

PROJECT REPORT ON

Automated Voting System

(WEBEL ACHARYA ACADEMY MAJOR PROJECT)

SUBMITTED BY

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B.TECH IN COMPUTER SCIENCE & ENGINEERING

Under the Project Guidance of

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WEBEL ACHARYA ACADEMY

A Joint Initiatives of WBEIDC Ltd.
(A Govt. of West Bengal Undertaking
& ACHARYA INSTITUTES, Bangalore)

CERTIFICATE

This is to certify that _____
_____ of WEBEL
ACHARYA ACADEMY has worked under my supervision and guidance from _____ to
_____ and has successfully completed the project entitled
“_____” in fulfillment of the requirements for the award of
J2EE, at WEBEL ACHARYA ACADEMY under my Supervision and guidance.

Head of the Institute
WEBEL ACHARYA ACADEMY

Head of the J2EE
WEBEL ACHARYA ACADEMY

ACKNOWLEDGEMENT

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Last, but my no means least, I thank my friends for their support and encouragement throughout.

Name

Signature

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DOCUMENTATION

Abstract of the Project

1. INTRODUCTION:

All the technical and non technical Voting System has different activities. Voting System have different departments such as admin department, voters cell, have lots of people, guards etc. So it's very difficult to control the whole Voting System manually between organizations. Again many organizations have more voting port located in different places so maintain all voting port become very difficult. So one very easy and usable web application required for each organizations. That's the purpose we try here to develop very easy and usable web application name as [Automated Voting System](#). We are working still on it as a team to develop the whole project.

We are completed one module [Automated Voting System](#) a very crucial part of the project. Here we try to develop the web application.

For security and flexibility of the project we use jsp, css and servlet and make the software more usable and reliable.

It's very important to store all the data corresponding to all transaction and asset details like store all the records on system details, Admin details, voter's details, Candidate details etc. To store all the relevant data about Admin, Voter's, System, etc.

1.1 General overview of the problem:

To address all these problems on Assets handling here we try to develop [Automated Voting System](#). It gives the facility to keep all these voter related details and will facilitate easy maintenance flow by reducing the time, cost, and probability of human-error and communication complexity. This is a procedure and logistics application which can be hosted in Educational, Government, and Organizations place. It can be run in any organization's intranet also. Different organizations will use this application. They will register themselves; keep data about their voters those they will maintain in their voting system, keep details of users, details of equipments related to voter's etc. There are four major part of this module. We can handle four major part of voter like System details, Admin details, Voter's details, Result details. Other parts are related to asset so we attach them to Voter module. This system will have extensibility to interface/integrate with any other application/subsystem to capable of maintaining Organizations.

1.2 Problem Definition:

It is a web based hosted application that is being made in favour of voter in organization to handle all the voter corresponding to that organization. As the name implies, the system is made up for organization in favour of managing the voter's.

1.3 Details of the problem:

The main objective of the “**Automated Voting System**” is to develop an web based hosted application of Voter Management System to control automated like voter’s, Admin, System, vehicle to perform the task like store, update, delete, checking etc with authority . There has been a growing demand among all employer/voter’s administrators for computerized application on **Automated Voting System** which will made easy to work more flexibly and easily from each end of world. Here staff can perform the following task

1. Insert, update and delete details from any end of world
2. Check all the transaction from anywhere via network
3. From anywhere via network they can access their accounts
4. Check all update, warranty, Current condition of any item
5. They can handle all assets easily
6. Overcome probability of human-error and Communication complexity

1.4 Analysis of the Problem:

There has been a growing demand among all employer/voter’s administrators for computerized application on **Automated Voting System** which will made easy to work more flexibly and easily.

The main objective of the “**Automated Voting System**” is to develop an web based hosted application to control the asset like voter’s, Admin, System, results and other assets.

1.5 Objectives of the problem:

The objectives are explained as given below:

- We have to provide an efficient way to maintain the database of all transaction of voting’s system with proper way.
- Those voter’s those have unique username and password they can access the database and perform the task insert, update, delete, the item with their corresponding information.

- Any authorized voter's can show the details of all activity of their corresponding section.

1.6 Proposed solution strategy

We are completely user driven .We feel sense of urgency on all matters related to our user and strive them with integrity and professionalism.We take ownership of problems and we are always responsive.

To handle the project we have to move through some phases,they are as follows:

- Feasibility study
- Requirement analysis and specification
- Design
- Testing
- Maintenance

1.7 Algorithm

Algorithm for Login Verification:

1. Fetch the value of username and password from user.
2. Executing the query for login.
3. If username and login is equal to true then login complete and
Enter the next module

Else

Print: incorrect username or password and goto step1.

4. End

Algorithm for Adding Record:

1. Creating the connection with database.
2. Fetch the result from database to count the no. of rows
3. Get the values from the user.
4. Executing the query for inserting data into database.
5. If (all the fields are filled) then
Insert the values to the database

Show the confirmation message.

Else

Unable to insert.

6. End
- 7.

Algorithm for Modify Record:

1. Creating the connection with the database.
2. Fetch the searching result from the database.
3. While row!=null
 Store the value of each field in variables.

 Show the result to the corresponding fields.

 End while
4. After modification of information taking the new value from user.
5. Insert the values to the database and store at the same row.
6. If insert is correct then
 Print: successful

 Else

 Unable to insert.
7. End

Algorithm for Delete Record:

1. Creating the connection with database.
2. Storing the index value of searching combo box.
3. While row!= null then
 Do

 Delete all the fields of corresponding data.

 End
4. Close the connection.
5. If (all fields are blank) then
 Print : successfully deleted.

