

# **COLLEGE VOTING SYSTEM**

## **PROJECT REPORT**

Submitted in partial fulfillment of requirement for the award of the Degree

Bachelor of Computer Science

In the faculty of Computer Science of Bharathiar University, Coimbatore

Submitted by

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**L.R.G GOVERNMENT ARTS COLLEGE FOR  
WOMEN**

**(Affiliated To Bharathiar University)**

**TIRUPUR-4**

**APRIL-2023**

# *CERTIFICATE*

## **CERTIFICATE**

This is to certify that the project work entitled “ **COLLEGE VOTING SYSTEM** ” Submitted to Bharathiar University in partial fulfilled of the requirement for the award of the Degree of Bachelor of computer science is a record of the original work done by **Ms.S.RASIKADEVI (Reg.No.2022K0152)** Under my supervisor and that project work has not formed the basis for the any Degree /Diploma /Association /Fellowship or similar title to any candidate of any university.

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# *DECLARATION*

## **DECLARATION**

I hereby declare that the project work submitted to the **UG Department of the Computer Science, L.R.G. Government Arts College for Women, Tirupur**, affiliated to Bharathiar University, Coimbatore in the partial fulfillment of the required for the award of Bachelor of Computer Science is an original work done by me during the fourth semester.

**Place:**

**Date:**

**Signature of the Candidate**

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# *ACKNOWLEDGEMENT*

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I thank our college library for providing me with many informative books that help me to enrich my knowledge to bring out the project successfully.

## *SYNOPSIS*



## **SYNOPSIS**

The project is beneficial for Election Commission, Voters as they can get to know the candidate background and choose wisely, and even for Candidate. The software system allows the Candidate to login in to their profiles and upload all their details including their previous milestone onto the system. The college voting system is highly developed and the college voting system can be replaced by accurately and directly voting and immediate results. The college voting system is done by the internet so it can be called the Internet Voting.

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# *INTRODUCTION*

# **CHAPTER 1**

## **1. INTRODUCTION**

### **1.1 ORGANIZATION PROFILE**

Tata Consultancy Services Ltd (TCS), a subsidiary of Tata Sons Pvt Ltd, is a provider of information technology (IT) services. It offers IT infrastructure services, engineering, and industrial services, business intelligence, business process outsourcing, and consulting services, cloud services, quality engineering, block chain, enterprise solutions, and IoT. The company offers business solutions to various industries, including banking, financial services, communication, media, technology, insurance, life sciences and healthcare, retail, consumer goods and distribution, manufacturing, information services, Hi-Tech, education, energy and utilities, life sciences, healthcare, travel, transportation, and hospitality. It's software products comprise TCS BaNCS, Ignio, TAP, TCS iON, TCS TwinX, TCS Optumera, TCS OmniStore, TCS ADD, TCS HOBS, Quartz, Jile, and TCS MasterCraft. The company has operations across Latin America, North America, Europe, Asia-Pacific, the Middle East, and Africa. TCS is headquartered in Mumbai, Maharashtra, India.

TCS offers a consulting-led, cognitive-powered, integrated portfolio of business, technology, and engineering services and solutions. This is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 592,000 of the world's best-trained consultants in 55 countries. The company generated consolidated revenues of US \$25.7 billion in the fiscal year ended March 31, 2022, and is listed on the BSE (formerly Bombay Stock Exchange) and the NSE (National Stock Exchange) in India.

## **1.2 SYSTEM SPECIFICATION**

System Requirements Specification also known as Software Requirements Specification, is a document or set of documentation that describes the features and behavior of a software application

### **WINDOWS OS**

Windows is a graphical operating system developed by Microsoft. It allows users to view and store files, run the software, play games, watch videos, and provides a way to connect to the internet. It was released for both home computing and professional works.

Microsoft introduced the first version as 1.0

It was released for both home computing and professional functions of Windows on 10 November 1983. Later, it was released on many versions of Windows as well as the current version, Windows 10.

In 1993, the first business-oriented version of Windows was released, which is known as Windows NT 3.1. Then it introduced the next versions, Windows 3.5, 4/0, and Windows 2000. When the XP Windows was released by Microsoft in 2001, the company designed its various versions for a personal and business environment. It was designed based on standard x86 hardware, like Intel and AMD processor. Accordingly, it can run on different brands of hardware, such as HP, Dell, and Sony computers, including home-built PCs.

Play Video

Editions of Windows

Microsoft has produced several editions of Windows, starting with Windows XP. These versions have the same core operating system, but some versions included advance features with an additional cost. There are two most common editions of Windows:

- Windows Home
- Windows Professional

Windows Home is basic edition of Windows. It offers all the fundamental functions of Windows, such as browsing the web, connecting to the Internet, playing video games, using office software, watching videos. Furthermore, it is less expensive and comes pre-installed with many new computers.

## **PYTHON**

Python is a computer programming language often used to build websites and software, automate tasks, and conduct data analysis. Python is a general-purpose language, meaning it can be used to create a variety of different programs and isn't specialized for any specific problems. This versatility, along with its beginner-friendliness, has made it one of the most-used programming languages today. A survey conducted by industry analyst firm RedMonk found that it was the second-most popular programming language among developers in 2021.

Python is commonly used for developing websites and software, task automation, data analysis, and data visualization. Since it's relatively easy to learn, Python has been adopted by many non-programmers such as accountants and scientists, for a variety of everyday tasks, like organizing finances.

“Writing programs is a very creative and rewarding activity,” says University of Michigan and Courser instructor Charles R Severance in his book Python for Everybody. “You can write programs for many reasons, ranging from making your living to solving a difficult data analysis problem to having fun to helping someone else solve a problem.”

## **MYSQL**

MySQL is an Oracle-backed open source relational database management system (RDBMS) based on Structured Query Language (SQL). MySQL runs on virtually all platforms, including Linux, UNIX and Windows. Although it can be used in a wide range of applications, MySQL is most often associated with web applications and online publishing.

