

APPENDIX 1



ONLINE VOTING SYSTEM

A Project Report of Capstone Project – 2

Submitted by

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APPENDIX 2



SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

BONAFIDE CERTIFICATE

Certified that this project report “**Online Voting System**” is the bonafide work of  
“**Siddhant Bhardwaj**” who carried out the project work under my supervision.

**SIGNATURE**

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**HEAD OF DEPARTMENT**

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## ABSTRACT

*The Project is developed for the threat free and user oriented E- Voting System. The E-Voting system is made for the people of the country residing around the world and wants to vote for their representative..The automated ballot elections are called the electronic voting. An online voting system for Indian election is proposed for the first time in this paper. The proposed model has a secure authentication for greater security in the sense that voter high security password is confirmed before the vote is accepted in the main database of Election Commission of India. The additional feature of the model is that the voter can confirm if his/her vote has gone to correct candidate/party. In this model a person can also vote from outside of his/her allotted constituency or from his/her preferred location. In the proposed system the tallying of the votes will be done automatically, thus saving a huge time and enabling Election Commissioner of India to announce the result within a very short period. An online voting system for Indian election is proposed for the first time in this paper. The proposed model has a greater security in the sense that voter high security password is confirmed before the vote is accepted in the main database of Election Commission of India. The additional feature of the model is that the voter can confirm if his/her vote has gone to correct candidate/party. In this model a person can also vote from outside of his/her allotted constituency or from his/her preferred location. In the proposed system the tallying of the votes will be done automatically, thus saving a huge time and enabling Election Commissioner of India to announce the result within a very short period. Keywords: Authentication, Voting, Unique key*



**APPENDIX 3**

**TABLE OF CONTENTS**

Bonafide Certificate.....	i
Acknowledgements .....	ii
Abstract .....	iii
List of Figures .....	iv
List of Abbreviations.....	V
1. INTRODUCTION.....	
1.1 Objective.....	
1.2 Scope.....	
1.3 Problem identification .....	
1.4 Methodology.....	
2. BACKGROUND AND LITERATURE SURVEY.....	
2.1 Existing system.....	
2.2 Requirement Specifications.....	
2.3 Feasibility Study.....	
2.4 Innovativeness and Usefulness.....	
2.5 Modification and improvement over the existing implementation.....	
3. PROCESS MODEL.....	
3.1 Software Process Model Used.....	
3.2 Market Potential and Competitive Advantage .....	
3.3 Project Estimation.....	
4. DESIGN.....	
4.1 Data Flow Diagram.....	
4.2 Entity Relationship Diagram.....	
4.3 Flow Chart .....	

4.4	USE-CASE diagrams.....
4.5	Sequence Diagram.....
4.6	Activity Diagram.....
4.7	Class Diagram.....
4.8	Algorithm.....
5.	TECHNOLOGY AND TOOLS USED.....
5.1	Front-end Tools (With brief description) .....
5.2	Back-end Tools (With brief description) .....
5.3	Operating System (With brief description) .....
5.4	Additional Software requirements (Web browser, utility tools etc.) .....
6.	HARDWARE REQUIREMENT.....
6.1	System Configuration (CPU, RAM, HDD, Network used) .....
7.	CODING.....
8.	TESTING .....
8.1	Testing Method Used .....
8.2	Test case with results .....
8.3	Results analysis .....
9.	Screen Layouts.....
10.	Future Enhancement.....
11.	References

## LIST OF FIGURES

Figure No.	Title	Page No.
1.1	System Model.....	
1.2	ER Diagram.....	
1.3	Use Case Diagram.....	
2.1	Data Flow Diagram.....	
3,2	User Screen.....	

## LIST OF ABBREVIATIONS

### ABBREVIATION

### DESCRIPTION

OS

Operating System



# Chapter 1

## INTRODUCTION

## 1.1 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 e-VOTE 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.

i.) Democracy: The system should be "democratic" in the sense that it will permit only eligible voters to vote (eligibility) and it will ensure that each eligible voter can vote only once (unreusability).

ii.) Privacy: The system should ensure that none of the actors involved in the voting process (organizers, administrators, voters etc.) can link any ballot (contextually) to the voter who cast it, and that no voter can prove that he or she voted in a particular way (unintractability).

iii.) Integrity: The necessary mechanism should be employed in order to guarantee that no one can duplicate his or someone else's vote (duplicability) and no one can change someone else's vote (unchangeability)

iv.) Accuracy: The system functionality should ensure that no one can falsify or modify the result of the voting by eliminating a valid vote or counting an invalid vote in the final tally.

v.) Verifiability: The system should allow and support anyone to independently verify that all

votes have been counted correctly.

vi.) Convenience: The system should allow and assist voters to cast their votes quickly, in one session, and with minimal equipment or special skills.

vii.) Flexibility: The system should allow a variety of ballot formats and it should be customized to the specific characteristics of the voting processes.

viii.) Mobility: The system should not pose any restrictions on the location from which a voter can cast a vote.

ix.) Efficiency: The election can be held in a timely manner (i.e. all computations during the election are done in a reasonable amount of time and voters are not required to wait on other voters to complete the process).

x.) Scalability: The size of the election should not drastically affect performance.

In parallel with the development of the aforementioned e-VOTE functionality and the implementation of the associated voting protocol, the consortium will take into account all relevant European legal and regulatory issues that may pose extra requirements or constraints in terms of the functionality, the equipment, or the security measures. Furthermore, legal issues associated with the use of Internet for electronic voting will be explored, clarified and incorporated into the system.

## 1.2 Scope:

Online Voting System has a good scope in future due to following reasons:

i.) Voter can Vote from anywhere for his/her Constituency.

ii.) Vote count will make easy and fast.

iii.) Invalid Vote will be rejected.

iv.) It Maintains all The Information of all the Candidates and Votes.

- v.) It checks Voter have Voted or Not.
- vi.) You can observe All Information Related to any Voting System Online.
- vii.) It Increase the Voting Percentage.
- viii.) Finally, it makes Easy Voting by Avoiding problems like Security, Booth capturing.

The actual purpose of going for this system is to make the organizational process to get speed up.

### 1.3 Problem Identification:

The percentage of polling on the day of elections is not satisfactory as majority of the people are not coming to vote and thinks is just as a wastage of time. The manual voting system takes long time as there is a lot of paper work first and then human effort is also there for counting of the votes. Manual voting consumes almost 4-6 hrs. (approx.) of every voter which is surely a headache.

The voting will be done online such that there is no need to come at the place on the time of elections and the people can vote from the home or from any other place. A key will be provided to every person, so that on the time of elections they can easily login on the election link and can use his/her vote.

### 1.4 Methodology:

A process model for software engineering is choose based on the nature of the project and application, the methods and tools to be used, and the controls and deliverables that are required. The model is used to build the —ONLINE VOTING SYSTEM software is —The Incremental Model.

Incremental Model is a process of software development where requirements are broken down into multiple standalone modules of software development cycle. Incremental development is done in steps from analysis design, implementation, testing/verification, maintenance.

Each iteration passes through the requirements, design, coding and testing phases. And each subsequent release of the system adds function to the previous release until all designed functionality has been implemented.

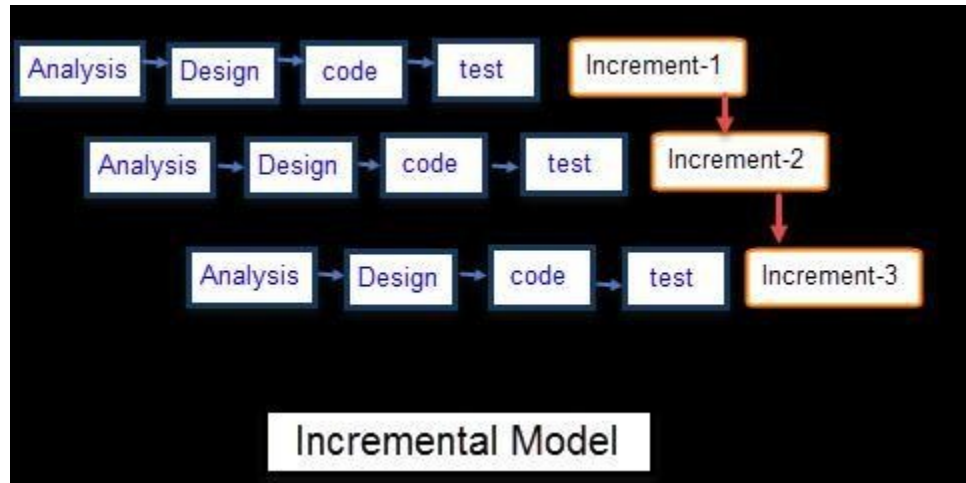


Fig 1.4: Incremental Model

An Incremental module includes:

- i.) System development is broken down into many mini development projects.
- ii.) Partial systems are successively built to produce a final total system.
- iii.) Highest priority requirement is tackled first.
- iv.) Once the requirement is developed, requirement for that increment are frozen.

# Chapter 2

## BACKGROUND AND LITERATURE SURVEY

## 2.1 Existing System:

### i.) Paper Based Voting:

The voter gets a blank ballot and use a pen or a marker to indicate he want to vote for which candidate. Hand-counted ballots is a time and labor consuming process, but it is easy to manufacture paper ballots and the ballots can be retained for verifying this type is still the most common way to vote.

### ii.) Lever voting machine:

Lever machine is peculiar equipment and each lever is assigned for a corresponding candidate. The voter pulls the lever to poll for his favourite candidate. This kind of voting machine can count up the ballots automatically. Because its interface is not user friendly enough, giving some training to voters is necessary.

### iii.) Direct recording electronic voting machine:

This type, which is abbreviated to DRE, integrates with keyboard; touch screen, or buttons for the voter to press to poll. Some of them lay in voting records and counting the votes is very quickly. But the other DRE without voting records are doubted about their accuracy.

### iv.) Punch cards:

The voter uses metallic hole punch to punch the hole on the blank ballot. It can count votes automatically , but if the voter's perforation is incomplete the result is probably determined wrongfully.

### v.) Optical voting machine:

After each voter fills a circle correspond to their favourite candidate on the blank ballot, this machine selects the darkest mark on each ballot for the vote then computes the total result. This

kind of machine counts up ballots rapidly. However, if the voter fills over the circle, it will lead to the error result of optical scan.

## 2.2 Requirement Specification:

The basic function of requirement analysis is that it translates the ideas in the mind of the clients into a formal document. Thus the output of this phase is a set of precisely specified requirements which are complete and consistent. This document is called Software Requirement Specification. In order to provide the user with a feeling of community, the following requirement should be taken care:

- Each user will have to create their own profile that they can log into each time they visit the site.
- If the user does not create or log in to an account they will only be able to browse , they will not be able to use any of the sites other functionalities.
- In order to create an account, the user must have a Aadhaar card no., email id, and mobile number (verified by server).
- Once they create an account the user will be able to Log in and out of the system.
- The admin page is also made where the admin can organize the election (like election for chief minister, prime minister etc.).

## 2.3 Feasibility Study

Depending on the results of the initial investigation the survey is now expanded to a more detailed feasibility study. “FEASIBILITY STUDY” is a test of system proposal according to its workability, impact of the organization, ability to meet needs and effective use of the resources.

It focuses on these major questions:



1. What are the user's demonstrable needs and how does a candidate system meet them?
2. What resources are available for given candidate system?
3. What are the likely impacts of the candidate system on the organization?
4. Whether it is worth to solve the problem?

During feasibility analysis for this project, following primary areas of interest are to be considered. Investigation and generating ideas about a new system does this. Eight steps involved in the feasibility analysis are:

- Form a project team and appoint a project leader.
- Prepare system flowcharts.
- Enumerate potential proposed system.
- Define and identify characteristics of proposed system.
- Determine and evaluate performance and cost effective of each proposed system.
- Weight system performance and cost data.
- Select the best-proposed system.
- Prepare and report final project directive to management.

#### i.) Technical feasibility

A study of resource availability that may affect the ability to achieve an acceptable system. This evaluation determines whether the technology needed for the proposed system is available or not.