 Else

 Unable to delete.
6. End.

Front End

- eclipse

Back End

- MySQL 6.1

Web Server

- Apache Tomcat 6.0

Software Requirement Specification

2.1 Requirement definition:

The Requirements Definition is a natural language statement of what services the system is expected to provide & the constraints under which it must operate. We are to provide a system which will manage automatic voting system by all admin of a organizations very frequently and easily.

The system is in the form of a web based hosted application. The constraint of the system is that the user will have to provide his/her authentication by providing the username and password. Unless, if it is not verified and confirmed by the administrator, the user could not access the database file.

Requirement Specification:

The **Requirement Specification** is a structured document which lists the system services in details. This document is also called a functional specification. The objective of the project is to create a database regarding all the information connecting with the voter's.

2.2 Overall Description:

An SRS is basically an organization's understanding (in writing) of a customer or potential client's system requirements and dependencies at a particular point in time (usually) prior to any actual design or development work. It's a two-way insurance policy that assures that both the client and the organization understand the other's requirements from that perspective at a given point of time. It's important to note that an SRS contains functional and non-functional requirements only; it does not offer design suggestions, possible solutions to technology or business issues, or any other information other than what the development team understands the customer's requirements to be.

2.3 Functional Requirement:

Functional Requirement :

Login Process

Description: The login process requires the user to enter valid user name and password to enter to main page.

Login:

Input: id, password

Process:

The combination of the id and password are matched with database.

Output:

If match found then enter to login page otherwise error message appear in screen

Create Voter Profile

Description: This function allows user to insert data into respective fields for storing information about voter.

Input: Title, AuthoreLname, AuthoreFname, EditionNo, EditionDate, TotalPage, TotalImage, CoverType, IsbnNo, Copyright, CallClassNo, CallBookNo, PublisherName, Address, PhoneNo, OtherNo, Mobile, FaxNo, Url, PurFrom, PurDate, PurPrice, Mrp, PoNo, PoDate, GrnNo, GrnDate.

Output: Display confirmation message if profile has been created successfully.

Create System Profile

Description: This function allows user to insert data into respective fields for storing information about system.

Input: cat,modNo, Scomp, Srnk, Ssize, Stype, SslNo, SWrnt, Swrtype, SswrntPeriod, Rsize, RSLNo, Rcomp,RWrnt, Rsize, RSLNo, Rcomp,RWrnt, Hsize, HSLNo, Hcomp,HWrnt, Hsize, HSLNo, Hcomp,HWrnt,Pname, Pspeed, PslNo, Pcomp, PWrnt, PurDate, VenName, VenAdd, ContactNo, Price, MRP, Wrnt

Output: Display confirmation message if profile has been created successfully.

Create Furniture Profile

Description: This function allows user to insert data into respective fields for storing information about furniture.

Input: id,type,cat,name,des, slNo, wrnt, vebName, venAdd, conNo, purDate, purPrice, mrp, poNo,poDate, grnNo, grndate

Output: Display confirmation message if profile has been created successfully.

Create Category Profile

Description: This function allows user to insert data into respective fields for storing information about various category.

Input: id, name, description

Output: Display confirmation message if profile has been created successfully.

Create Type Profile

Description: This function allows user to insert data into respective fields for storing information about various type of asset.

Input: id, name, description

Output: Display confirmation message if profile has been created successfully.

Create User Profile

Description: This function allows administrator to insert data into respective fields for storing information about user or employee.

Input: id, name, pwd, dob, mob, email.

Output: Display confirmation message if profile has been created successfully.

2.4 Non Functional Requirements

- (a) Interactive:** the software should provide an appealing and easy GUI.
- (b) Robustness:** The system which is going to be developed will be capable of performing continuously with negligible cost incurred in maintenance.
- (c) Portability:** The ease with which the developed system can be transferred from one computer to another.
- (d) Reliability:** The system is capable of performing the required function under suitable condition.
- (e) Correctness:** Provide proper error message when invalid input are given to the system.

2.5 Design Constraints

Hardware Constraints:

- Intel Pentium IV processor 2.4GHz(or more)
- Minimum 512mb of DDR2 RAM.
- 5GB free hard disk space.

Software Constraints:

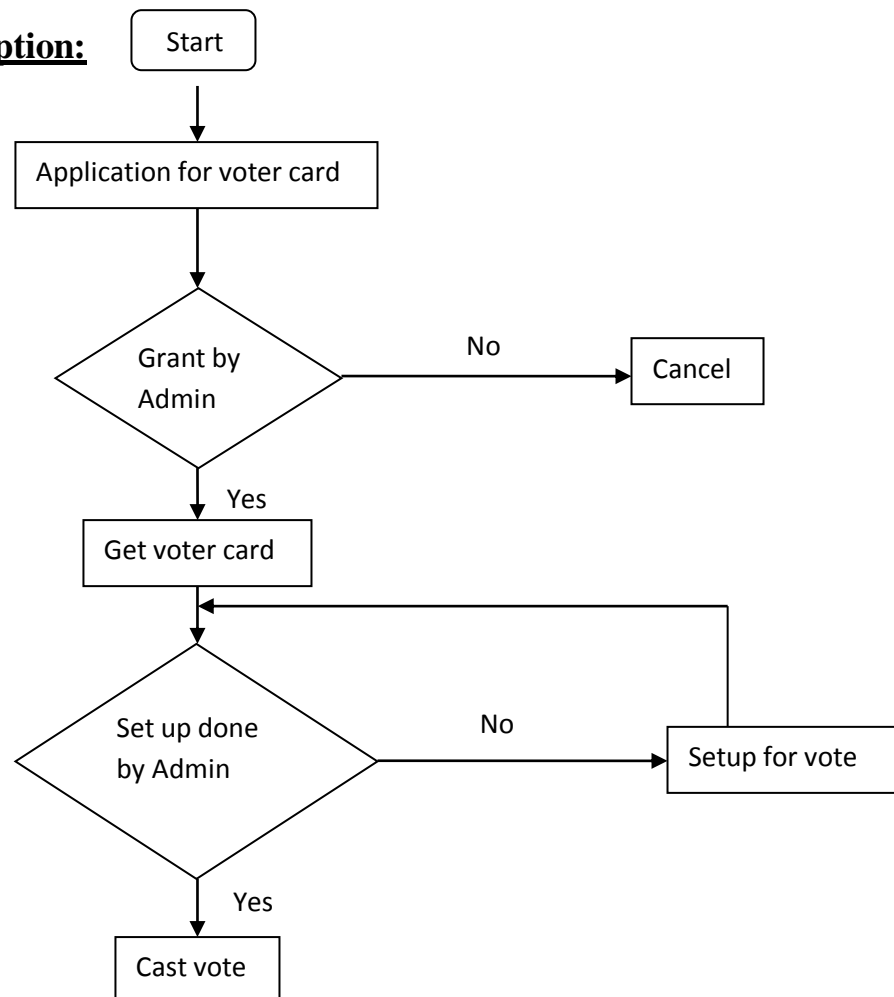
- Windows XP

- Eclipse IDE 6.9.1 with JDK 6.0
- Dreamweaver MX 2004
- Tomcat 6.1
- Wamp Server

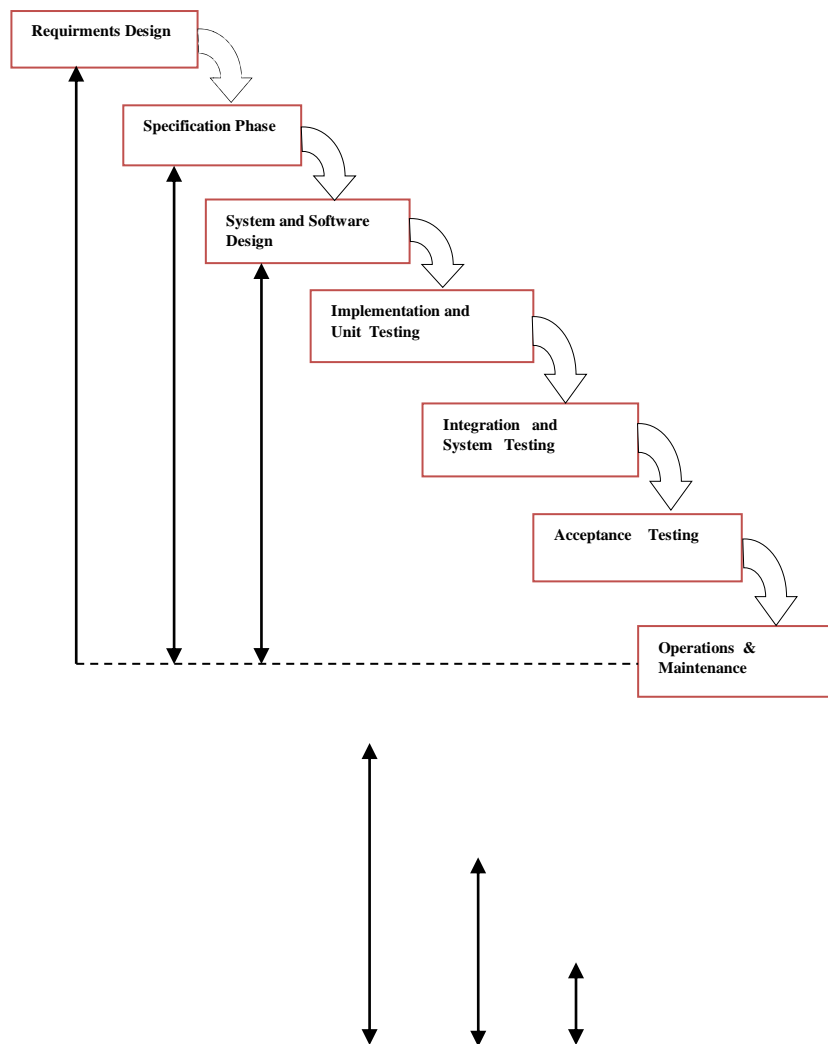
2.6 Goals of Implementation:

- It is user-friendly.
- It generates instant error message if occurred.
- Speeds up the work flow mechanism by removing the manual work.
- Reduction of paperwork and time spent for storage of data records.

3.1 Process Description:



3.1 Life Cycle Model :



Iterative waterfall model

Description :-

A life cycle model forms a common understanding of the activities among the software engineers and helps develop software in a systematic and disciplined manner. Other advantages of a documented life cycle model are that it enhances the understanding of the process among the developers and mandates the software development organization to accurately define every activity in the life cycle.

A structured sequence of phases for implementing an information system is system design life cycle of that system.

The various steps involved in the system design life cycle are as follows:-

➤ Feasibility study:-

(Evaluation of existing system and procedures analysis of alternative candidate systems cost estimation)

The feasibility study is a formal proposal for a new system. Before the project is to

begin, the project is studied to determine what exactly the user wants depending upon the result of initial investigation. The survey is expanded to more detailed study.