MySQL is an important component of an open source enterprise stack called LAMP. LAMP is a web development platform that uses Linux as the operating system, Apache as the web server, MySQL as the relational database management system and PHP as the object-oriented scripting language. (Sometimes Perl or Python is used instead of PHP.)

Originally conceived by the Swedish company MySQL AB, MySQL was acquired by Sun Microsystems in 2008 and then by Oracle when it bought Sun in 2010. Developers can use MySQL under the GNU General Public License (GPL), but enterprises must obtain a commercial license from Oracle.

Relational database management systems use structured query language (SQL) to store and manage data. The system stores multiple database tables that relate to each other. MS SQL Server, MySQL, or MS Access are examples of relational database management systems. The following are the components of such a system.

A SQL table is the basic element of a relational database. The SQL database table consists of rows and columns. Database engineers create relationships between multiple database tables to optimize data storage space.

SQL statements, or SQL queries, are valid instructions that relational database management systems understand. Software developers build SQL statements by using different SQL language elements. SQL language elements are components such as identifiers, variables, and search conditions that form a correct SQL statement.

### **1.2.1 HARDWARE SPECIFICATION**

- Processor : P 4 700 GHz.
- RAM : 4 GB RAM
- Hard Disk Drive : 180 GB

### **1.2.2 SOFTWARE SPECIFICATION**

- Operating System : Windows 7/8/10
- Front End : PYTHON
- Back End : MYSQL



*SYSTEM STUDY*

## **CHAPTER 2**

### **SYSTEM STUDY**

#### **2.1 EXISTING SYSTEM**

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.

##### **2.1.1 DRAWBACKS**

- Chances of hacking candidate or voter's account.
- Every voter does not have pc or net connection, so voters can even go in polling booth and vote there.

#### **2.2 PROPOSED SYSTEM**

In this system voter can voting their candidate via college voting system. With the help of that system, we can vote easily. User can't vote more than one time. In this system helps to easy way to counting vote.

##### **2.2.1 FEATURES**

- Fast and easy way of conducting election.
- Voters can view background of each Candidate.
- Candidate can present themselves against voters.
- Admin can verify the documents and details of Candidate.
- System Generated Unique ID and Password gives more Secure Logins

*SYSTEM DESIGN AND DEVELOPMENT*

## **CHAPTER 3**

### **SYSTEM DESIGN AND DEVELOPMENT**

#### **3.1 FILE DESIGN**

The selection of the file system design approach is done according to the needs of the developers what are the needed requirements and specifications for the new design. It allowed us to identify where our proposal fitted in with relation to current and past file system development. Our experience with file system development is limited so the research served to identify the different techniques that can be used. The variety of file systems encountered show what an active area of research file system development is. The file systems may be from one of the two fundamental categories. In one category, the file system is developed in user space and runs as a user process. Another file system may be developed in the kernel space and runs as a privileged process. Another one is the mixed approach in which we can take the advantages of both aforesaid approaches. Each development option has its own pros and cons. In this article, these design approaches are discussed.

A file system is the data structure designed to support the abstraction of the data blocks as an archive and collection of files. This data structure is unique because it is stored on secondary storage (usually the disk), which is a very slow device.

The file system structure is the most basic level of organization in an operating system. Almost all of the ways an operating system interacts with its users, applications, and security model are dependent upon the way it organizes files on storage devices.

File Design Information systems in business are file and database oriented. Data are accumulated into files that are processed or maintained by the system. The systems analyst is responsible for designing files, determining their contents and selecting a method for organizing the data.

The most important purpose of a file system is to manage user data. This includes storing, retrieving and updating data. Some file systems accept data for storage as a stream of bytes which are collected and stored in a manner efficient for the media.

## **3.2 INPUT DESIGN**

The input design is the link between the information system and the user. It comprises the developing specification and procedures for data preparation and those steps are necessary to put transaction data in to a usable form for processing can be achieved by inspecting the computer to read data from a written or printed document or it can occur by having people keying the data directly into the system. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple. The input is designed in such a way so that it provides security and ease of use with retaining the privacy. Input Design considered the following things:’

- What data should be given as input?
- How the data should be arranged or coded?
- The dialog to guide the operating personnel in providing input.
- Methods for preparing input validations and steps to follow when error occur.

### **OBJECTIVES**

- Input Design is the process of converting a user-oriented description of the input into a computer-based system. This design is important to avoid errors in the data input process and show the correct direction to the management for getting correct information from the computerized system.
- It is achieved by creating user-friendly screens for the data entry to handle large volume of data. The goal of designing input is to make data entry easier and to be free from errors. The data entry screen is designed in such a way that all the data manipulates can be performed. It also provides record viewing facilities.
- When the data is entered it will check for its validity. Data can be entered with the help of screens. Appropriate messages are provided as when needed so that the user
- will not be in maize of instant. Thus the objective of input design is to create an input layout that is easy to follow

### **3.3 OUTPUT DESIGN**

The design of output is the most important task of any system. During output design, developers identify the type of outputs needed, and consider the necessary output controls and prototype report layouts.

#### **External Outputs**

Manufacturers create and design external outputs for printers. External outputs enable the system to leave the trigger actions on the part of their recipients or confirm actions to their recipients.

Some of the external outputs are designed as turnaround outputs, which are implemented as a form and re-enter the system as an input.

#### **Internal outputs**

Internal outputs are present inside the system, and used by end-users and managers. They support the management in decision making and reporting.

#### **Output Integrity Controls**

Output integrity controls include routing codes to identify the receiving system, and verification messages to confirm successful receipt of messages that are handled by network protocol.

Printed or screen-format reports should include a date/time for report printing and the data. Multipage reports contain report title or description, and pagination. Pre-printed forms usually include a version number and effective date.

### 3.4 DATABASE DESIGN

Today's businesses depend on their databases to provide information essential for day-to-day operations, especially in case of electronic commerce businesses who has a definite advantage with up-to-date database access. Good design forms the foundation of any database, and experienced hands are required in the automation process to design for optimum and stable performance.

Software Solutions have been constantly working on these platforms and have attained a level of expertise. We apply proven methodologies to design, develop, integrate and implement database systems to attain its optimum level of performance and maximize security to meet the client's business model.