- Can the work for the project be done with current equipment existing software technology & available personal?
- Can the system be upgraded if developed?
- If new technology is needed then what can be developed?
- This is concerned with specifying equipment and software that will successfully satisfy the

user requirement.

## ii.) Economical feasibility

Economic justification is generally the “Bottom Line” consideration for most systems.

Economic justification includes a broad range of concerns that includes cost benefit analysis. In this we weight the cost and the benefits associated with the candidate system and if it suits the basic purpose of the organization i.e. profit making, the project is making to the analysis and design phase.

The financial and the economic questions during the preliminary investigation are verified to estimate the following:

- The cost to conduct a full system investigation.
  - The cost of hardware and software for the class of application being considered. The benefits in the form of reduced cost.
- The proposed system will give the minute information, as a result the performance is improved
- This feasibility checks whether the system can be developed with the available funds. The Online voting system does not require enormous amount of money to be developed. This can be done economically if planned judiciously, so it is economically feasible. The cost of project depends upon the number of man-hours required.

## iii.) Operational Feasibility

It is mainly related to human organizations and political aspects. The points to be considered are:

- What changes will be brought with the system?
- What organization structures are disturbed?

- What new skills will be required? Do the existing staff members have these skills? If not, can they be trained in due course of time?

The system is operationally feasible as it very easy for the End users to operate it. It only needs basic information about Windows platform.

#### iv.) Schedule feasibility

Time evaluation is the most important consideration in the development of project. The time schedule required for the developed of this project is very important since more development time effect machine time, cost and cause delay in the development of other systems. A reliable Online voting system can be developed in the considerable amount of time.

## 2.4 Innovativeness and Usefulness

The proposed system is divided into four stages: Register, Authentication, Voting and Counting. All are based on the Client-Server model.

- i.) Register Stage: First, all the users who want to vote in the election ought to register in advance. Here, the user is provided with a unique username and password that would later be used to log-in on an election day.
- ii.) Authentication: The registered voters will need to log-in using access credentials provided at the registration stage. They will be allowed to vote once they are verified.
- iii.) Voting Stage: The voter casts his vote once he is verified. Then, the vote is encrypted and stored.
- iv.) Counting Stage: All the votes cast are decrypted and then result is declared.

This system has many uses as it will help in election and avoids invalid voting and also deals with:

- i.) Planned approach towards working: - The working in the organization will be well planned

and organized. The data will be stored properly in data stores which will help in retrieval of information as well as its storage.

ii.) Accuracy: - The level of accuracy in the proposed system will be higher. All operation would be done correctly and it ensures that whatever information is coming from the center is accurate.

iii.) Reliability: - The reliability of the proposed system will be high due to the above stated reasons. The reason for the increased reliability of the system is that now there would be proper storage of information.

iv.) No Redundancy: - In the proposed system utmost care would be that no information is repeated anywhere, in storage or otherwise. This would assure economic use of storage space and consistency in the data stored. Immediate retrieval of information: - The main objective of proposed system is to provide for a quick and efficient retrieval of information.

v.) Immediate storage of information: - In manual system there are many problems to store the largest amount of information.

vi.) Easy to Operate: - The system should be easy to operate and should be such that it can be developed within a short period of time and fit in the limited budget of the user.

# Chapter 3

## PROCESS MODEL

### 3.1 Software Process Model Used

A process model for software engineering is chosen based on the nature of the project and application, the methods and tools to be used, and the controls and deliverables that are required.

The model is used to build the “ONLINE VOTING SYSTEM” software is “The Prototyping Model”. The prototyping paradigm is:

“Incremental Model”

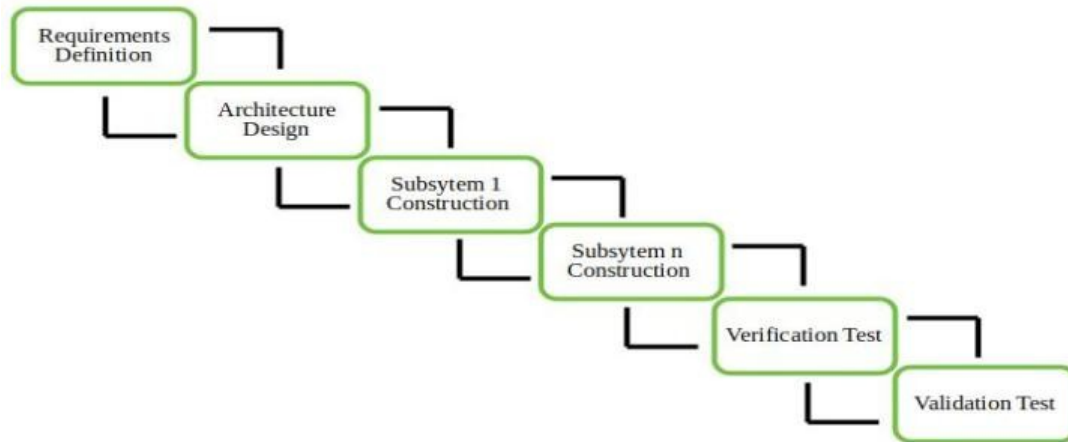


Fig 3.1: Incremental Model

#### INCREMENTAL MODEL

Incremental Model is a process of software development where requirements are broken down into multiple standalone modules of software development cycle. Incremental development is done in steps from analysis design, implementation, testing/verification, maintenance.

#### ADVANTAGES

- The software will be generated quickly during the software life cycle.
- A customer can respond to each building.
- Errors are easy to be identified.

### 3.2 Market Potential and Competitive Advantage



Fig 3.2: Online voting

### Advantages of Online Voting

- **Empowerment:** Voting is the most powerful way for members to have a voice in the leadership and direction of their association. When allowed to vote in fair and open elections, members feel a greater sense of value, ownership, and responsibility. Online elections help empower members of associations, societies, and other democratic organizations by making voting easy and convenient.
- **Accessibility:** Online voting allows association members to access their ballots from anywhere at any time, provided they have an Internet connection. This makes casting a vote convenient and fast. Members can cast their votes from home, from work or “on the go” via their mobile devices.
- **Cost effectiveness:** Online voting reduces election budgets by limiting production costs. Paper, printing, and postage costs are all significantly lower for online elections than for traditional voting

methods. In addition, staff will save time because online elections eliminate the need to assemble ballot packages and manually tabulate votes.

- Security and confidentiality: A properly designed, secure online voting system has safeguards in place to protect voting information and voter identities.

## Challenges of Online Voting

- Legal and bylaw issues: You need to check state statutes and your association's bylaws to make sure that online voting is an acceptable election method. Often, state law or internal policy clearly states if online methods are acceptable. When in doubt, check with legal counsel. Your organization's attorney should be able to advise you as to whether you can immediately move forward with online voting. If either state law or internal guidelines prohibit electronic methods, your challenge will be to revise the applicable statute or policy to permit online voting.
- Learning curve: As with any new process, online election methods might cause anxiety and trepidation for some members. You'll need to invest in a well-planned promotion and education strategy to properly teach and reassure members about the new election process. This plan will require buy-in from leadership and must be large enough in scope to reach all members.
- Not all organizations are a good fit: Online elections are not the best answer for every association, nor are all association members computer-savvy. Some members may not have easy access to the Internet. According to the Pew Internet and American Life Project, only 42 percent of Americans ages 65 and older use the Internet. Also, only 67 percent of people living in rural communities use the Internet compared to 81 percent of people living in urban areas. This means that an association consisting primarily of older members who live in sparsely populated areas should consider maintaining some form of traditional voting practice. Before investing in an online



voting system, take the time to break down your association's demographics and tendencies so that you can build a voting process that best serves the needs of *your* members.

- Expertise required: Building an online voting system requires programming experience and an understanding of election processes. Often, associations need to look outside the organization to establish an online voting system either because their staff lacks the necessary expertise or because building such a system internally would put an unreasonable strain on employee resources. If you use an outside vendor, your challenge will be to find an election partner as serious about your election as you are. Ask potential partners for references, and research their track records of serving fellow associations.

### 3.3 Project Estimation

Barry Boehm introduced a hierarchy of software estimation models bearing the name COCOMO, for Constructive Cost Model. The original COCOMO model became one of the most widely used and discussed software cost estimation models in the industry. The COCOMO II application composition model uses object points.

The object point is an indirect software measure that is computed using counts of the no. of screens (user interface), reports and components likely to be required to build the application. Each object instance is classified into one of three complexity levels using criteria suggested by Boehm.

The object point count is then determined by multiplying the original number of object instances by the weighting factor in and summing to obtain a total object point count. When component-based development or general software reuse is to be applied, the percent of reuse (%reuse) is estimated and the object point count is adjusted:

$$NOP = (\text{object points}) \times [(100 - \%reuse)/100],$$

where NOP is defined as new object points.

To derive an estimate of effort based on the computed NOP value, “productivity rate” must be derived.

$$PROD = NOP/person-month$$

Table 3.1 presents the productivity rate for different levels of developer experience and development environment maturity. Once the productivity rate has been determined, an estimate of project effort can be derived as

$$Estimated\ effort = NOP/PROD$$

Objective Type	No. Of Objects	Complexity Weight			Count
		Simple	Medium	Difficult	
Screen	4	1(2)	2(2)	3(1)	7
Report	2	2(2)	5(1)	8(0)	9
3GL Component	2			10(2)	20
Object Points Sum					36

Fig 3.3: Table of Project Estimation

Data used in estimating effort are:

- (1) Object points is 36(taken from table 3.2)
- (2) Estimated reuse is 36%
- (3) Prod is 13 (average value taken)

$$= 36 * [(100 - 35) / 100]$$

$$= 24$$

$$= 24 / 13$$

$$= 2 \text{ person-months}$$

Hence estimated effort of the project is 2 person-months

## -ESTIMATING SCHEDULE

Putnam and Myers suggest a set of equations derived from the software equation. Minimum development time is defined as

$$LOC/P$$

$$t_{min} = 8.14$$

in months for  $t_{min} > 6$  months

Since project's time period is less than 6 months, the above equation cannot be applied.

An estimation model of the form:

$E = [LOC - B.333P] 3 \times (1/t^4)$  (equation 1) where  $E$  = effort in person-months or person-years  
 $t$  = project duration in months or years

$B$  = "special skills factor"

$P$  = "productivity parameter"

Calculating development time for project, using equation 1 and effort calculated in section 3.2

$$2 = [1000 - 0.01.3338000] 3 \times (1/t^4)$$

$t^4 = 0.06$ . Hence estimated schedule of the project is 0.06 months.

## RISK TABLE

A table provides a project manager with a simple technique for risk production. A risk table is sorted by probability and impact to rank risks. A project team begins by listing all risks in the 1<sup>st</sup> column of the table. This can be accomplished with the help of the risk item checklist referenced. Each risk is categorized in the 2nd column. The probability of occurrence of each risk is entered in the next column of the table. Next, the impact of each risk is assessed. Each risk component is assessed using the characterization presented and an impact category is determined. The categories

for each of the four risk components-performance, support, cost and schedule-are averaged to determine an overall impact value.

Once the first four columns of the risk table have been completed, the table is sorted by probability and by impact. High-probability, high-impact, risk-impact risks percolate to the top of the table and low-probability risks drop to the bottom.