Feasibility study can be understood by giving answer/solution of the requirements:-

➤ **System analysis:-**

Analysis is a detailed study of various operations performed by the system and the relationship within and outside of the system that is it includes finding out in more detailed what the system problem are and what are the different new changes the user wants.

➤ **System design:-**

The system design is most creative and challenging phase of the system design life cycle. Analysis phase is used to design the logical model of the system and system design the physical model of the system.

➤ **Coding and Unit Testing:-**

The purpose of the coding and unit testing phase of software development is to translate the software design into source code. Each component of the design is implemented as a programmer module. The end-product of this phase is a set of programmer modules that have been individually tested.

➤ **Integration and System Testing:-**

Integration is normally carried out incrementally over a number of steps. During each integration step, the partially integrated system is tested and set a previously planned modules are added to it. Finally, when all the modules have been successfully integrated and tested, system testing is carried out.

➤ **Maintenance:-**

Apart from the bugs, the programmer has to maintain the program he/she has created. Program Maintenance is a term used for the updating of a program after the program is put into use. This updating may be a result of the users request or a change in the way the program needs to operate.

3.2 Feasibility study:

An estimate is made of whether the identified **user's needs may be satisfied** using current software and hardware technologies. The study will also decide whether the proposed system will be **cost-effective** from a business point of view and if it can be developed given existing budgetary constraints.

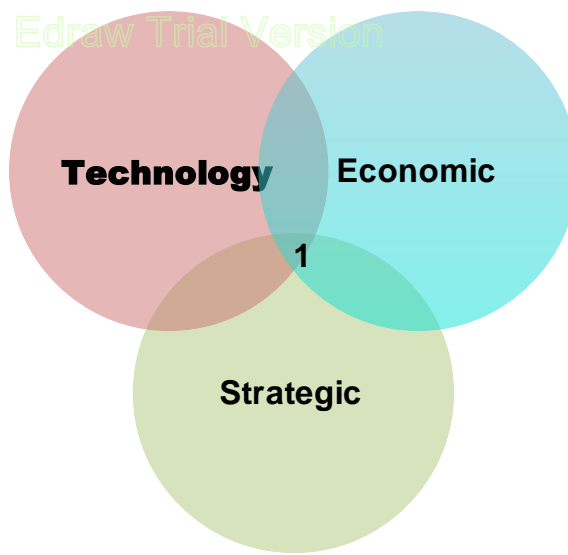
To implement our software system to a new machine, there is a need to set up a web-server and a database server. The system is definitely cost-effective since we

will reduce the time of data entry sustaintially as well as reduce chances of error caused due to manual data entry. Also we can reduce the number of employees required at the head office to feed in the data and to check the correctness of the data.

Arround feasiblity study we think about different solution strategies and compare there benefits as resource requires, cost of developments and development time for each of the option. finally we think that this procedure is best.

3.3 Requirement analysis and specification:

For completing our project three things are required. The following figure shows that requirement:-



There are also functional and non-functional requirements which are already discussed before.

3.4 Team structure :

In our project there are project manager, designer, analyzer and tester. This team structure has given us a successful project in a smooth manner. Team structure has helped us to reduce time and work load. Some team is multi-tasker, that's why the project is successfully ended in time.

To complete a successful project team structure is very much needed. By separating the tasks to different member, the pressure on one member is reduced.

Our team crated with three 3rd year student given bellow. The group created near about 1 months later. After a hard work we are complete the project properly. Our list of team member are

1. SUKANTA SHARMA
2. VIKASH SINGH
3. ARBIND KUMAR MAHATO
4. ABHIJEET SHAW
5. BANDANA YADAV
6. ARPANA KUMARI

3.5 Development Schedule

Essentially, driving without any idea of how it going to get there is the same as working on a project without a schedule. No matter the size or scope of the project, the schedule is a key part of project management. The schedule tells when each activity should be done, what has already been completed, and the sequence in which things need to be finished.

Scheduling, on the other hand, is not an exact process. It's part estimation, part prediction, and part 'educated guessing.'

Because of the uncertainty involved, the schedule is reviewed regularly, and it is often revised while the project is in progress. It continues to develop as the project moves forward, changes arise, risks come and go, and new risks are identified. The schedule essentially transforms the project from a vision to a time-based plan.

Schedules also help to do the following:

- It provides a basis to monitor and control project activities.
- It helps to determine how best to allocate resources so that it achieve the project goal.
- It helps to assess how much time delays will impact the project.
- It provides a basis to help to keep track on project progress.

3.6Gantt Chart:

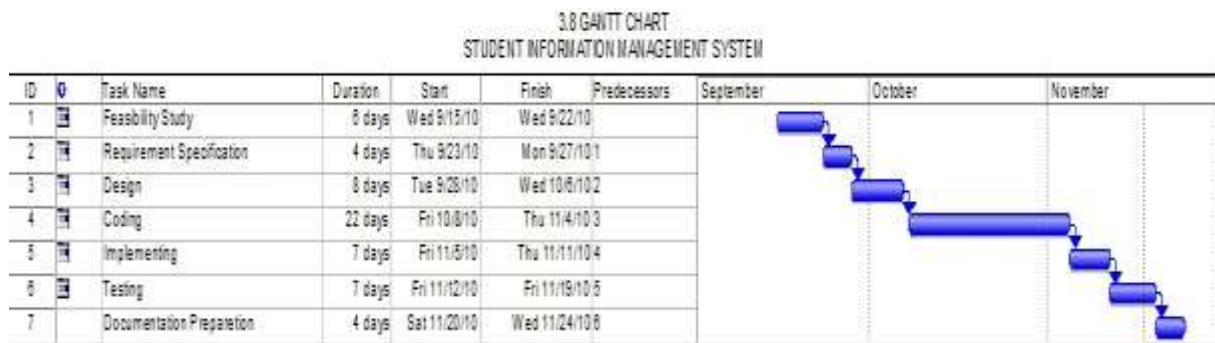


Fig 2.Gantt Chart for developing schedule & time

3.3 Resource Requirements:

a)Hardware Environments:

- Intel Pentium IV Processor 2.4 GHz (or more).
- Minimum 512 of DDR RAM on client machine (1GB for better results).
- Minimum 2GB of DDR RAM on the server machine.
- GB of free hard disc space on the server (approx).
- Internet connected home and works PCs(optional)
- LAN connection under premises(optional for testing)

b) Software Requirements:

- Windows XP/Linux
- Eclipse
- Dreamweaver MX 2004
- Apache Tomcat6
- MySQL

ER - DIAGRAM

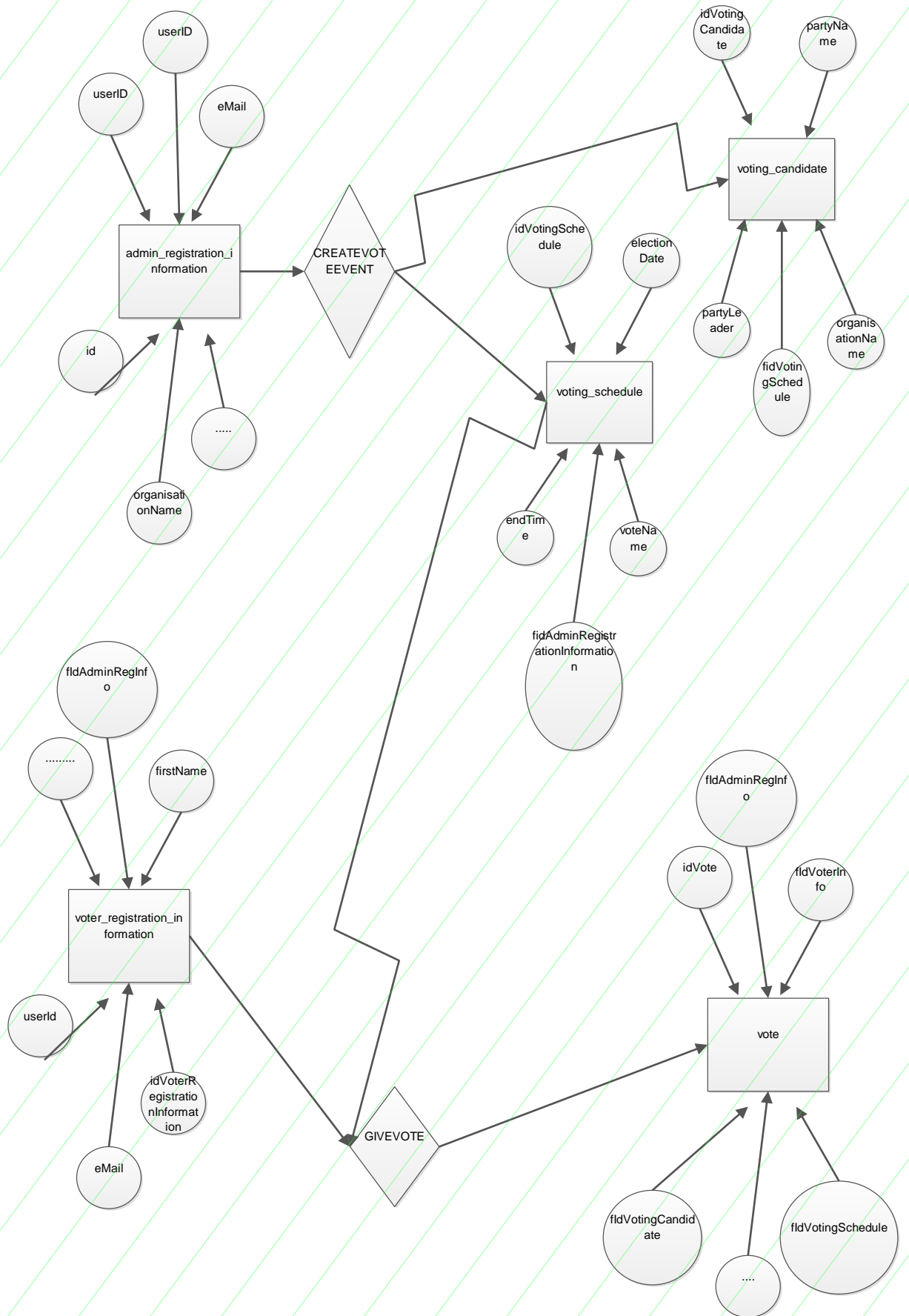


TABLE-DESCRIPTION

➤ **admin_registration_information :-**

SL No	Field Name	Field Description	Field Type	Size
1	id	Stores id	Int	200
2	firstName	Stores first name	varchar	20
3	lastName	Stores lastName	varchar	20
4	organisationName	Stores organisationName	varchar	20
5	eMail	Stores eMail	varchar	20
6	userID	Stores userID	varchar	20
7	password	Stores password	varchar	20
8	organisationAddress	Stores organisationAddress	varchar	200
9	agree	Stores agree	varchar	20
10	fileName	Stores fileName	varchar	20
11	registrationDate	Stores registrationDate	varchar	20
12	registrationDay	Stores registrationDay	varchar	20
13	registrationTime	Stores registrationTime	varchar	20