#### **Business needs addressed:**

- Determine the basic objects about which the information is stored
- Determine the relationships between these groups of information and the objects
- Effectively manage data and create intelligent information
- Remote database administration or on site administrative support
- Database creation, management, and maintenance
- Information retrieval efficiency, remove data redundancy and ensure data security

The most important consideration in designing the database is how the information will be used. The main objective of designing a database is Data Integration,

Data Integrity and Data Independence.

### **Data Integration**

In a database, information from several files is coordinated, accessed and operated upon as though it is in a single file. Logically, the information is centralized, physically; the data may be located on different devices, connected through data communication facilities.

### **Data Integrity**

Data integrity means storing all data in one place only and how each application accesses it. This approach results in more consistent information, one update being sufficient to achieve a new record status for all applications. This leads to less data redundancy that is data items need not be duplicated.

### **Data Independence**

Data independence is the insulation of application programs from changing aspects of physical data organization. This objective seeks to allow changes in the content and organization of physical data without reprogramming of application and allow modifications to application programs without reorganizing the physical data.

## **3.5 SYSTEM DEVELOPMENT**

Systems development is the process of defining, designing, testing, and implementing a new software application or program. It could include the internal development of



customized systems, the creation of database systems, or the acquisition of third party developed software.

Systems development life cycle phases include planning, system analysis, system design, development, implementation, integration and testing, and operations and maintenance.

### **3.5.1 DESCRIPTION OF MODULES**

#### **Voter Registration**

Voters are created by admin, once voters are created, they will get unique username and password. The voters can able to login via this application and update his/her profile details. Voter can't add themselves.

#### **Candidate Registration**

Candidates are created by admin, once candidates are created they will displayed in the voting screen. Those details will be displayed in the election result as well.

#### **Candidate & Voter Details**

This module contains provide the all information about the voter's and candidates. These values have been collected from the voter and candidate table.

#### **Pooling voter**

Voter can pool their vote in this module. Once voter pooling their vote then can't vote more than one time. Voter selects his favorite voter and pooling their vote.

#### **Election Result**

Election result will be declared after the election will completed. This is the main module for finding the winner. Rank wise we can display the winner candidates.

*TESTING AND IMPLEMENTATION*

## **CHAPTER 4**

### **TESTING AND IMPLEMENTATION**

#### **TESTING METHODOLOGIES**

System testing is state of implementation, which is aimed at ensuring that the system works accurately and efficiently as expect before live operation commences. It certifies that the whole set of programs hang together.

System testing requires a test plan that consists of several key activities and step for run program, string, system and user acceptance testing. The implementation of newly designed package is important in adopting a successful new system

Testing is the important stage in software development. the system test in implementation stage in software development process. The system testing implementation should be confirmation that all is correct and an opportunity to show the users that the system works as expected. It accounts the largest percentage of technical effort in the software development process.

Testing phase in the development cycle validates the code against the functional specification testing is vital to achievement of the system goals. The objective of the testing is to discover errors to fulfill this objective a series of test step unit, integration. Validation and system tests were planned and executed the test steps are:

#### **SYSTEM TESTING**

Testing is an integral part of any system development life cycle. Insufficient and untested applications may tend to crash and the result is loss of economic and manpower investment besides user's dissatisfaction and downfall of reputation. Software testing can be looked upon as one among many processes, an organization performs, and that provides the lost opportunity to correct any flaws in the developed system. Software testing includes selecting test data that have more probability of giving errors.

The first step in system testing is to develop a plan that tests all aspects of the system. Completeness, correctness, reliability and maintainability of the software are to be tested for the best quality assurance that the system meets the specification and requirements for its intended use and performance. System testing is the most useful practical process of executing a program with the implicit intention of finding errors that make the program fails. System testing is done in three phases.

- Unit Testing
- Integration Testing
- Validation Testing

## **UNIT TESTING**

Unit testing focuses verification effort on the smallest unit of software the module. Using the detailed design and the process specification testing is done to registration by the user with in the boundary of the Login module. The login form receives the username and password details and validates the value with the database. If valid, the home page is displayed.

## **INTEGRATION TESTIN**

Integration Testing is the process of this activity can be considered as testing the design and hence module interaction. The primary objective of integration testing is to discover errors in the interfaces between the components. Login form and registration form are integrated and tested together. If the user is newly registered, the received details will be stored in the registration table. While logging in, the application will check for valid user name and password in the registration table and if valid the user is prompted for submitting complaints.

Data can be lost across an interface, one module can have adverse effect on another sub function when combined it may not produce the desired major functions. Integration testing is a systematic testing for constructing test to uncover errors associated within an interface.

The objectives taken from unit tested modules and a program structure is built for integrated testing. All the modules are combined and the test is made.

A correction made in this testing is difficult because the vast expenses of the entire

program complicated the isolation of causes. In this integration testing step, all the errors are corrected for next testing process.

## **VALIDATION TESTIN**

Validation are independent procedures that are used together for checking that a product, service, or system meets requirements and specifications and that it fulfills its in purpose the actual result from the expected result for the complaint process. Select the complaint category of the complaint by user. The input given to various forms fields are validated effectively. Each module is tested independently. It is tested that the complaint module fields receive the correct input for the necessary details such as complaint category, complaint id, reference name, complaint description, and email for further process.s

After the completion of the integrated testing, software is completely assembled as a package; interfacing error has been uncovered and corrected and a final series of software test validation begins.

Validation testing can be defined in many ways but a simple definition is that validation succeeds when the software function in a manner that can be reasonably expected by the customer. After validation test has been conducted, one of two possible conditions exists.

## **OUTPUT TESTIN**

The next process of validation testing, is output testing of the proposed system, since no system could be successful if it does not produce the required output in the specified format. Asking the user about the format required, list the output to be generated or displayed by the system under considerations.

Output testing is a different test whose primary purpose is to fully exercise the computer based system although each test has a different purpose all the work should verify that all system elements have been properly integrated and perform allocated functions.