# Chapter 4

## Design

## 4.1 Data Flow Diagram

DFD: Level 0

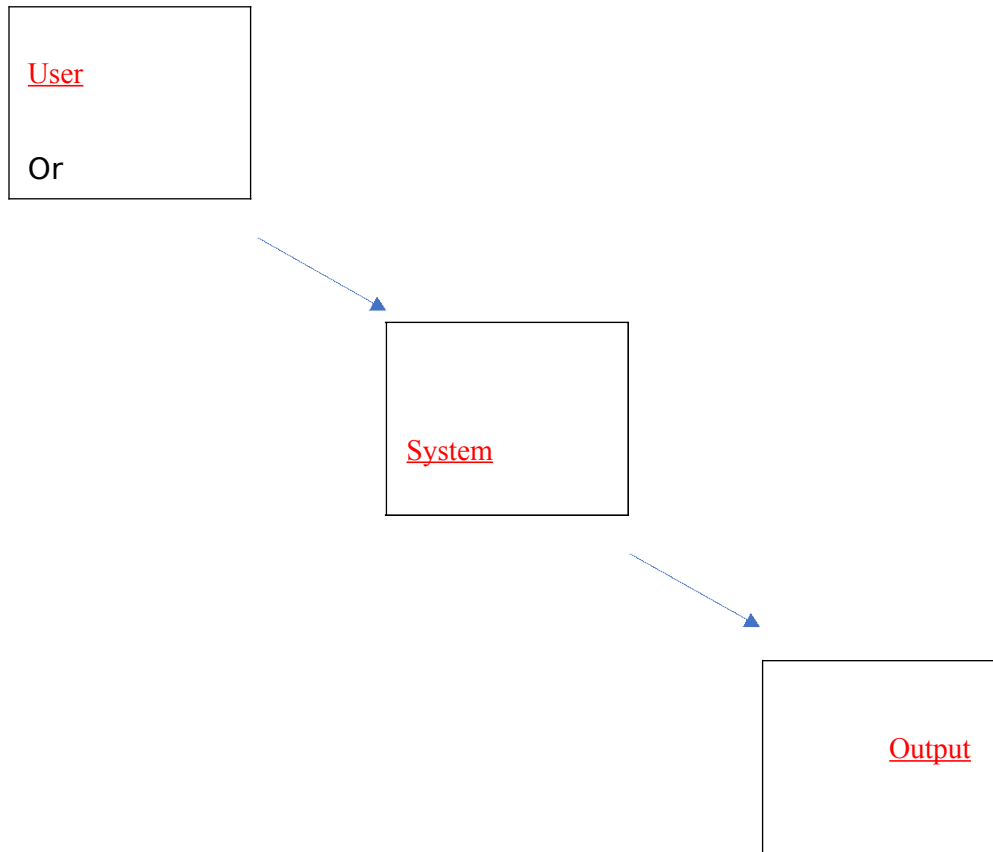


Fig 4.1: Data Flow Diagram Level 0

DFD Level-0

The above diagram is a 0-level DFD that only shows the flow of data between the various and the system. In online voting system the Administrator is the controller of the system and all the decisions are made by him. The Administrator can handle the entire voter and their details, voting

details etc. and view details of them and he can update that detail also. User or Administrator  
Output System.

DFD: Level 1:

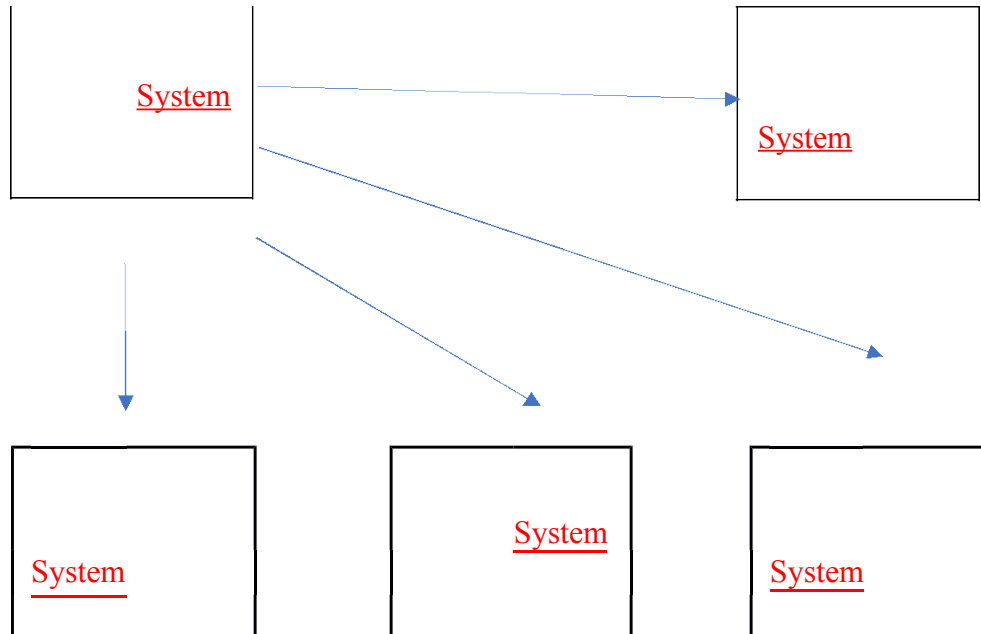


Fig 4.2: Data Flow Diagram Level 1

The above shown diagram is a 1-level Data Flow Diagram for the Online voting system. According to this DFD various process are done after login process. The Administrator can register voter. The ELECTION COMMISSION can register the voters and voter can use their voting rights. The voter can view the final report after giving vote.