➤ **admin_sign_in_history:-**

SL No	Field Name	Field Description	Field Type	Size
1	id	Stores id	Int	200
2	fId	Stores fId	varchar	20
3	signInDate	Stores signInDate	varchar	20
4	signInDay	Stores signInDay	varchar	20
5	signInTime	Stores signInTime	varchar	20
6	signOutDate	Stores signOutDate	varchar	20
7	signOutDay	Stores signOutDay	varchar	20
8	signOutTime	Stores signOutTime	varchar	20

➤ **vote:-**

SL No	Field Name	Field Description	Field Type	Size
1	idVote	Stores idVote	int	200
2	fIdAdminRegInfo	Stores fIdAdminRegInfo	int	200
3	fIdVoterInfo	Stores fIdVoterInfo	int	200
4	fIdVotingSchedule	Stores fIdVotingSchedule	int	200
5	fIdVotingCandidate	Stores fIdVotingCandidate	int	200
6	currentDate	Stores currentDate	Date	-
7	currentTime	Stores currentTime	time	-

➤ voter_registration_information:-

SL No	Field Name	Field Description	Field Type	Size
1	idVoterRegistrationInformation	Stores idVoterRegistrationInformation	int	200
2	fIdAdminRegInfo	Stores fIdAdminRegInfo	int	20
3	firstName	Stores firstName	varchar	20
4	lastName	Stores lastName	varchar	20
5	fileName	Stores fileName	varchar	20
6	dob	Stores dob	varchar	20
7	eMail	Stores eMail	varchar	20
8	userId	Stores userId	varchar	20
9	password	Stores password	varchar	20
10	address	Stores address	varchar	200
11	po	Stores postalCode	varchar	20
12	state	Stores state	varchar	20
13	registrationDate	Stores registrationDate	varchar	20
14	registrationDay	Stores registrationDay	varchar	20
15	registrationTime	Stores registrationTime	varchar	20
16	approved	Stores approved	int	20

➤ voter_sign_in_history:-

SL No	Field Name	Field Description	Field Type	Size
1	id	Stores id	Int	200
2	fId	Stores fId	varchar	20
3	signInDate	Stores signInDate	varchar	20
4	signInDay	Stores signInDay	varchar	20
5	signInTime	Stores signInTime	varchar	20
6	signOutDate	Stores signOutDate	varchar	20
7	signOutDay	Stores signOutDay	varchar	20
8	signOutTime	Stores signOutTime	varchar	20

➤ voting_candidate:-

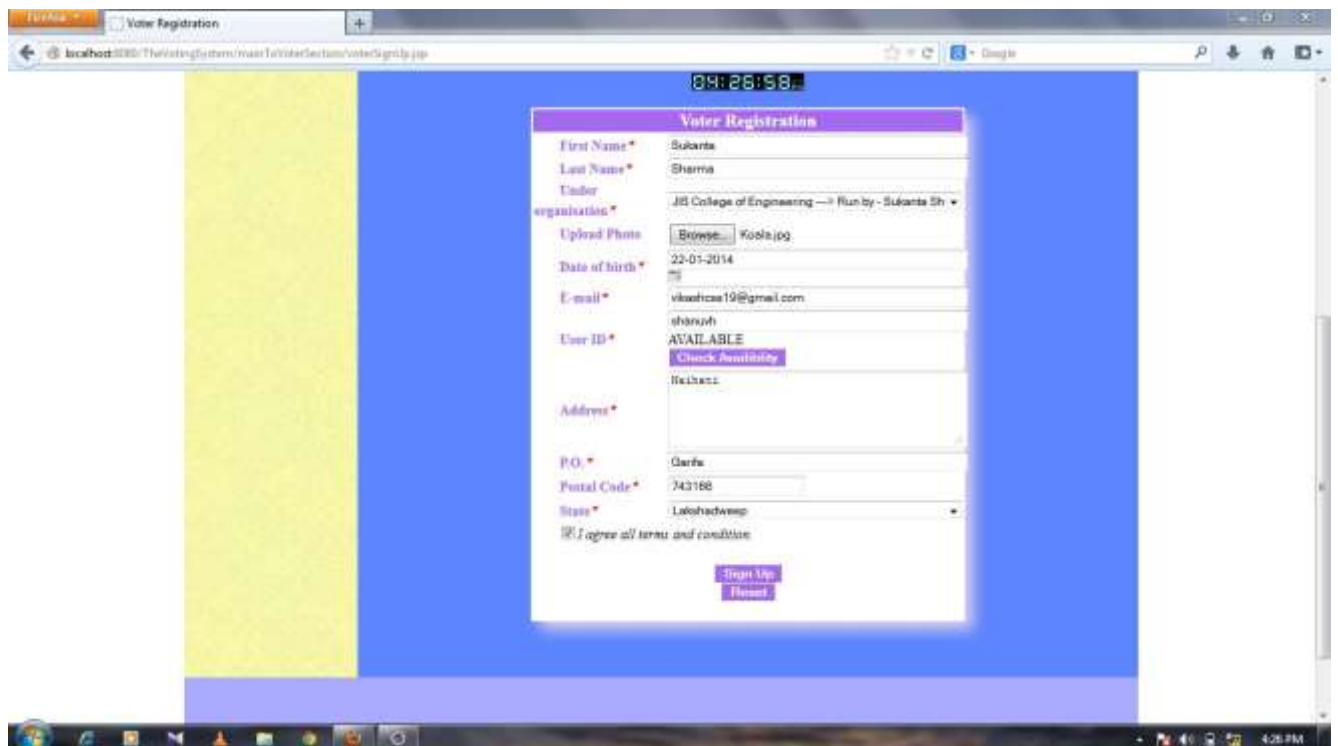
SL No	Field Name	Field Description	Field Type	Size
1	idVotingCandidate	Stores idVotingCandidate	Int	200
2	fIdVotingSchedule	Stores fIdVotingSchedule	Int	200
3	partyName	Stores partyName	Varchar	20
4	partyLeader	Stores partyLeader	Varchar	20
5	voteCount	Stores voteCount	int	200