The output format on the screen is found to be corrected as the format was designed in the system design phase according to the user needs for the hard copy also; the output testing has not resulted in any correction in the system.

## **SYSTEM IMPLEMENTATION**

When the initial design was done for the system, the client was consulted for the acceptance of the design so that further proceedings of the system development can be carried on. After the development of the system a demonstration was given to them about the working of the system. The aim of the system illustration was to identify any malfunction of the system.

After the management of the system was approved the system implemented in the concern, initially the system was run parallel with existing manual system. The system has been tested with live data and has proved to be error free and user friendly.

Implementation is the process of converting a new or revised system design into an operational one when the initial design was done by the system; a demonstration was given to the end user about the working system.

This process is used to verify and identify any logical mess working of the system by feeding various combinations of test data. After the approval of the system by both end user and management the system was implemented.

System implementation is made up of many activities. The six major activities are as follows.

## **CODING**

Coding is the process of whereby the physical design specifications created by the analysis team turned into working computer code by the programming team. A design code may be a tool which helps ensure that the aspiration for quality and quantity for customers and their requirements, particularly for large scale projects, sought by the water agency

Design pattern are documented tried and tested solutions for recurring problems in a given context. So basically you have a problem context and the proposed solution for the same.



## **INSTALLATION**

Installation is the process during which the current system is replaced by the new system. This includes conversion of existing data, software, and documentation and work procedures to those consistent with the new system.

## **DOCUMENTATION**

Documentation is descriptive information that describes the use and operation of the system. The user guide is provided to the end user as the student and administrator. The documentation part contains the details as follows,

User requirement and water agency details administration has been made online. Any customer can request their water requirement details through online and also use of documentation, they can view the purpose of each purpose, The admin could verify the authentication of the users, users requirements and need to take delivery process, thus the documentation is made of full view of project thus it gives the guideline to study the project and how to execute also.

## **USER TRAINING AND SUPPORT**

The software is installed at the deployment environment, the developer will give training to the end user of the regional transport officer and police admin officer in that software. The goal of an end user training program is to produce a motivated user who has the skills needed to apply what has been to apply what has been learned to perform the job related task. The following are the instruction which is specified the handling and un-handling events in the application,

- The authenticated user of admin and office workers only login in the application with authorized username and password.
- Don't make user waste their time to come straight to the water agency or make a phone call.
- It can easily track through online by the user.
- Very user friendliness software

## **IMPLEMENTATION PROCEDURES**

Implementation includes all the activities that take place to convert the old system to the new one. Proper implementation is essential to provide a reliable system to meet the organization requirements. Implementation is the stage in the project where the theoretical design is turned into a working system. The most crucial stage is achieving a successful new system & giving the user confidence in that the new system will work efficiently & effectively in the implementation state.

## **IMPLEMENTATION PROCEDURES**

### **PILOT RUNNING**

Processing the current data by only one user at a time called the pilot running process. When one user is accessing the data at one system, the system is set to be engaged and connected in network. This process is useful only in system where more than one user is restricted.

### **PARALLEL RUNNING:**

Processing the current data by more than one user at a time simultaneously is said to be parallel running process. This same system can be viewed and accessed by more than one user at the time. Hence the implementation method used in the system is a pilot type of implementation.

Implementation is the stage in the project where the theoretical design is turned into a working system. The most crucial stage is achieving a successful new system & giving the user confidence in that the new system will work efficiently & effectively in the implementation state.

The stage consists of,

- Testing the developed program with sample data.
- Detection's and correction of error.
- Creating whether the system meets user requirements.
- Making necessary changes as desired by the user.
- Training user personnel.

## **USER TRAINING**

User Training is designed to prepare the user for testing & consenting the system. .

- User Manual.
- Help Screens.
- Training Demonstration.

## **USER MANUAL**

The summary of important functions about the system and software can be provided as a document to the user.

## **HELP SCREENS**

This features now available in every software package, especially when it is used with a menu. The user selects the “Help” option from the menu. The system accesses the necessary description or information for user reference.

## **TRAINING DEMONSTRATION:**

Another User Training element is a Training Demonstration. Live demonstrations with personal contact are extremely effective for Training Users.

## **SYSTEM MAINTENANCE**

Maintenance is actually the implementation of the review plan. As important as it is, many programmers and analysts are to perform or identify themselves with the maintenance effort. There are psychological, personality and professional reasons for this. Analysts and programmers spend far more time maintaining programs than they do writing them. Maintenance accounts for 50-80 percent of total system development

Maintenance is expensive. One way to reduce the maintenance costs are through maintenance management and software modification audits.

- Maintenance is not as rewarding as exciting as developing systems. It is perceived as requiring neither skill nor experience.
- Users are not fully cognizant of the maintenance problem or its high cost.
- Few tools and techniques are available for maintenance.
- A good test plan is lacking.
- Standards, procedures, and guidelines are poorly defined and enforced.
- Programs are often maintained without care for structure and documentation.
- There are minimal standards for maintenance.
- Programmers expect that they will not be in their current commitment by time their programs go into the maintenance cycle.

### **Corrective Maintenance**

It means repairing, processing or performance failure or making changes because of previously uncovered problems or false assumptions. Task performed to identify, isolate, and rectify a fault so that the failed equipment, machine, or system can be restored to an operational condition within the tolerances or limits established for in-service operations.

Corrective maintenance can be subdivided into "immediate corrective maintenance" (in which work starts immediately after a failure) and "deferred corrective maintenance" (in which work is delayed in conformance to a given set of maintenance rules).

### **Perfective Maintenance**

It means changes made to a system to add new features or to improve performance. Preventive maintenance is predetermined work performed to a schedule with the aim of preventing the wear and tear or sudden failure of equipment components. process or control equipment failure can have adverse results in both human and economic terms. In addition to down time and the costs involved to repair and/or replace equipment parts or components, there is the risk of injury to operators, and of acute exposures to chemical and/or physical

agents.

Time-based or run-based Periodically inspecting, servicing, cleaning, or replacing parts to prevent sudden failure .On-line monitoring of equipment in order to use important/expensive parts to the limit of their serviceable life. Preventive maintenance involves changes made to a system to reduce the chance of future system failure.