DFD: Level 2

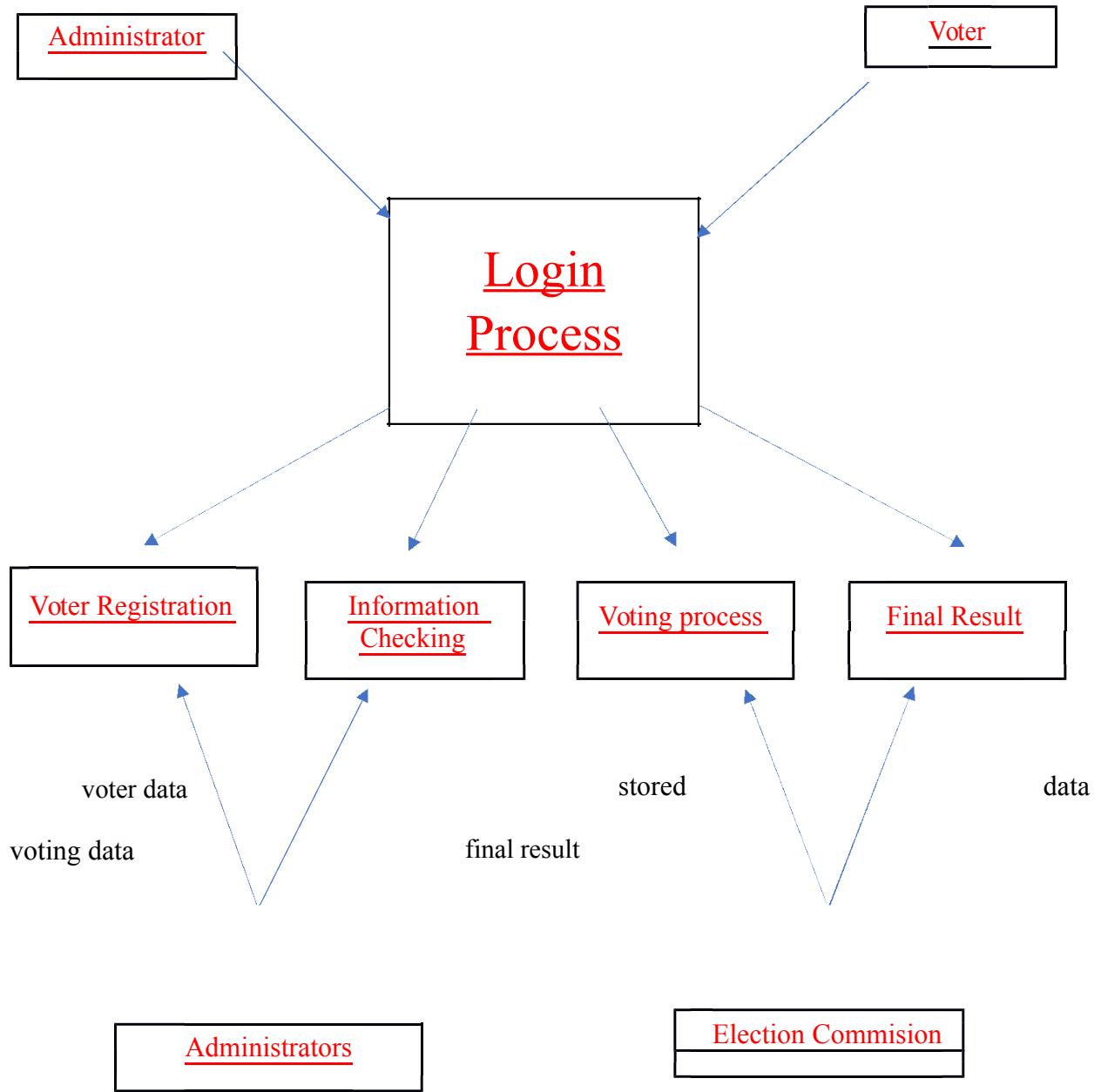


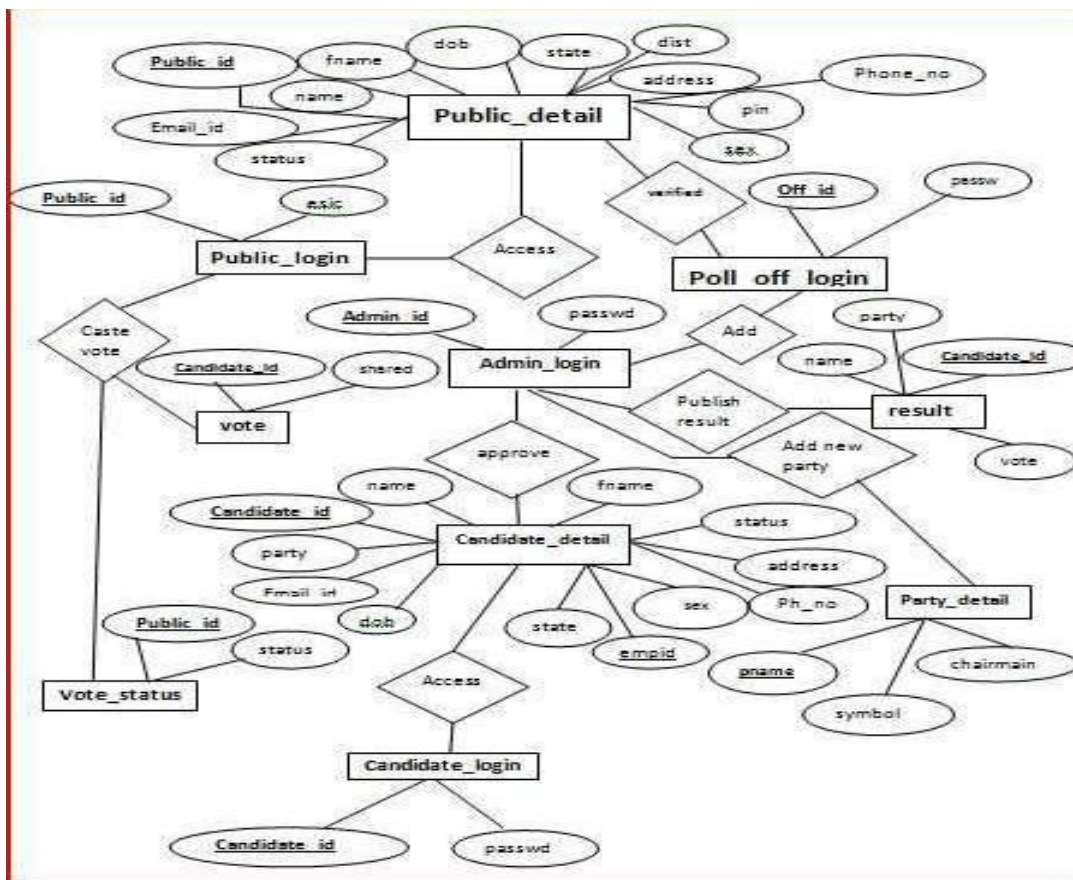
Fig 4.3: Data Flow Diagram Level 2



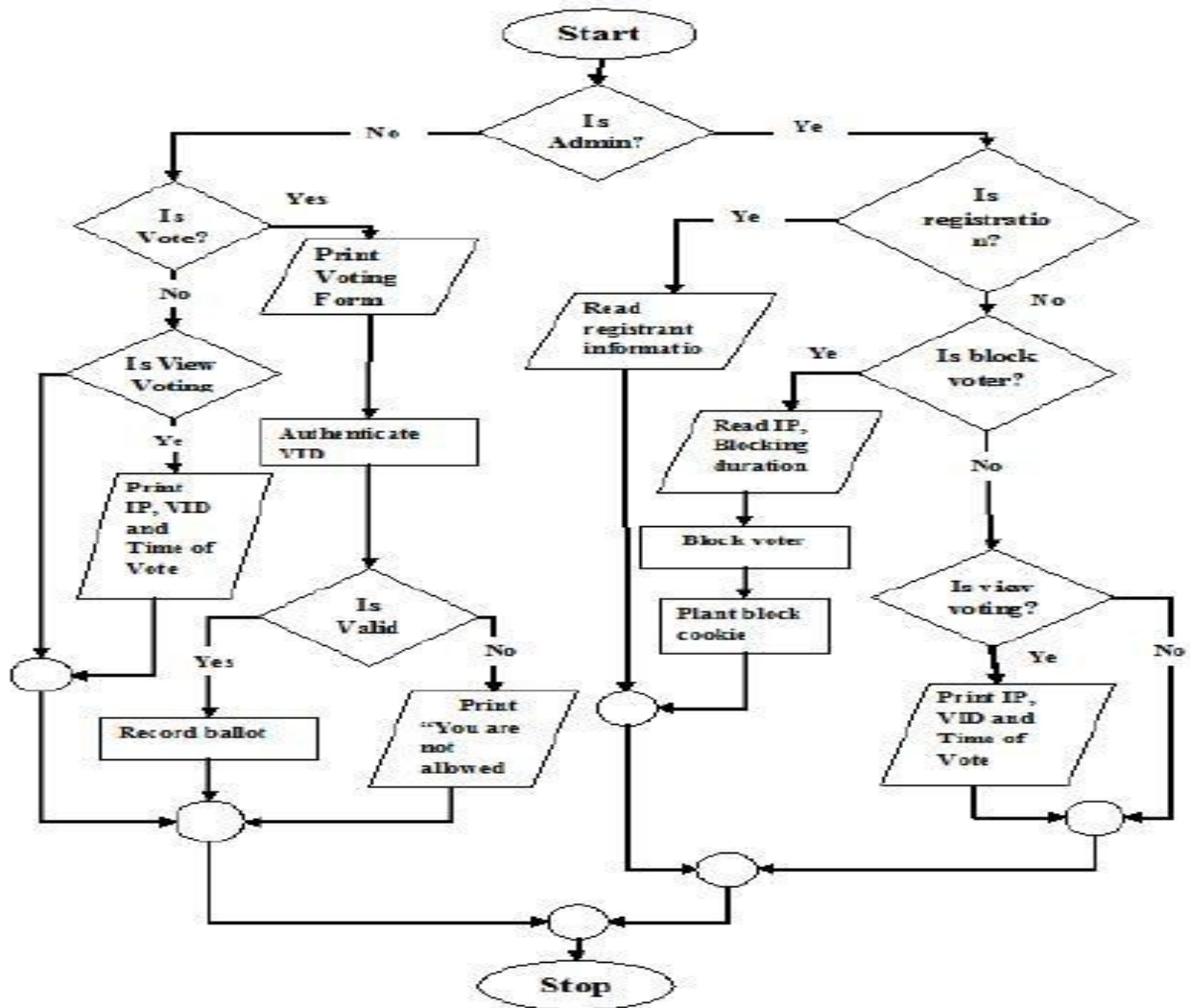
## DFD: Level 2.1

The above shown diagram is a 2.1 level Data Flow Diagram for the Online voting system. According to this DFD the Administrator can register the voter information. Administrator can allow or denies the voter. A voter can give vote if all the information filled by him/her are correct.

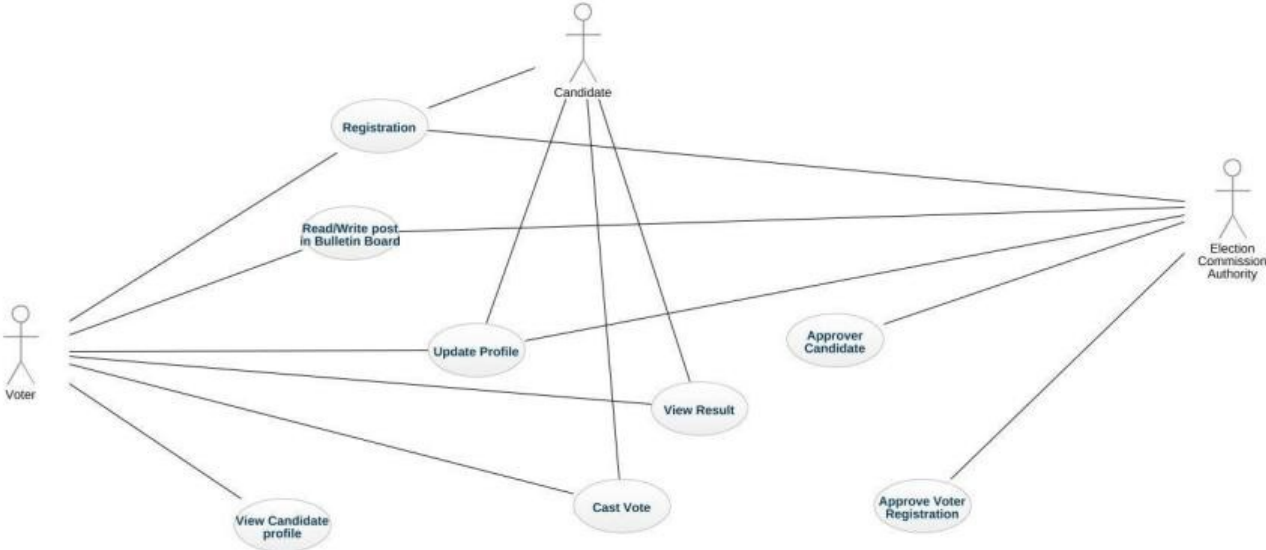
## 4.2 Entity Relationship Diagram



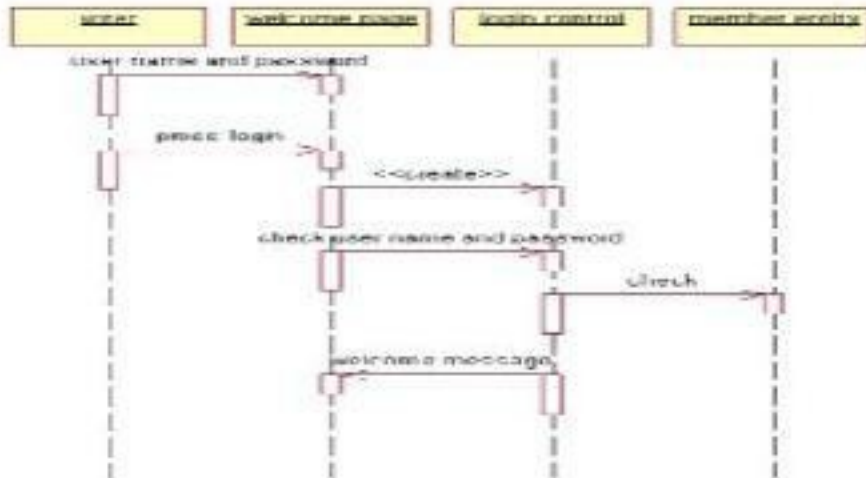
### 4.3 Flow Chart



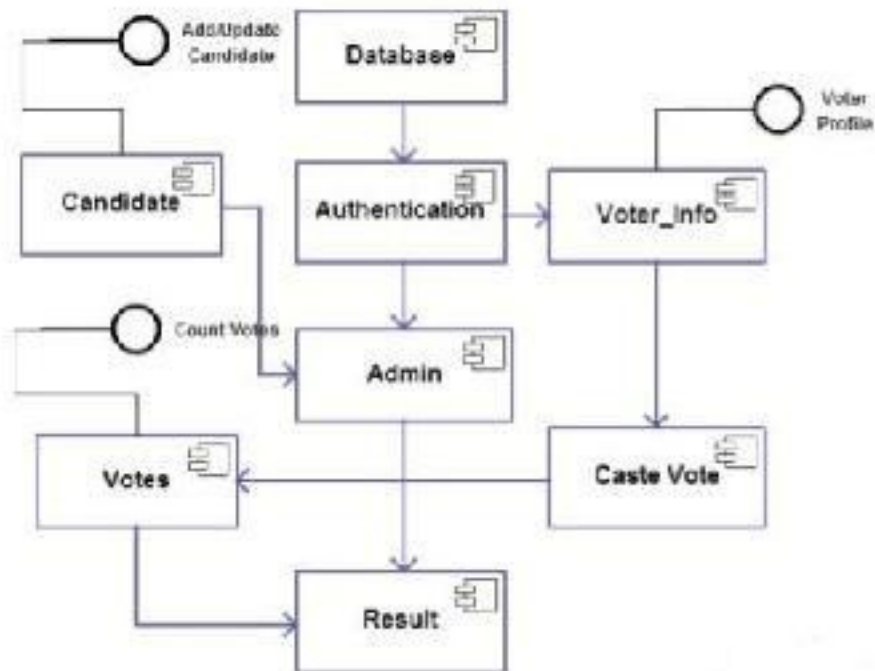
### 4.4 USE-CASE Diagram



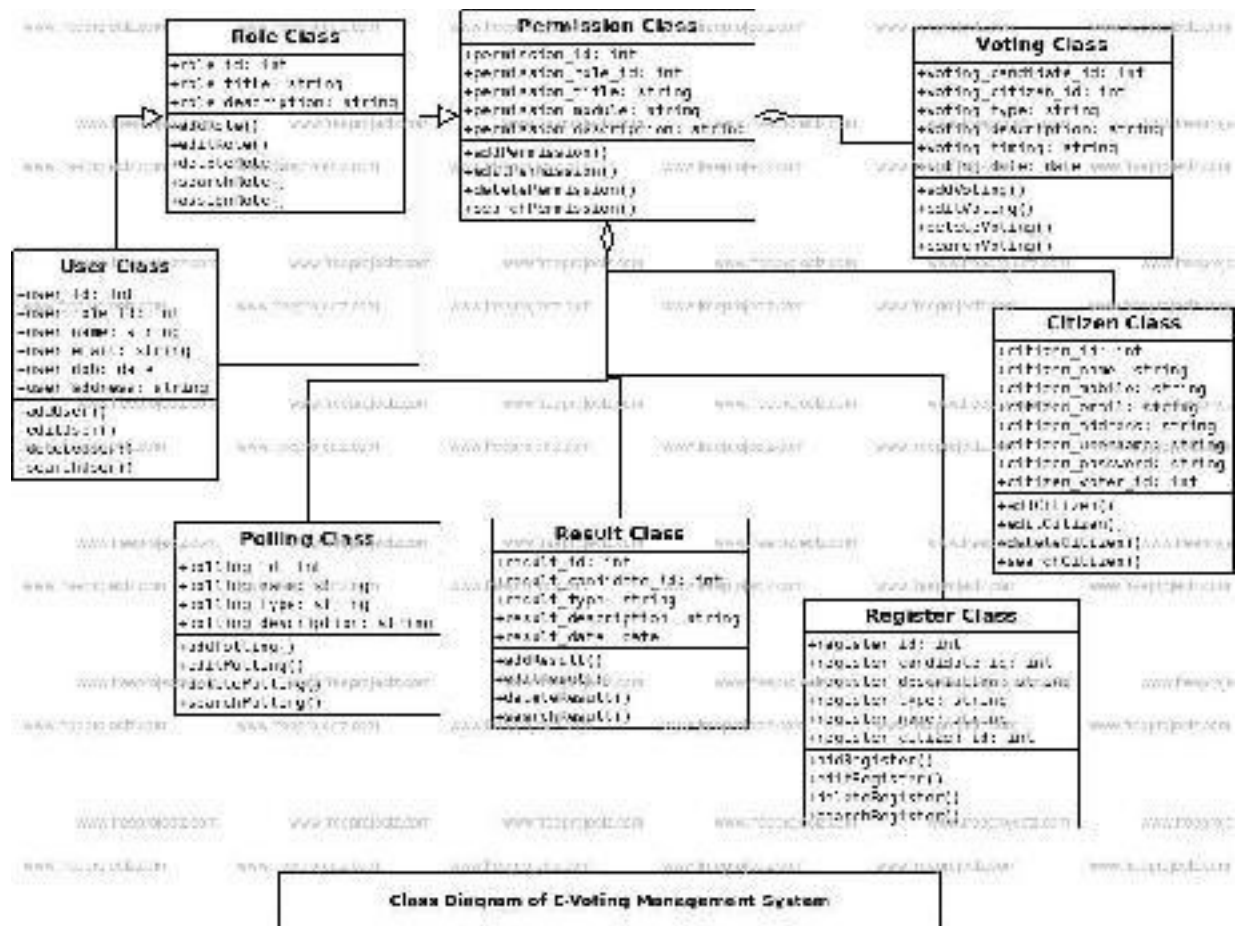
## 4.5 Sequence Diagram



### 8.3.4 Component diagram:



## 4.6 Class Diagram



## 4.7 Algorithm

The public key in this cryptosystem consists of the value  $n$ , which is called the modulus, and the value  $e$ , which is called the public exponent. The private key consists of the modulus  $n$  and the value  $d$ , which is called the private exponent. An RSA public-key / private-key pair can be generated by the following steps:

1. Generate a pair of large, random prime's  $p$  and  $q$ .
2. Compute the modulus  $n$  as  $n = p \cdot q$ .

3. Select an odd public exponent  $e$  between 3 and  $n-1$  that is relatively prime to  $p-1$  and  $q-1$ .
4. Compute the private exponent  $d$  from  $e$ ,  $p$  and  $q$ .
5. Output  $(n, e)$  as the public key and  $(n, d)$  as the private key. The encryption operation in the RSA cryptosystem is exponentiation to the  $e$ th power

$$c = \text{ENCRYPT}(m) = m^e \bmod n$$

The input  $m$  is the message; the output  $c$  is the resulting cipher text. In practice, the message  $m$  is typically some kind of appropriately formatted key to be shared. The actual message is encrypted with the shared key using a traditional encryption algorithm. This construction makes it possible to encrypt a message of any length with only one exponentiation.

The decryption operation is exponentiation to the  $d$ th power modulo  $n$ :

$$m = \text{DECRYPT}(c) = c^d \bmod n.$$

The relationship between the exponents  $e$  and  $d$  ensures that encryption and decryption are inverses, so that the Decryption operation recovers the original message  $m$ . Without the private key  $(n, d)$  (or equivalently the prime factors  $p$  and  $q$ ), it's difficult because given only  $n$ ,  $e$ , and  $c$ , but not the prime factors, it appears to be quite hard to recover the value  $m$ . to recover  $m$  from  $c$ . Consequently,  $n$  and  $e$  can be made public without compromising security, which is the basic requirement for a public-key cryptosystem.

The fact that the encryption and decryption operations are inverses and operate on the same set of inputs also means that the operations can be employed in reverse order to obtain a voter ID scheme

following Diffie and Hellman's model. A message can be digitally signed by applying the decryption operation to it, i.e., by exponentiation it to the d t h power:

$$s = \text{VOTERID}(m) = md \pmod{n}.$$

The digital signature can then be verified by applying the encryption operation to it and comparing the result with and/or recovering the message:

$$m = \text{VERIFY}(s) = se \pmod{n}.$$

In practice, the plaintext  $m$  is generally some function of the message, for instance a formatted one-way hash of the message. This makes it possible to sign a message of any length with only one exponentiation

“Voter Account Maintenance”

When any voter registers him/her self for voting process then this system verify voter is valid or not, if voter is valid then creates an account of that voter and activated his/her account for particular election date, Once any individual passes the authenticity criteria, he/she will be logged into his/her voting account. We can easily restrict a voter from logging into his/her voting account more than once during that elections date

# Chapter 5

## TECHNOLOGY AND TOOLS USED



## 5.1 Front-end Tools:

### 1. HTML:

HTML is the language for describing the structure of Web pages. HTML gives authors the means to:

Publish online documents with headings, text, tables, lists, photos, etc.

Retrieve online information via hypertext links, at the click of a button.

Design forms for conducting transactions with remote services, for use in searching for

information, making reservations, ordering products, etc.

Include spread-sheets, video clips, sound clips, and other applications directly in their documents.

## 2. CSS:

CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language. The separation of HTML from CSS makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments. This is referred to as the separation of structure (or: content) from presentation.:

## 3. JavaScript:

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

## 4. JSP:

JSP technology is used to create web application just like Servlet technology. It can be thought of as an extension to Servlet because it provides more functionality than servlet such as expression language, JST. The JSP syntax adds additional XML-like tags, called JSP actions, to be used to invoke built-in functionality. Additionally, the technology allows for the creation of JSP tag libraries that act as extensions to the standard HTML or XML tags. Tag libraries provide a platform independent way of extending the capabilities of a Web server.

JSPs are compiled into Java Servlets by a JSP compiler. A JSP compiler may generate a servlet in Java code that is then compiled by the Java compiler, or it may generate byte code for the servlet directly. JSPs can also be interpreted on-the-fly, reducing the time taken to reload changes. Architecturally, JSP may be viewed as a high-level abstraction of servlets that is implemented as an extension of the Servlet 2.1 API. Both servlets and JSPs were originally developed at Sun Microsystems. Starting with version 1.2 of the JSP specification, JavaServerPages have been developed under the Java Community Process. JSR 53 defines both the JSP 1.2 and Servlet 2.3 specifications and JSR 152 defines the JSP 2.0 specification. As of May 2006 the JSP 2.1 specification has been released under JSR 245 as part of Java EE 5.

## 5.2 Back-end Tools:

### 1. MYSQL:

MySQL was a free-software database engine originally developed and first released in 1995. MySQL is named after My, the daughter Michael Widenius, of one of the product's originators. It was originally produced under the GNU General Public License, in which source code is made freely available. MySQL is very popular for Web-hosting applications because of its plethora of Web-optimized features like HTML data types, and because it's available for free. It is part of the Linux, Apache, MySQL, PHP (LAMP) architecture, a combination of platforms that is frequently used to deliver and support advanced. Web applications. MySQL runs the back-end databases of some famous websites, including Wikipedia, Google and Facebook- a testament to its stability and robustness despite its decentralized, free-for-all philosophy. MySQL Features:

MySQL is a database management system.

MySQL is a relational database management system.

MySQL software is Open Source.

The MySQL Database Server is very fast, reliable, and easy to use.

## 2.Database:

A database is a collection of information that is organized so that it can be easily accessed, managed and updated. Data is organized into rows, columns and tables, and it is indexed to make it easier to find relevant information. Data gets updated, expanded and deleted as new information is added. Databases process workloads to create and update themselves, querying the data they contain and running applications against it. Contributor(s): Allan Leake and Adam Hughes

Computer databases typically contain aggregations of data records or files, such as transactions, product catalogs and inventories, and customer profiles.

Typically, a database manager provides users with the ability to control read/write access, specify report generation and analyze usage. Some databases offer ACID (atomicity, consistency, isolation and durability) compliance to guarantee that data is consistent and that transactions are complete.

## 3. Relational Database

There are different ways to organize data in different ways in database; relational databases are one of the most effective. Relational database systems are an application of mathematical set

A table represents some class of objects that are important to an organization. For example, a company may have a database with a table for employees, another table for customer, and another for stores. Each table is built of columns and rows. Each column represents some attribute of the object represented by the table. For example, an Employee table that have a column such as First Name, Last Name, EmpId, Department, and Job title.

A database system comprises two components:

Programs that provide an interface for client-based users to access data.

The database structure that manages and stores the data on the serve.

### 3.NetBeans IDE:

NetBeans IDE is the official IDE for Java 8. With its editors, code analyzers, and converters, you can quickly and smoothly upgrade your applications to use new Java 8 language constructs, such as lambdas, functional operations, and method references.

Batch analyzers and converters are provided to search through multiple applications at the same time, matching patterns for conversion to new Java 8 language constructs.

With its constantly improving Java Editor, many rich features and an extensive range of tools, templates and samples, NetBeans IDE sets the standard for developing with cutting edge technologies out of the box.

## 5.3 Operating System:

### 1. Window95:

Windows 95 was capable of running DOS and Windows-based applications, although it had completely removed DOS as the underlying platform, unlike previous versions of Windows. This helped in overcoming two limitations: eight-character file names and memory-related problems. Windows 95 sported new technical features along with updating existing features. It brought updated visual styles and interface advancements. It had new and improved Windows control and introduced the desktop, which was represented as a folder which holds different files. Shortcuts, icons and the recycle bin were introduced in Windows 95. An improved help system was provided with a help window which could provide information in the content window. The "plug & play" feature was introduced, which allowed automatic recognition of hardware. Another significant feature introduced was the registry; this helped in combining the configuration files essentially into two files, which also allowed easier location of the system configurations. Windows 95 enhanced the memory handling processes compared to previous versions. Another user-friendly feature introduced from Windows 95 was the representation of files and folders as icons. File modification was possible through menus and the drives were all listed in the folder called "My Computer." Windows 95 came with built-in network support for different protocols including ones for Internet access. The 32-bit application support gave Windows 95 the ability to execute complex tasks and applications more efficiently.

#### 5.4 Additional Software requirements:

##### 1. Glassfish Server:

Glassfish is a Java application server project created by Sun Microsystems that allows many developers to generate enterprise technologies that are convenient and scalable, as well as additional services that can be installed based on preference. It is a free, dual-licensed software

under the GNU General Public License (GPL) and the Common Development and Distribution License (CDDL). GlassFish was acquired by Oracle in 2010.

Glassfish was developed based on a source code that was released by Sun and Oracle's TopLink persistence system. The project was launched in 2005 and the first version that supported Java

EE 5 was released in 2006. The reference implementation of Java EE is GlassFish, so it supports JMS, Java Server Pages, Enterprise JavaBeans, RMI, JPA and servlets. Because of its nature, developers can create scalable and portable applications that easily integrate with legacy systems and technologies.

## 2. Apache:

Apache is the most widely used web server software. Developed and maintained by Apache Software Foundation, Apache is an open source software available for free. It runs on 67% of all web servers in the world. It is fast, reliable, and secure. It can be highly customized to meet the needs of many different environments by using extensions and modules. Most WordPress hosting providers use Apache as their web server software. However, WordPress can run on another web server software as well.

## 3. Web Server:

Web server is like a restaurant host. When you arrive in a restaurant, the host greets you, checks your booking information and takes you to your table. Similar to the restaurant host, the web server checks for the web page you have requested and fetches it for your viewing pleasure. However, A web server is not just your host but also your server. Once it has found the web page you requested, it also serves you the web page. A web server like Apache, is also the Maitre D' of the restaurant. It handles your communications with the website (the kitchen), handles your requests, makes sure that other staff (modules) are ready to serve you. It is also the bus boy, as it

cleans the tables (memory, cache, modules) and clears them for new customers.

So basically a web server is the software that receives your request to access a web page. It runs a few security checks on your HTTP request and takes you to the web page. Depending on the page you have requested, the page may ask the server to run a few extra modules while generating the document to serve you. It then serves you the document you requested. Pretty awesome isn't it.

#### 4. Internet Browser:

A Browser is a software program used to view HTML documents within the World Wide Web. The primary goal of a web browser is to send and receive data from the Web Server that provides the Web page. The server sends the web page in the HTML markup language and the browser interprets that HTML code, presenting the page to the user.

#### 5. Netscape Navigator: -

Netscape navigator created by Netscape Corporation, one of the most popular browsers available today. Netscape is available on windows, Macintosh and X windows platforms.

#### 6. Internet Explorer: -

Internet is the Microsoft's contribution to the Web browser community. The Internet Explorer is based on Microsoft's ActiveX technology and is available for Windows, Windows NT, and Macintosh platforms. One significant capability of the Internet Explorer is that support the embedded intrinsic and ActiveX controls within the Web pages, with which JavaScript can interact

#### 7. Other Browsers:

Varieties of additional browsers are available, and because the Internet is evolving so rapidly, other new browser may have come into existence.