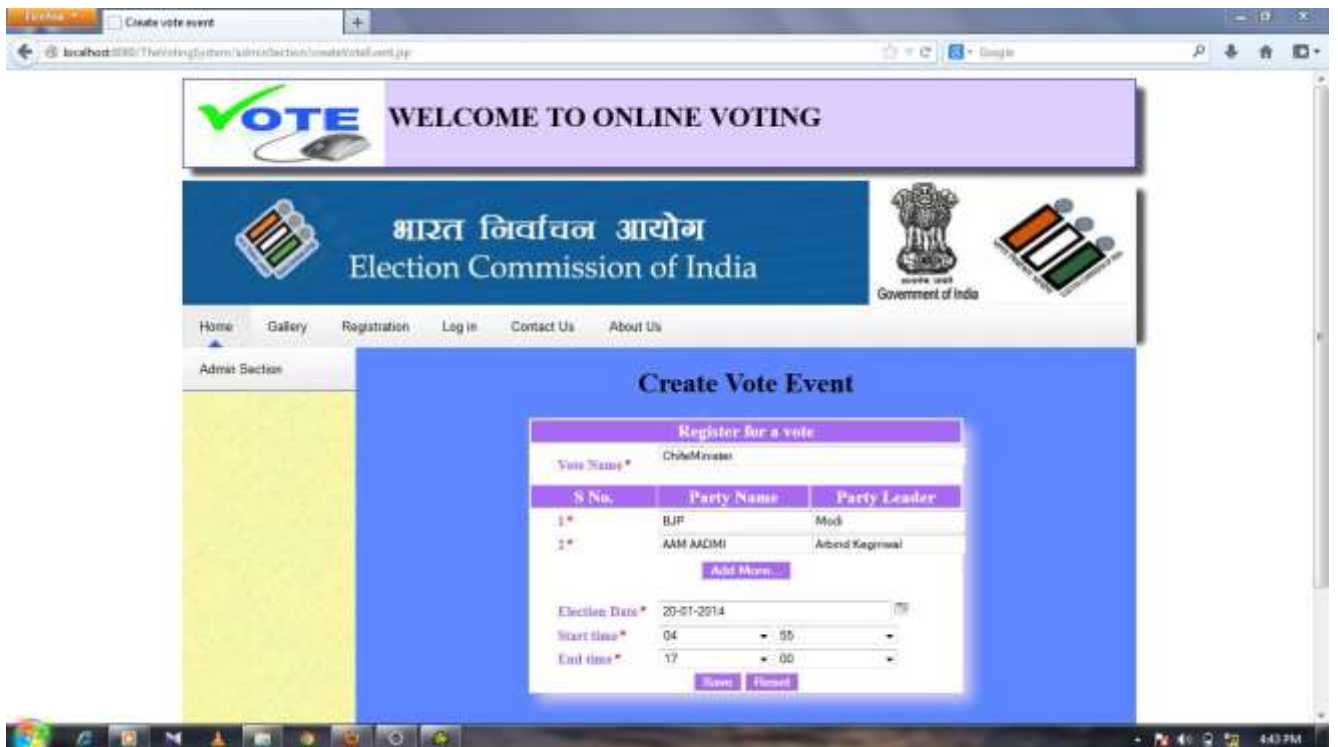
➤ voting_schedule:-

SL No	Field Name	Field Description	Field Type	Size
1	idVotingSchedule	Stores idVotingSchedule	Int	200
2	fIdAdminRegistrationInformation	Stores fIdAdminRegistrationInformation	Int	200
3	electionDate	Stores electionDate	Date	-
4	startTime	Stores startTime	Time	-
5	endTime	Stores endTime	Time	-
6	voteName	Stores voteName	varchar	20