An example of preventive maintenance might be to increase the number of records that a system can process far beyond what is currently needed or to generalize how a system sends report information to a printer so that so that the system can adapt to changes in printer technology.

### **Preventive Maintenance**

Changes made to a system to avoid possible future problems Perfective maintenance involves making enhancements to improve processing performance, interface usability, or to add desired, but not necessarily required, system features. The objective of perfective maintenance is to improve response time, system efficiency, reliability, or maintainability.

During system operation, changes in user activity or data pattern can cause a decline in efficiency, and perfective maintenance might be needed to restore performance. Usually, the perfective maintenance work is initiated by the IT department, while the corrective and adaptive maintenance work is normally requested by users.

*CONCLUSION*

## **CHAPTER 5**

### **CONCLUSION**

College voting systems are critical tools for managing and facilitating student elections in colleges and universities. These systems provide several benefits, including improved convenience, increased participation, and enhanced accuracy.

College voting systems ensure improved convenience by enabling students to vote from anywhere, using their smartphones or computers. This eliminates the need for physical polling stations and reduces the time and effort required to cast a vote. This can lead to increased participation in student elections and ensure that more students have their voices heard.

Moreover, these systems ensure increased participation by providing a range of voting options, such as online voting, absentee voting, and in-person voting. This ensures that students who cannot attend polling stations on election day can still participate in the election and have their say.

College voting systems also enhance accuracy by automating the counting of votes, reducing the risk of human error, and ensuring that results are reported in real-time. This helps to promote trust in the election process and ensures that election results are accurate and transparent.

In conclusion, College voting systems are critical tools for managing and facilitating student elections in colleges and universities. They offer several benefits, including improved convenience, increased participation, and enhanced accuracy. By leveraging these benefits, colleges and universities can

# *BIBLIOGRAPHY*



ensure that student elections are fair, transparent, and accessible to all students.

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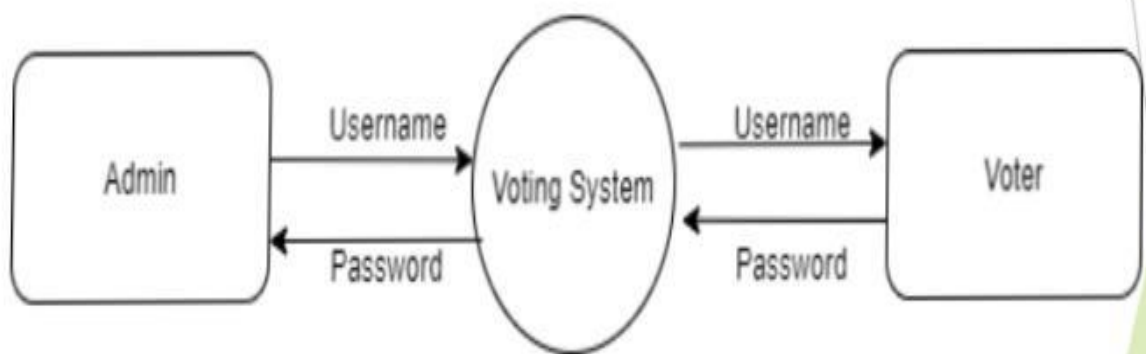
# *APPENDICES*

## APPENDICES

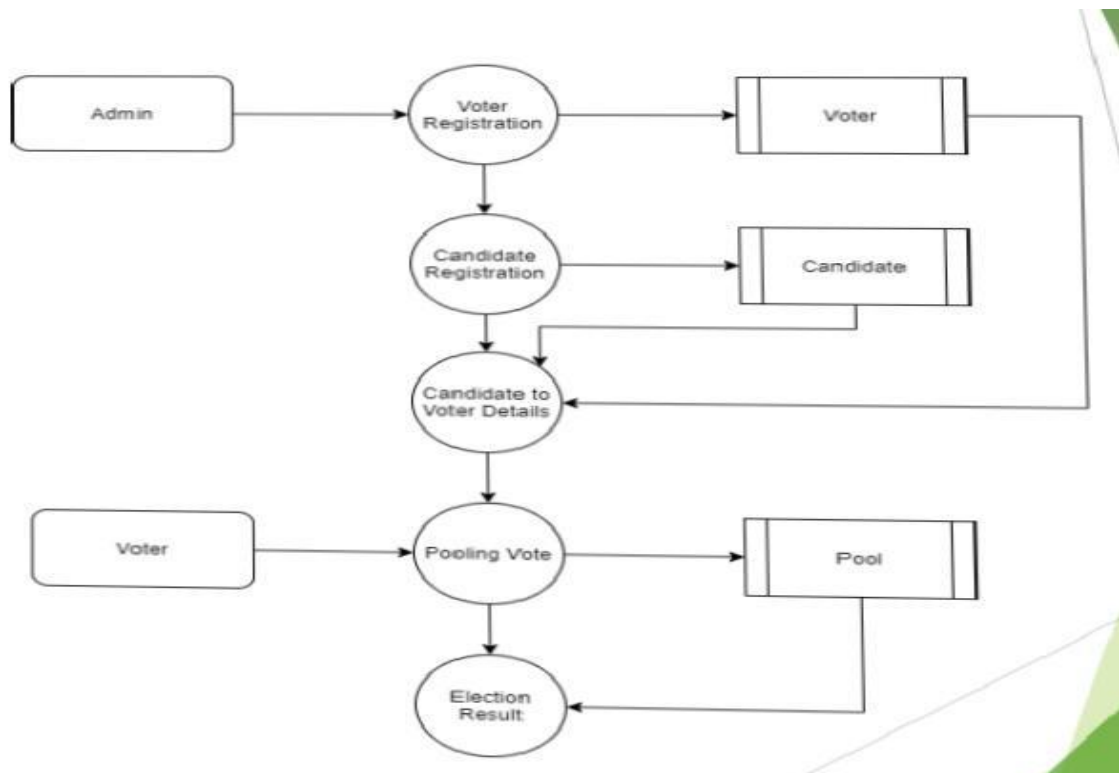
### A. DATA FLOW DIAGRAM

A data-flow diagram (DFD) is a way of representing a flow of a data of a process or system. The DFD also provides information about the outputs and inputs of each entity and process itself. A data-flow diagram is a part of structured-analysis modeling tools.