# CHAPTER 6

## HARDWARE REQUIREMENT

## 1. System Configuration

Pentium II

512 MB RAM

50 MB of free hard disk

space Keyboard and

pointing device

486 DX2 or Higher

Microprocessor. Free Disk

space 100 M.B.

Color Monitor \$ Multimedia Kit.

One free com port for modem.

Modem 56 Kbps.

Internet connection.

# CHAPTER 7

## CODING

```
<!-- onlineVoting/login/ index.jsp is the first file to run when projects starts -->
```

```
<%@page import="java.security.SecureRandom"%> <!DOCTYPE html>
```

```
<html >
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<title>Login Form</title
```

```
<!-- linking css files for login page -->
```

```
<link rel="stylesheet" href="css/reset.min.css">
```

```
<link rel="stylesheet prefetch" href='css/style2.css'>
```

```
<link rel="stylesheet prefetch" href='http://maxcdn.bootstrapcdn.com/font-awesome/4.3.0/css/font-awesome.min.css'>
```

```
<link rel="stylesheet" href="css/style.css">
```

```
<!-- validation testing script of the information submitted by user -->
```

```
<script type="text/javascript" src="js/checkValidation.js"></script>
```

```
</head>
```

```
<body>
```

```
<%@page import="java.sql.*" %>
```

```
<%@page import="javax.sql.*" %>
```

```
<!-- making connection to the sql database of the admin
```

```
--> <%@ include file="../user/getcon_admin.jsp"%> <!--
```

```
mail delivery java API's files -->
```

```
<%@ page import="java.util.*,javax.mail.*"%>
```

```
<%@ page import="javax.mail.internet.*" %>
```

```
<%@ page import="javax.activation.*" %>
```

```
<%
```

```
    /   captcha code builder (6 random letters from the string defined) final String s1 =
```

```
    "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz&!()
```

```
    %$#
```

```
@^*";
```

```
SecureRandom rnd1 = new SecureRandom();
```

```
StringBuilder cap = new StringBuilder(6); for (int
```

```
x1 = 0; x1 < 6;x1++)
```

```
{ cap.append(s1.charAt(rnd1.nextInt(s1.length())));
```

```
}
```

```
%>
```

```
<!-- Register and login code -->
```

```
<!-- Form Mixin-->
```

```
<!-- Input Mixin-->
```

```
<!-- Button Mixin-->
```

```
<!-- Pen Title-->
```

```
<div class="pen-title">
```

```
<h1 style="color:white;font-weight: 600;font-size: 70px" ></h1>
```

```
</div>
```

```
<!-- Form Module-->
```

```
<div class="module form-module">
```

```
<div class="toggle"><i class="fa fa-times fa-pencil"></i>
```

```
<div class="tooltip">Register</div> </div>
```

```
<div class="form">
```

<h2>Login to your account</h2>

```
<form name="login">
<input type="text" placeholder="Username" name="Username"/>
<input type="password" placeholder="Password"
name="Password"/> <button name="log">Login</button> </form>
```

```
</div>
```

```
<div class="form">
```

```
<h2>Create an account</h2>
```

```
<form name="register">
```

```
<input type="text" placeholder="Name" name="name"/>
```

```
<input type="text" placeholder="Course" name="course"/>
```

```
<input type="text" placeholder="Branch" name="branch"/>
```

```
<input type="text" placeholder="Aadhar No" name="rollno"/>
```

```
<input type="radio" name="gender" value="Male">Male
```

```
<input type="radio" name="gender" value="Female">Female
```

```
<br>
```

```
<br>
```

```
<input type="email" placeholder="Email Address" name="email"/>
```

```
<input type="tel" placeholder="Phone Number" name="tel"/>
```

```
<input type="text" placeholder="Username" name="username"/>
```

```
<input type="password" placeholder="Password" name="npass"/>
```

```
<input type="password" placeholder="Confirm Password" name="cpass"/>
```

```
<div style="background-color: #87CEEA;width:150px;padding:10px;color:
```



```

black;margin:10px;font-size: 30px" ><s><i><font
face="casteller"><%=cap.toString()%></font></i>
</s></div>

<input type="text" name="captcha" placeholder="Enter the captcha code"/>

<button name="reg" onclick="return check('<%=cap.toString()%>')">Register</button>

</form>

</div>

<div class="cta"><a href="forgotpass.jsp">Forgot your password?</a></div>

</div>

<%

if (request.getParameter("reg") != null) { // if user clicks on the register button and
submitted his details

String g = "";

String h = "";

try {

String a = request.getParameter("name");

String b = request.getParameter("course");

String c = request.getParameter("branch");

String d = request.getParameter("rollno");

String e = request.getParameter("email");

String f = request.getParameter("tel");

g = request.getParameter("username");

```

```
h = request.getParameter("npass"); // new password
String i = request.getParameter("cpass"); // confirm
password String j = request.getParameter("gender");
Statement st = con.createStatement(); // create query to see if the user is already registered or not
String query = "select * from student"; // student is the table where information about the
registered
users are stored
ResultSet m = st.executeQuery(query);
int flag = 0;
while (m.next()) { // compare one by one all the rows of student table
if (m.getString("email").equals(e)) { flag = 1;

%>
<script>
alert("already registered email id");
</script>
<%
break;
}
if (m.getString("rollno").equals(d)) {
flag = 1;
%>
<script>
```

```
alert("rollno already registered");
</script>

<%
break;
}
if (m.getString("username").equals(g)) {
flag = 1;
%>
<script>
alert("username already registered");
</script>
<%
break;
}
}

/ checking whether the username is taken by admin or not
/ login table is for admin information
Statement st1 = con.createStatement();
String query1 = "select * from login";
ResultSet m1 = st1.executeQuery(query1);
while(m1.next())
{
```

```

if (m1.getString("username").equals(g)) {
    flag = 1;
    %>
    <script>
    alert("username already registered");
    </script>
    <% break;
    }
    }
    if (flag == 0) {
        /   sending mail to the user final String AB =

        "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
        xyz"; SecureRandom rnd = new SecureRandom();

        StringBuilder security_string = new
        StringBuilder(8); for (int x = 0; x < 8; x++) {
        security_string.append(AB.charAt(rnd.nextInt(AB.length()))); // security string which

        the user needs to enter for login into site

        }

        /   Get recipient's email-ID, message & subject-line from

        index.html page final String to = request.getParameter("email");
        final String subject = "Confirmation mail";

```

```

    /  Sender's email ID and password needs to be
        mentioned final String from = "-----";

final String pass = "-----";

/  Defining the gmail host

    /  Creating Properties object

        Properties props = new
            Properties();

/  Defining properties

        props.put("mail.smtp.host", host);
        props.put("mail.transport.protocol",
            "smtp"); props.put("mail.smtp.auth",
            "true");

        props.put("mail.smtp.starttls.enable",
            "true"); props.put("mail.user", from);
        props.put("mail.password", pass);
        props.put("mail.port", "465");

/  Authorized the Session object.

Session mailSession = Session.getInstance(props, new javax.mail.Authenticator()
{ @Override
protected PasswordAuthentication getPasswordAuthentication() {
return new PasswordAuthentication(from, pass); }

});

```

```
try {
```

```
MimeMessage message = new MimeMessage(mailSession);

    / Set From: header field of the header.

    message.setFrom(new

    InternetAddress(from));

    / Set To: header field of the header.

    message.addRecipient(Message.RecipientT

    ype.TO, new InternetAddress(to));

    / Set Subject: header

    field

    message.setSubject(s

    ublic);

/ Now set the actual message

StringBuilder s = new StringBuilder();

s.append("<div>")

.append(" Dear User<br/><br/>")

.append(" Thank you for registration. Your mail is under verification<br/>")

.append(" Please copy the unique key provided below and paste it in the prompt box

after login the site.<br/>")

.append(" Key : " + security_string.toString() + "")

.append(" <br/><br/>")

.append(" Thanks,<br/>")

.append(" E-Voting admin")

.append("</div>");
```

```
message.setContent(s.toString(), "text/html; charset=utf-  
8"); // Send message
```



```
// Transport.send(message);

//inserting the data of the user in student database

PreparedStatement k = con.prepareStatement("insert into student
values(?,?,?,?,?,?,?,?,?,?,?)");

k.setString(1, a);

k.setString(2, d);

k.setString(3, b);

k.setString(4, c);

k.setString(5, e);

k.setString(6, f);

k.setString(7, g);

k.setString(8, h);

k.setString(9, i);

k.setString(10, j);

k.setString(11, security_string.toString());

k.setString(12, "NO"); // is_activated field to see whether user enters the security
key or not

k.executeUpdate();

session.setAttribute("who", g); // session variable for storing username

session.setAttribute("who_mail", e); // session variable for storing mail id of the
user session.setAttribute("who_name", a); // session variablefor storing name of the
user response.sendRedirect("verify_key.jsp");
```

```

} catch (MessagingException mex) {
%><script>alert("Something went wrong..try again");</script><% }
}
} catch (Exception e) {
%><script>alert("something went wrong...try again");</script><%
}
}
%>
<%
if (request.getParameter("log") != null) { // if user logs into
site String a = request.getParameter("Username"); String b =
request.getParameter("Password");
String me = "select * from student where username='" + a + "' and password='" + b + "'";
Statement k = con.createStatement();
ResultSet m = k.executeQuery(me);
if (m.next()) {
session.setAttribute("who", a);
session.setAttribute("who_mail", m.getString("email"));
session.setAttribute("who_name", m.getString("name"));
if (m.getString("is_activated").equals("NO")) { //if user has not complete the security
procedure
response.sendRedirect("verify_key.jsp");
} else {

```

```
response.sendRedirect("../user/index.jsp");
}
} else {
String adm = "select * from login where username='" + a + "' and password='" + b + "'";
Statement k_admin = con.createStatement();
ResultSet admin = k_admin.executeQuery(adm);
if (admin.next()) {
session.setAttribute("who_admin", a);
response.sendRedirect("../admin/admin.jsp");
} else
{ %>
<script>

<% session.setAttribute("who_admin", null);
session.setAttribute("who", null);%>
alert("wrong username or password");
</script>

<%
}
}
}
%>

<script src='js/jquery.min.js'></script>
```

```
<script src="js/index.js"></script>
```

```
</body>
```

```
</html>
```

# CHAPTER 8

## TESTING

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system. Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system. Testing also adds value to the product by conforming to the user requirements.

The main purpose of testing is to detect errors and error-prone areas in a system. Testing must be thorough and well-planned. A partially tested system is as bad as an untested system. And the price of an untested and under-tested system is high.

The implementation is the final and important phase. It involves user-training, system testing in order to ensure successful running of the proposed system. The user tests the system and changes are made according to their needs. The testing involves the testing of the developed system using various kinds of data. While testing, errors are noted and correctness is the mode.

## 8.1 Testing Method Used:

### Step 1: Functional Testing:

Functional testing is a quality assurance (QA) process and a type of black-box testing that bases its test cases on the specifications of the software component under test. Functions are tested by feeding them input and examining the output, and internal program structure is rarely considered (unlike white-box testing).

Functional testing happens in the source code, where the system is tested against functional

requirements and specifications.

Typically, functional testing includes:

The identification of functions that software is supposed to do data input and output.

The execution of the test case.

An analysis of the actual results.

During functional testing, actual system usage is simulated. The idea is to come as close as possible to real system usage and create test conditions that are related to user requirements.

Step 2: Usability Testing:

Usability goes beyond functionality testing and combines testing for functionality as well as overall user experience. This can be done internally or by getting external testers that fit your potential user base. To find external testers, you can use services such as Apple's Test Flight for applications designed for the app store.

Usability testing involves the following steps:

1. Develop a testing strategy that ensures all functions of your application will be examined.

These include navigation and content.