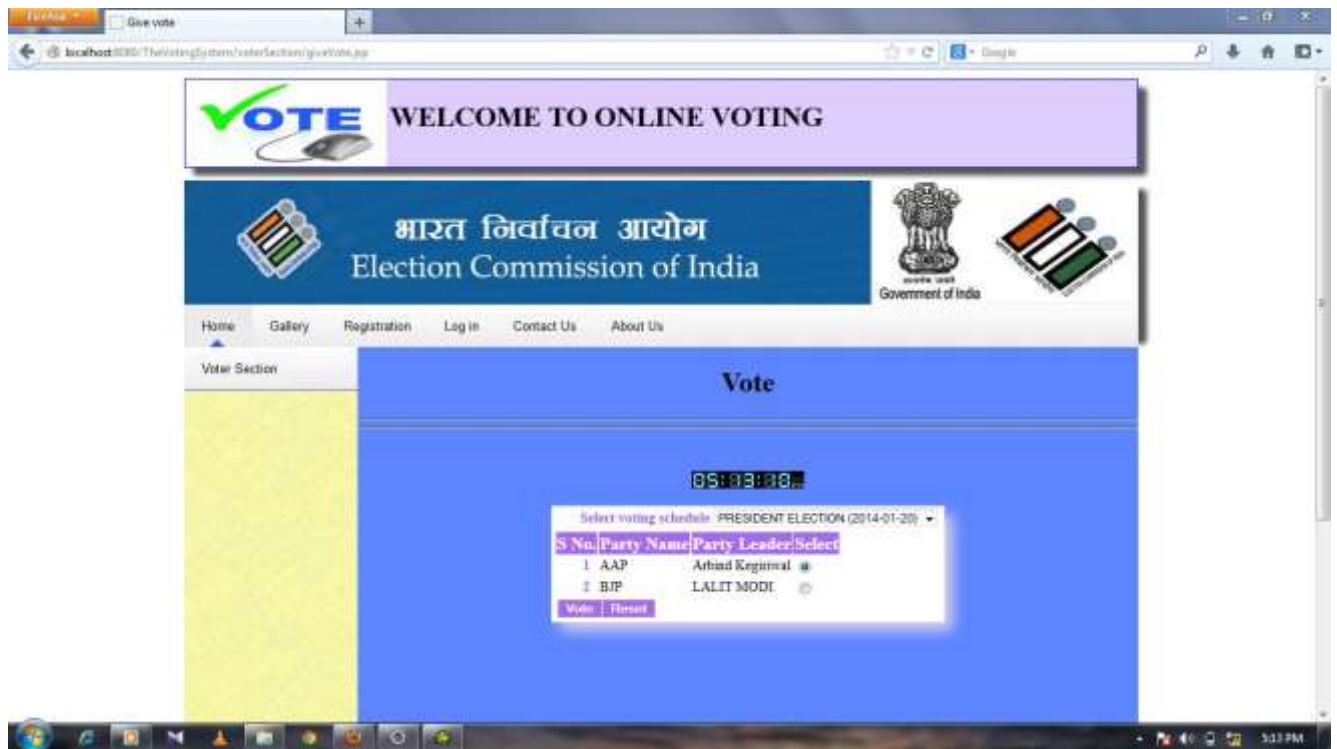
SCREEN – SHOTS











Testing

In testing part at first we create one module and testing the particular module. If there was any difficulty arises then we solve the program as a error detection method. It is module base approach.

- A failure is a manifestation of an error (or defect or bug). But the mere presence of an error may not necessarily lead to a failure.
- A test case is the triplet [I,S,O], where I is the input to the system, S is the state of the system at which the data is input, and O is the expected output of the system.
- A test suite is the set of all test cases with which a given software product is to be tested.

A software product goes through three levels of testing:

1. Unit testing.
2. Integration testing.
3. System testing.

a) Unit Testing:

In this phase all the independent units of the system are tested to ensure that information properly flows into and out of the program under test. Here, the local data structures are also examined to ensure that the modules operate properly. All possible error-handling paths are also tested to give proper messages to the users of the system when an error is encountered. Another important facility that has been tried out and tested successfully is to give warning messages to the Administrator of the system when they are about to confirm some changes to the records in the database.

b) Integration Testing and System Testing:

This phase of testing helps to uncover errors in the interfaces. The name Integration Testing suggests the testing of all the module interfaces before they are integrated to form the entire system.

(c) System testing

System testing refers to the process of testing the entire system as a whole with all the modules connected. The basic objective of this type of testing is to ensure that the system performs according to the Requirements Specification obtained during the early stages of Planning (during Analysis phase) and during Design Phase.

Some of the most important test cases that were tried out successfully re:-

1. Login Process.
2. Invalid attribute values.
3. Data is must for creating risk data elements.
4. Without selecting any row it is not going it delete.

Installation Guide

In order to run Voting Management System application the user have to first install the current version of JDK (Java Development Kit) which comes with a collection of tools that are used for developing and running Java application programs . We have to install the following software one by one first in server site.

- Windows Server/Linux/
- MySQL JDBC driver(mysql-connector-java-5.1.6-bin.jar)
- Apache Tomcat5
- MySQL

Java Database Connectivity (JDBC) must be done in order to connect the application. As Java is platform independent the Voting Management System application can be run under any system working on any Operating Systems.

It's a web hosted application. The user has to need one LAN or network and one browser. Using these two things they can connect with the server.

User Manual

To run Voting Management System application one the administrator has to perform the following steps

We have to install the following software one by one first in server site.

Java Database Connectivity (JDBC) must be done in order to connect the application. Again the following two things needs in the user side the user side.

- Computer with any operating system
- Web browser
- Network/Internet connection

Summary of Achievements

The concept of peer-reviews helped to rectify the problems as and when they occurred and also helped us to get some valuable suggestions that were incorporated by us.

Developing the project has helped us to gain some experience on real-time development procedures.

- ✓ The project successfully fulfills all the needs of the Voting Management System.
- ✓ The project successfully implements the sophisticated use.
- ✓ All the data are successfully store in the database.
- ✓ We gather many new future on JSP, CSS & Servlet

Main Difficulties Encountered:

During the development of the website we met some of the difficulties like:

- ✓ As we developed a web based application, so configure the machine as server was a very important job. There were some difficulties.
- ✓ Deploying the project in Internet caused some level of difficulties.
- ✓ There was a time constraint so it was very difficult to finish such a robust project.
- ✓ Resources were not available properly every time, so some level of difficulties was there.

Limitation of the Project

- ✓ We could not implement all the automatic voting system corresponding to all organization.
- ✓ We are implement all the work corresponding to asset

Future Scope of Work

- ✓ The project can include all information about voter's.
- ✓ The proposed methodology can be used in various regions like Voting Management System.
- ✓ We wants to do all the operation connecting with the automatic voting system.

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- [7] <http://javatutorial.net/home/java/index.aspx>
- [8] <http://cooltext.com>
- [9] <http://w3scholl.com>
- [10] <http://google.com>