#### LEVEL 0:



## LEVEL 1:



## TABLE STRUCTURE

The table needed for each module was designed and the specification of each and every column was given based on the records and details collected during record specification of the system study.

### TABLE NAME: ADMIN

FIELD	DATA TYPE	SIZE	CONSTRAINT
Admin id	Int	10	Primary key
Admin name	Varchar	30	Not Null
Admin mobile	Int	10	Not Null
Username	Varchar	20	Not Null
Password	Varchar	20	Not Null

### TABLE NAME: VOTER

FIELD	DATA TYPE	SIZE	CONSTRAINT
Voter ID	Int	10	Primary key
Voter type	Varchar	20	Not Null
Email	Varchar	20	Not Null
Password	Varchar	20	Not Null

<b>First name</b>	Varchar	20	Not Null
<b>Last name</b>	Varchar	20	Not Null
<b>Mobile number</b>	Int	10	Not Null
<b>Address</b>	Varchar	30	Not Null

**TABLE NAME: CANDIDATES**

<b>FIELD</b>	<b>DATA TYPE</b>	<b>SIZE</b>	<b>CONSTRAINT</b>
<b>Candidates I'd</b>	Int	10	Primary key
<b>Post</b>	Varchar	20	Not Null
<b>First name</b>	Varchar	20	Not Null
<b>Last name</b>	Varchar	20	Not Null
<b>Mobile</b>	Int	10	Not Null
<b>Email</b>	Varchar	20	Not Null
<b>Address</b>	Varchar	30	Not Null

**TABLE NAME: POOL**

<b>FIELD</b>	<b>DATA TYPE</b>	<b>SIZE</b>	<b>CONSTRAINT</b>
<b>Pool id</b>	Int	10	Primary key
<b>Candidates id</b>	Int	10	Foreign key
<b>Voter id</b>	Int	10	Foreign key
<b>Post id</b>	Int	10	Foreign key

## B. SAMPLE CODEING

```
#!/usr/bin/env python
# package: com.example.demo.controller
import python.util.List

import org.springframework.beans.factory.annotation.Autowired

import org.springframework.http.ResponseEntity

import org.springframework.web.bind.annotation.GetMapping

import org.springframework.web.bind.annotation.PathVariable

import org.springframework.web.bind.annotation.PostMapping

import org.springframework.web.bind.annotation.RequestMapping

import org.springframework.web.bind.annotation.RestController

import com.example.demo.response.GetProfileResponse

import com.example.demo.response.ValidateVotingResponse

import com.example.demo.response.ViewCandidatesResponse

import com.example.demo.response.ViewVoterResponse

import com.example.demo.response.VoteReportResponse
```



```

import com.example.demo.service.ApiService

@RequestMapping(value="/api")
class ApiController(object):
    """ generated source for class ApiController """
    service = ApiService()

    @PostMapping("/getprofile/{id}")
    def getprofile(self, id):
        """ generated source for method getprofile """
        return ResponseEntity.ok().body(self.service.getprofile(id))

    @PostMapping("/addVoter/{firstname}/{lastname}/{mobile}/{email}/{address}")
    def addVoter(self, firstname, lastname, mobile, email, address):
        """ generated source for method addVoter """
        self.service.addVoter(firstname, lastname, mobile, email, address)
        return "Voter sucessfully Created"

    @PostMapping("/deleteVoter/{id}")
    def deleteVoter(self, id):
        """ generated source for method deleteVoter """
        self.service.deleteVoter(id)
        return "Voter sucessfully deleted"

    @PostMapping("/viewVoter")
    def viewVoter(self):
        """ generated source for method viewVoter """
        return ResponseEntity.ok().body(self.service.viewVoter())

    @PostMapping("/addCandidate/{firstname}/{lastname}/{mobile}/{email}/{address}/{post}")
    def addCandidate(self, firstname, lastname, mobile, email, address, post):
        """ generated source for method addCandidate """
        self.service.addCandidate(firstname, lastname, mobile, email, address, post)
        return "Candidate sucessfully Created"

    @PostMapping("/deleteCandidates/{id}")
    def deleteCandidates(self, id):
        """ generated source for method deleteCandidates """
        self.service.deleteCandidates(id)

```

```

        return "Candidate sucessfully deleted"

    @PostMapping("/viewCandidates")
    def viewCandidates(self):
        """ generated source for method viewCandidates """
        return ResponseEntity.ok().body(self.service.viewCandidates())

    @PostMapping("/login/{username}/{password}")
    def login(self, username, password):
        """ generated source for method login """
        return ResponseEntity.ok().body(self.service.login(username, password))

    @PostMapping("/pullvote/{canid}/{votid}/{postid}")
    def pullvote(self, canid, votid, postid):
        """ generated source for method pullvote """
        self.service.pullvote(canid, votid, postid)
        return "Vote sucessfully saved"

    @PostMapping("/validateVoting/{id}")
    def validateVoting(self, id):
        """ generated source for method validateVoting """
        return ResponseEntity.ok().body(self.service.validateVoting(id))

    @GetMapping("/votreport")
    def votreport(self):
        """ generated source for method votreport """
        return ResponseEntity.ok().body(self.service.votreport())

    #!/usr/bin/env python
    # package: com.example.demo.dao
    import python.math.BigInteger

    import python.util.List

    import org.hibernate.Session

    import org.hibernate.SessionFactory

    import org.hibernate.query.NativeQuery