2. Recruit test participants, either internally or externally.

3. Run the test under the observation of experts.

4. Analyze the results and improve your application

accordingly. Step 3: Interface Testing

Interface testing ensures that all interactions between the web server and application server interfaces are running smoothly. This includes checking the communication processes as well as making sure that error messages are displayed correctly. Further things to test are that

interruptions by the user as well as by the server are handled correctly.

#### Step 4: Compatibility Testing

Ensuring your application is compatible with all browsers and devices is a key step in web application testing. Here are the different elements of compatibility testing: Browser compatibility

Make sure that your application is functioning correctly across the different browsers. This includes checking that JavaScript, AJAX, browser notifications, and authentication requests are working as designed.

#### Operating system compatibility

Just like with different browsers, your web application might run into problems on some operating systems. Check that it runs smoothly on Windows, macOS, Linux, and

#### UNIX. Step 5: Performance Testing

After ensuring that your application's functionality is working properly and responsively on all browsers and devices, it is time to take a look at how it performs under heavy load. This includes testing the application under different internet speeds and how it behaves under normal and peak loads (load testing).

To determine the breaking point of your application, it is put under increasing amounts of stress until it ceases to function (stress testing).

Testing for resiliency is a crucial activity to find out how your application behaves under stress before your users do. Make sure you test the functionality under different scenarios and hardware configurations, and that your application recovers from crashes in the best way possible. Step 6: Security Testing



The final step of web application testing makes sure that your application is protected against unauthorized access and harmful actions through viruses or other malicious software.

Security testing for web applications involves the following activities:

- Test whether secure pages can be accessed without authorization Check that open session are closed after ongoing user inactivity
- Make sure that restricted files cannot be downloaded without proper authorization

Overall, a security testing checklist comes in handy at this stage, as it helps you to structure and organize your testing efforts. Such as checklist should include of tasks in the following areas:

- Secure Transmission Authentication
- Session Management Authorization
- Cryptography Data Validation
- Denial of Service
- Specific Functionality Tests Error Handling

## 8.2 Test Case with Result:

A good testing case is one that has high probability of finding as yet undiscovered errors .The aim of testing is to determine that a program works by showing that it has no errors .This test case deals with the entering of basic details related with the registered and logged in user . This process takes many inputs. The test case should check for proper inputs and verify whether the function for validating the inputs is called properly or not.

- Details Related With The logged in user in a Standard Format.

www.google.co.in | Admin Page | localhost:8080/Online-Voting-System-master/admin/admin.jsp#

## Welcome : nancy

[Add new admin](#)

[Add new election](#)

[Add candidates](#)

[upload photo](#)

[Search](#)

[Authenticate](#)

[Log Out](#)

### Page is under contruction!!

localhost:8080/Online-Voting-System-master/admin/admin.jsp#

www.google.co.in | Admin Page | localhost:8080/Online-Voting-System-master/admin/admin.jsp#

## Welcome : nancy

[Add new admin](#)

[Add new election](#)

[Add candidates](#)

[upload photo](#)

[Search](#)

[Authenticate](#)

[Log Out](#)

[chief minister](#)

[HOD election](#)

[Member of Parliament](#)

[selection of PR](#)

chiefminister

username	Aadhar No	branch	email	is_eligible	is_voted	
radhika	14103095	cse	radhikag.es.14@nitj.ac.in	NO	NO	<a href="#">select</a>
pollavi	242424	cse	grgpallavi@gmail.com	YES	YES	<a href="#">select</a>
funky	482744525587	IT	funky11@gmail.com	YES	NO	<a href="#">select</a>

aadhar no:  
no selection yet

[proceed to authenticate](#)

Status : none

localhost:8080/Online-Voting-System-master/admin/authenticate2.jsp?v=chiefminister

www.google.co.in | Admin Page | localhost:8080/Online-Voting-System-master/admin/admin.jsp#

## Welcome : nancy

- Add new admin
- Add new election
- Add candidates
- upload photo
- Search
- Authenticate
- Log Out

[chief minister](#)

[HOD election](#)

[Member of Parliament](#)

[selection of PR](#)

selectionofPR

username	Aadhar No	branch	email	is_eligible	is_voted	
pollavi	242424	cse	grgpallavi@gmail.com	YES	YES	<input type="button" value="select"/>

aadhar no:  
no selection yet

Status : none

localhost:8080/Online-Voting-System-master/admin/authenticate2.jsp?v=selectionofPR

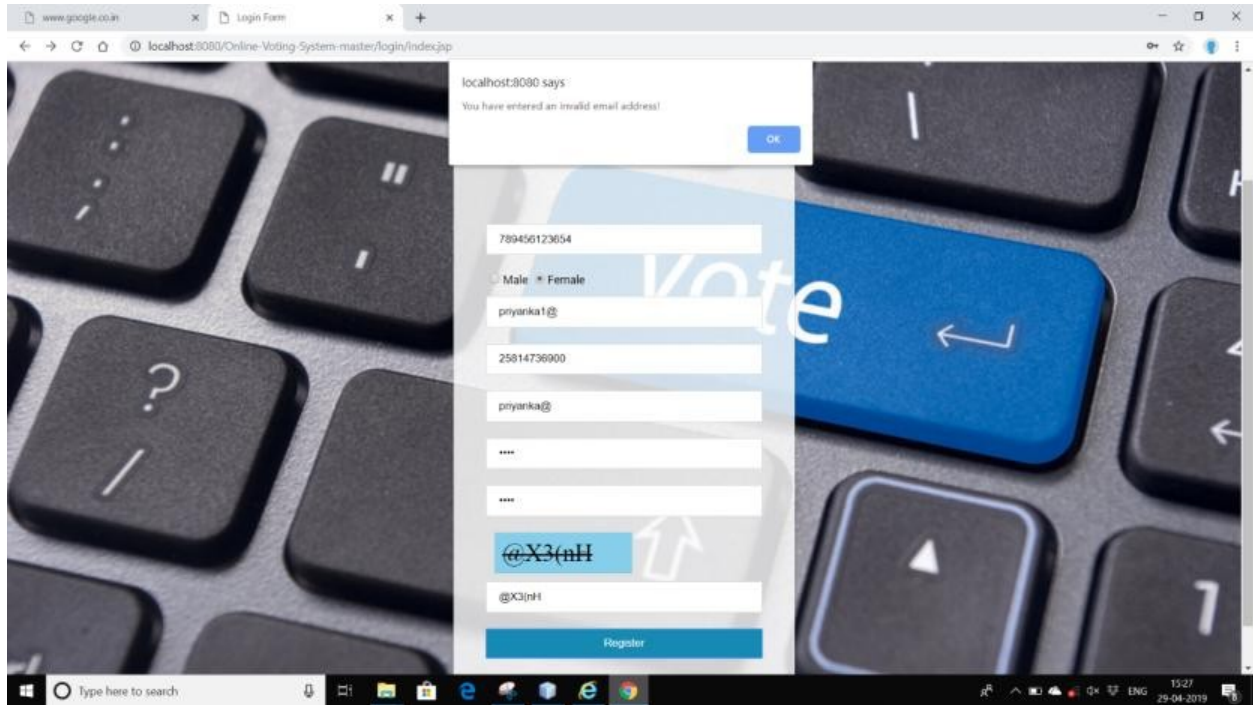
www.google.co.in | Verification Page | localhost:8080/Online-Voting-System-master/login/verify\_key.jsp

Please enter the unique key send to your email account.

Enter key :

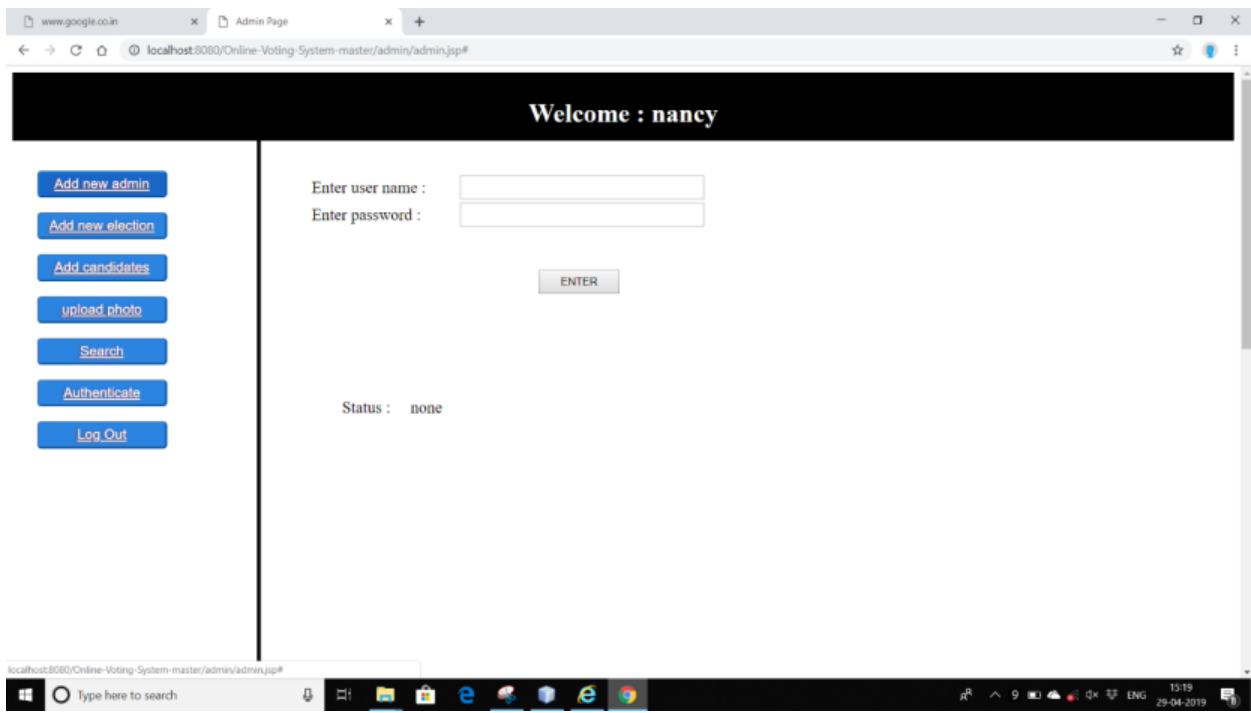
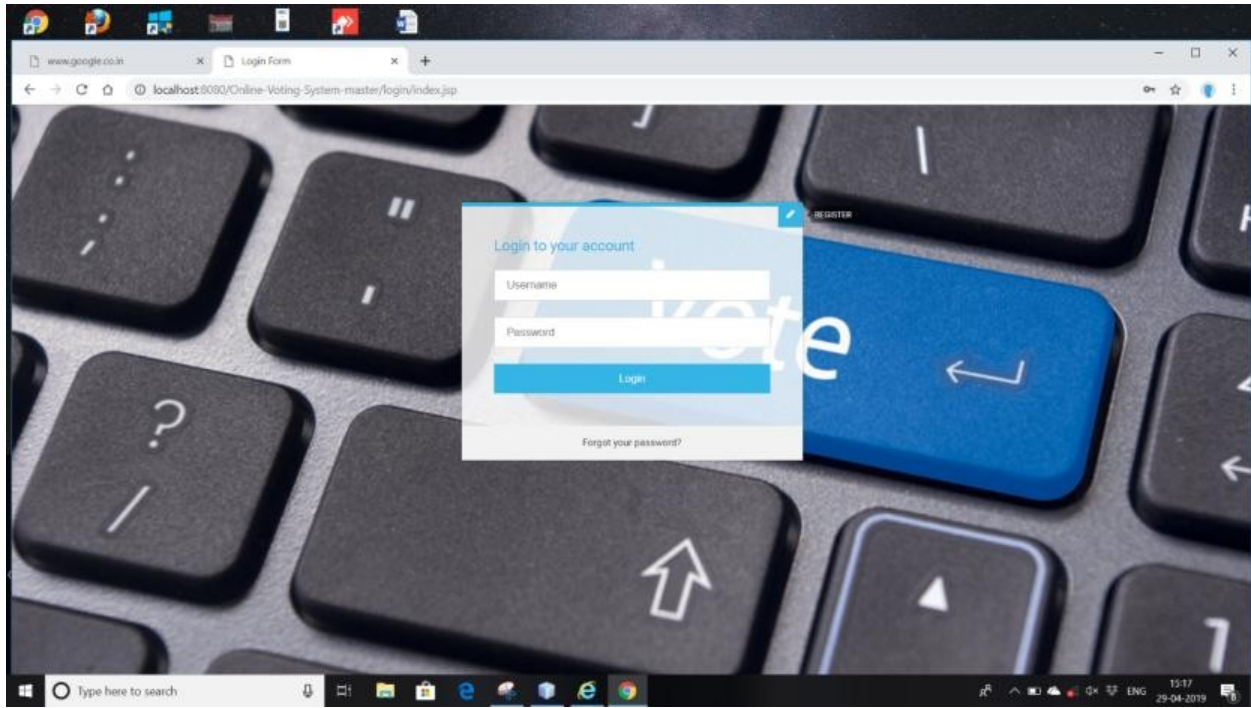
Type here to search





