090798.
2. Chaum, D., Ryan, P. Y. A., & Schneider, S. (2005). A practical, voter-verifiable election scheme. Advances in Cryptology – EUROCRYPT 2005, 118–139. Springer. https://doi.org/10.1007/11426639_7
3. Riera, A., & Brown, P. (2003). Bringing confidence to electronic voting. Electronic Government, 99– 104. Springer. https://doi.org/10.1007/978-3-540-45296-8_14
4. Volkamer, M. (2009). Evaluation of electronic voting: Requirements and evaluation procedures to support responsible election authorities. Springer. https://doi.org/10.1007/978-3-642-00493-1
5. Heiberg, S., Martens, T., & Vinkel, P. (2011). Improving the verifiability of the Estonian Internet voting scheme. EVOTE Conference Proceedings, 141-154. https://doi.org/10.1007/978-3-64227711-3_12