```

```

import org.springframework.beans.factory.annotation.Autowired

import org.springframework.stereotype.Repository

import com.example.demo.request.AddCourierRequest

import com.example.demo.request.AddCustomerRequest

import com.example.demo.request.LoginRequest

import com.example.demo.request.SearchRequest

import com.example.demo.request.UpdateCourierRequest

class ApiDao(object):
    """ generated source for class ApiDao """
    sf = SessionFactory()

    def getprofile(self, id):
        """ generated source for method getprofile """
        session = self.sf.getCurrentSession()
        sql = "select userid,usertype,email,password,firstname,lastname,mobilenumber,address  from
user where userid=" + id
        nq = session.createNativeQuery(sql)
        return nq.list_()

    def addVoter(self, firstname, lastname, mobile, email, address):
        """ generated source for method addVoter """
        session = self.sf.getCurrentSession()
        sql = "INSERT INTO `ovs`.`user` (`userid`, `usertype`, `email`, `password`, `firstname`,
`lastname`, `mobilenumber`, `address`) VALUES (NULL, '0', '" + email + "', '123', '" + firstname + "',
'" + lastname + "', '" + mobile + "', '" + address + "');"
        a = session.createSQLQuery(sql)
        a.executeUpdate()

    def deleteVoter(self, id):
        """ generated source for method deleteVoter """
        # TODO Auto-generated method stub
        session = self.sf.getCurrentSession()
        sql = "delete from user where userid=" + id

```

```

a = session.createSQLQuery(sql)
a.executeUpdate()

def viewVoter(self):
    """ generated source for method viewVoter """
    # TODO Auto-generated method stub
    session = self.sf.getCurrentSession()
    sql = "SELECT userid, usertype, email, password, firstname, lastname, mobilenumber, address
FROM user where usertype!=1 order by firstname"
    nq = session.createNativeQuery(sql)
    return nq.list_()

def addCandidate(self, firstname, lastname, mobile, email, address, post):
    """ generated source for method addCandidate """
    session = self.sf.getCurrentSession()
    sql = "INSERT INTO `ovs`.`candidates` (`userid`, `post`, `firstname`, `lastname`, `mobile`,
`email`, `address`, `img`) VALUES (NULL, '" + post + "', '" + firstname + "', '" + lastname + "', '" +
mobile + "', '" + email + "', '" + address + "', );"
    a = session.createSQLQuery(sql)
    a.executeUpdate()

def deleteCandidates(self, id):
    """ generated source for method deleteCandidates """
    # TODO Auto-generated method stub
    session = self.sf.getCurrentSession()
    sql = "delete from candidates where userid=" + id
    a = session.createSQLQuery(sql)
    a.executeUpdate()

def viewCandidates(self):
    """ generated source for method viewCandidates """
    session = self.sf.getCurrentSession()
    sql = "SELECT userid, post, firstname, lastname, mobile, address,email FROM candidates order
by firstname"
    nq = session.createNativeQuery(sql)
    return nq.list_()

def login(self, username, password):
    """ generated source for method login """
    session = self.sf.getCurrentSession()

```

```

    sql = "SELECT  userid,usertype,email,password,firstname,lastname,mobilenumber,address
FROM user where email='" + username + "' and password='" + password + "'"

    nq = session.createNativeQuery(sql)
    return nq.list_()

def pullvote(self, canid, votid, postid):
    """ generated source for method pullvote """
    # TODO Auto-generated method stub
    session = self.sf.getCurrentSession()
    sql = "INSERT INTO `ovs`.`voting` (`id`, `canid`, `votid`, `postid`) VALUES (NULL, '" + canid
+ "', '" + votid + "', '" + postid + "');"
    a = session.createSQLQuery(sql)
    a.executeUpdate()

def validateVoting(self, id):
    """ generated source for method validateVoting """
    session = self.sf.getCurrentSession()
    sql = "select id,canid,votid,postid from voting where votid=" + id
    nq = session.createNativeQuery(sql)
    return nq.list_()

def votreport(self):
    """ generated source for method votreport """
    session = self.sf.getCurrentSession()
    sql = "select c.userid,c.firstname,count(v.id) as count,c.post as postid from candidates as c left
join voting as v on (v.canid=c.userid) group by c.userid,c.firstname order by count desc"
    nq = session.createNativeQuery(sql)
    return nq.list_()

#!/usr/bin/env python
# package: com.example.demo.service
import python.math.BigInteger

import python.util.ArrayList

import python.util.List

import python.transaction.Transactional

import org.springframework.beans.factory.annotation.Autowired

```

```

import org.springframework.stereotype.Service

import com.example.demo.dao.ApiDao

import com.example.demo.response.GetProfileResponse

import com.example.demo.response.ValidateVotingResponse

import com.example.demo.response.ViewCandidatesResponse

import com.example.demo.response.ViewVoterResponse

import com.example.demo.response.VoteReportResponse

class ApiService(object):
    """ generated source for class ApiService """
    dao = ApiDao()

    def getprofile(self, id):
        """ generated source for method getprofile """
        result = self.dao.getprofile(id)
        response = ArrayList()
        i = 0
        while i < len(result):
            obj.setUserid(int(row[0]))
            obj.setUsertype(int(row[1]))
            obj.setEmail(str(row[2]))
            obj.setPassword(str(row[3]))
            obj.setFirstname(str(row[4]))
            obj.setLastname(str(row[5]))
            obj.setMobilenumber(str(row[6]))
            obj.setAddress(str(row[7]))
            response.add(obj)
            i += 1
        return response

    def addVoter(self, firstname, lastname, mobile, email, address):
        """ generated source for method addVoter """
        self.dao.addVoter(firstname, lastname, mobile, email, address)

```

```

def deleteVoter(self, id):
    """ generated source for method deleteVoter """
    # TODO Auto-generated method stub
    self.dao.deleteVoter(id)

def viewVoter(self):
    """ generated source for method viewVoter """
    result = self.dao.viewVoter()
    response = ArrayList()
    # TODO Auto-generated method stub
    i = 0
    while i < len(result):
        # TODO Auto-generated method stub
        obj.setUserid(int(row[0]))
        obj.setUserType(int(row[1]))
        obj.setEmail(str(row[2]))
        obj.setPassword(str(row[3]))
        obj.setFirstname(str(row[4]))
        obj.setLastname(str(row[5]))
        obj.setMobilenumber(str(row[6]))
        obj.setAddress(str(row[7]))
        response.add(obj)
        i += 1
    return response

def addCandidate(self, firstname, lastname, mobile, email, address, post):
    """ generated source for method addCandidate """
    self.dao.addCandidate(firstname, lastname, mobile, email, address, post)

def deleteCandidates(self, id):
    """ generated source for method deleteCandidates """
    self.dao.deleteCandidates(id)

def viewCandidates(self):
    """ generated source for method viewCandidates """
    result = self.dao.viewCandidates()
    response = ArrayList()
    # TODO Auto-generated method stub
    i = 0