# CHAPTER 9

## SCREEN LAYOUTS



www.google.co.in | Admin Page | localhost:8080/Online-Voting-System-master/admin/admin.jsp#

## Welcome : nancy

- Add new admin
- Add new election
- Add candidates
- upload photo
- Search
- Authenticate
- Log Out

Election name:

Date:

Time (a pm - b pm):

Add details:

Description:

ENTER

Status : none

localhost:8080/Online-Voting-System-master/admin/admin.jsp#

www.google.co.in | Admin Page | localhost:8080/Online-Voting-System-master/admin/admin.jsp#

## Welcome : nancy

- Add new admin
- Add new election
- Add candidates
- upload photo
- Search
- Authenticate
- Log Out

Election:

Name:

Add designation:

Designation:

Add description:

Description:

Add contact:

Contact:

Add motto:

Motto:

ENTER

localhost:8080/Online-Voting-System-master/admin/admin.jsp#

www.google.co.in | Admin Page | localhost:8080/Online-Voting-System-master/admin/admin.jsp#

## Welcome : nancy

- Add new admin
- Add new election
- Add candidates
- upload photo
- Search
- Authenticate
- Log Out

Search user by

ENTER :

Username :

Name :

Rollno :

Course :

Branch :

Display admin Information

Display election Information

localhost:8080/Online-Voting-System-master/admin/admin.jsp#

www.google.co.in | Admin Page | localhost:8080/Online-Voting-System-master/admin/admin.jsp#

## Welcome : nancy

- Add new admin
- Add new election
- Add candidates
- upload photo
- Search
- Authenticate
- Log Out

- [chief minister](#)
- [HOD election](#)
- [Member of Parliament](#)
- [selection of PR](#)

Register


### Login to your account

### Create an account

Name  Aadhar No   Male  Female

Email Address  Phone Number

Confirm Password

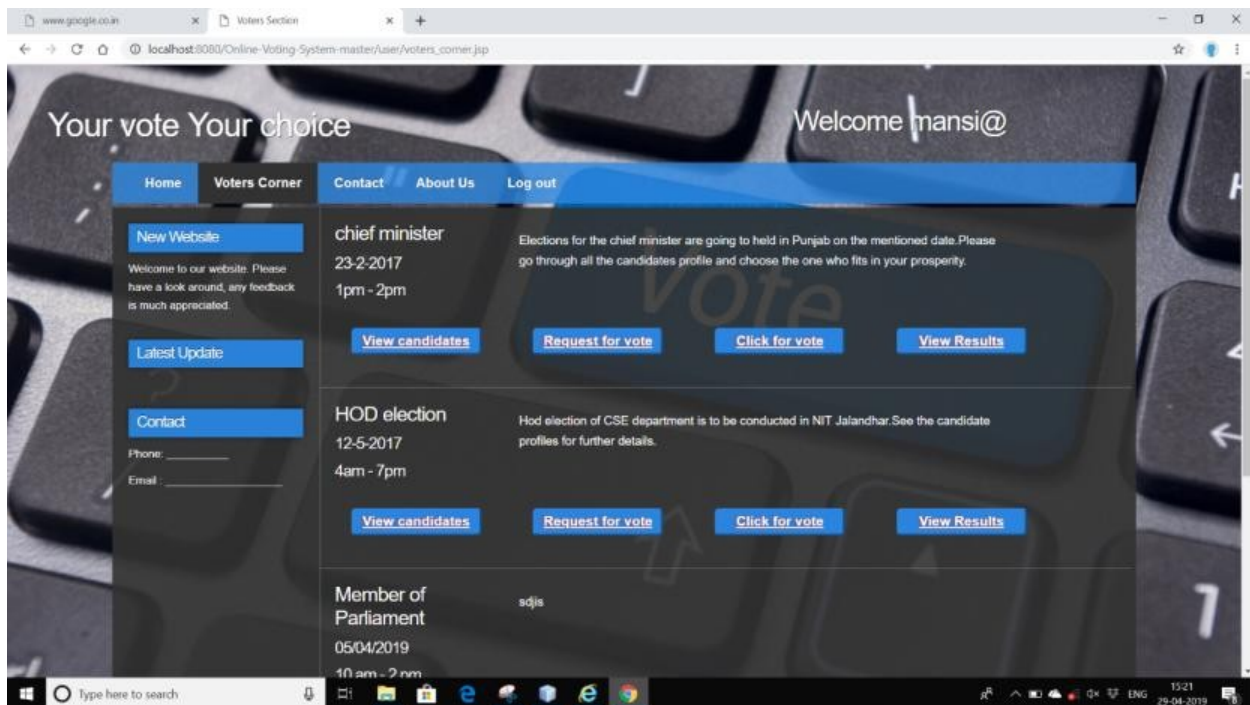
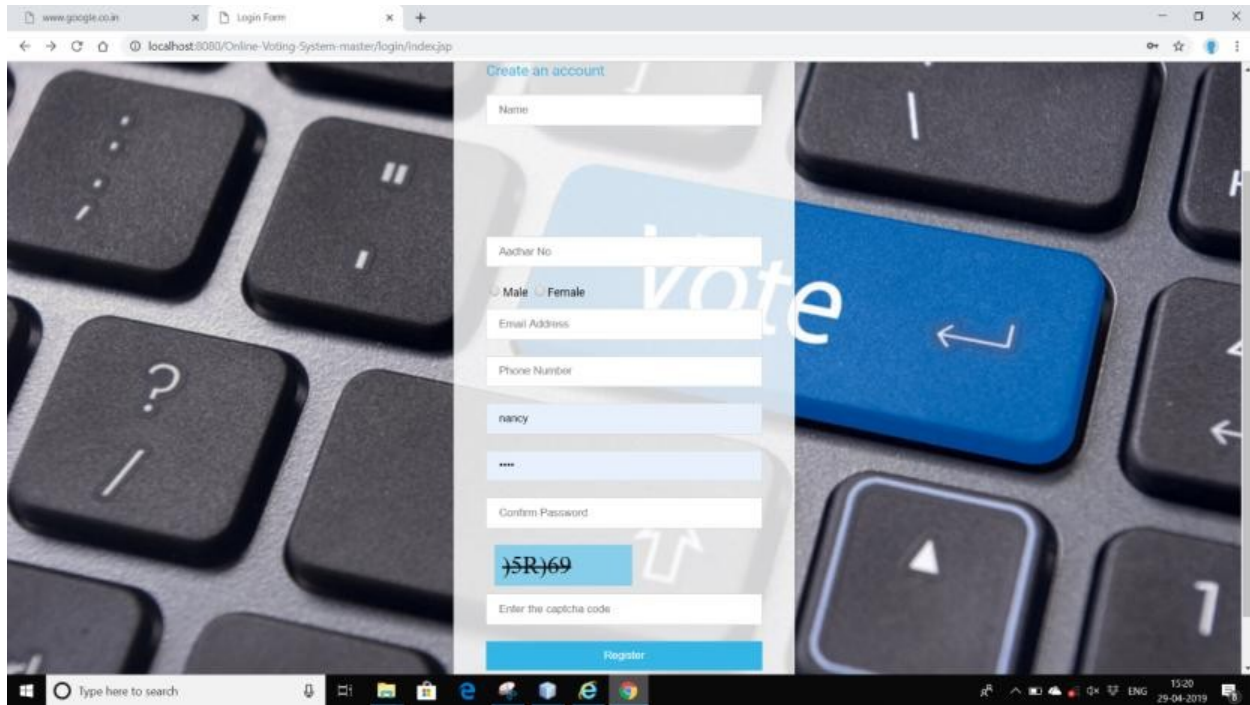


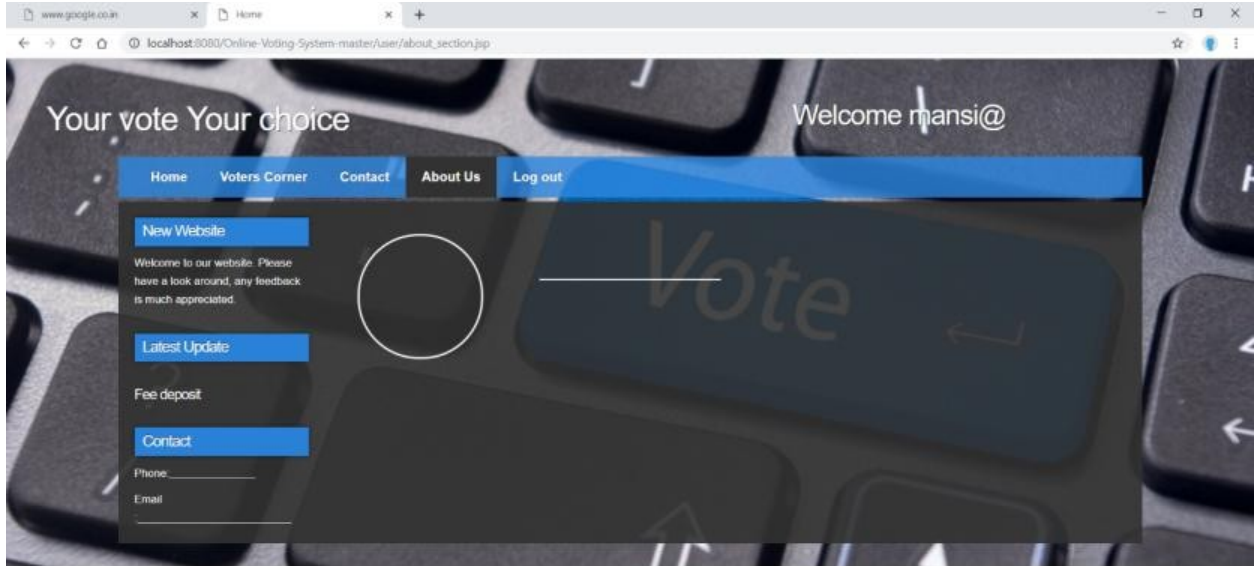
Enter the captcha code

[Forgot your password?](#)

localhost:8080/Online-Voting-System-master/admin/log.jsp







www.google.co.in x Login Form x +

localhost:8080/Online-Voting-System-master/login/index.jsp

Priyanka

789456123054

Male  Female

priyanka1@

25014736900

priyanka@

\*\*\*\*

\*\*\*\*

@X3(nH

@X3(nH

Register

Type here to search

15:27 29-04-2019

# **CHAPTER 10**

## **FUTURE ENHANCEMENT:**

The Electronic Voting Machine works precisely but the report analysis modifications are still to be improved. This software is tested properly and all necessary conditions that need to be taken care during vote process are considered. Aadhar card recognition facility for EVM will serve as future scope of this project. Electronic voting systems may offer advantages compared to other voting techniques. An electronic voting system can be involved in any one of a number of steps in the setup, distributing, voting, collecting, and counting of ballots, and thus may or may not introduce advantages into any of these steps.

Potential disadvantages exist as well including the potential for flaws or weakness in any electronic component.

# **CHAPTER 11**

# **REFERENCES**

- Software Engineering- A practitioner's Approach by Roger S. Pressman: 6th edition  
McGraw Hill, 2005
- An Integrated Approach to Software Engineering by Pankaj Jalote:3rd edition Springer, 2005