```

```

while i < len(result):
    # TODO Auto-generated method stub
    obj.setUserid(int(row[0]))
    obj.setPost(int(row[1]))
    obj.setFirstname(str(row[2]))
    obj.setLastname(str(row[3]))
    obj.setMobile(str(row[4]))
    obj.setEmail(str(row[6]))
    obj.setAddress(str(row[5]))
    response.add(obj)
    i += 1
return response

def login(self, username, password):
    """ generated source for method login """
    result = self.dao.login(username, password)
    response = ArrayList()
    # TODO Auto-generated method stub
    i = 0
    while i < len(result):
        # TODO Auto-generated method stub
        obj.setUserid(int(row[0]))
        obj.setUsertype(int(row[1]))
        obj.setEmail(str(row[2]))
        obj.setPassword(str(row[3]))
        obj.setFirstname(str(row[4]))
        obj.setLastname(str(row[5]))
        obj.setMobilenumber(str(row[6]))
        obj.setAddress(str(row[7]))
        response.add(obj)
        i += 1
    return response

def pullvote(self, canid, votid, postid):
    """ generated source for method pullvote """
    self.dao.pullvote(canid, votid, postid)

def validateVoting(self, id):
    """ generated source for method validateVoting """
    result = self.dao.validateVoting(id)

```



```

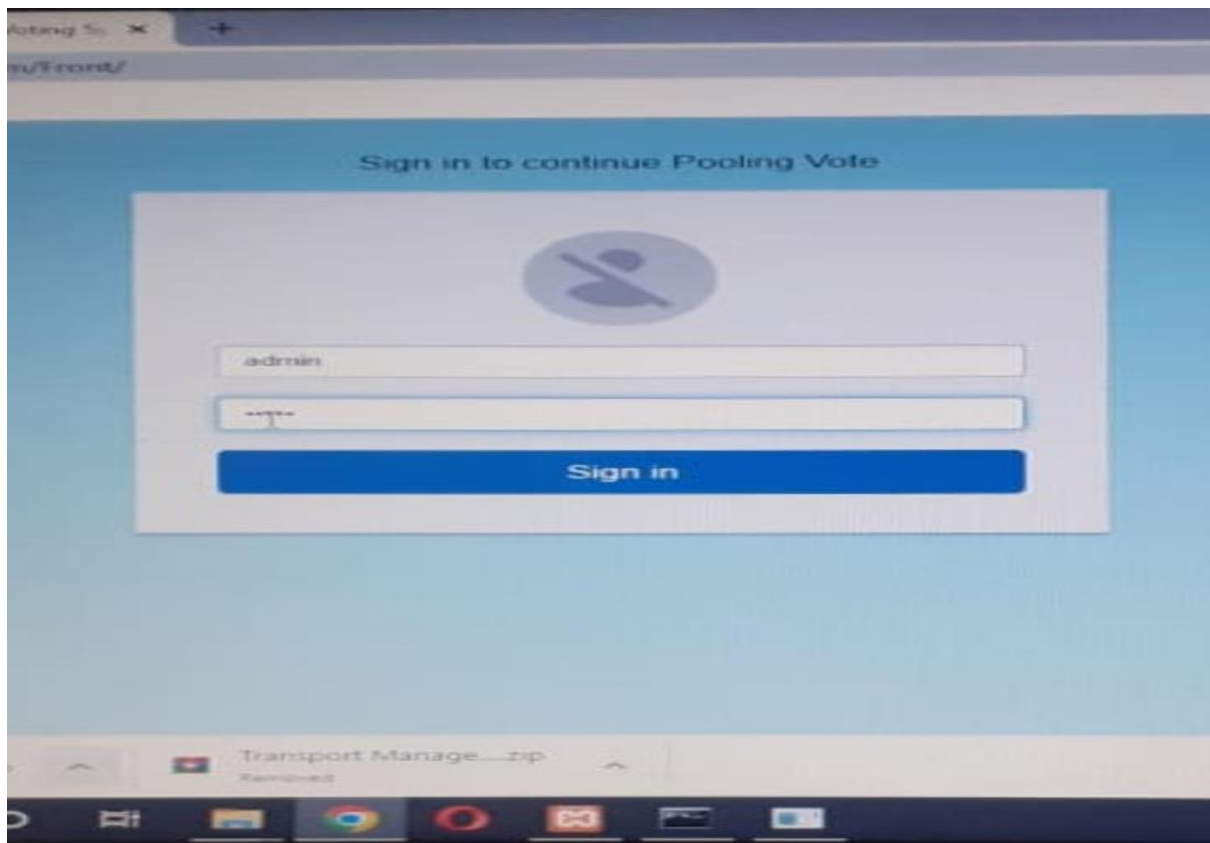
response = ArrayList()
# TODO Auto-generated method stub
i = 0
while i < len(result):
    # TODO Auto-generated method stub
    obj.setId(int(row[0]))
    obj.setCanid(int(row[1]))
    obj.setVotid(int(row[2]))
    obj.setPostid(int(row[3]))
    response.add(obj)
    i += 1
return response

def votereport(self):
    """ generated source for method votereport """
    result = self.dao.votereport()
    response = ArrayList()
    # TODO Auto-generated method stub
    i = 0
    while i < len(result):
        # TODO Auto-generated method stub
        obj.setUserid(int(row[0]))
        obj.setFirstname(str(row[1]))
        obj.setCount(BigInteger(row[2]))
        obj.setPostid(int(row[3]))
        response.add(obj)
        i += 1
    return response

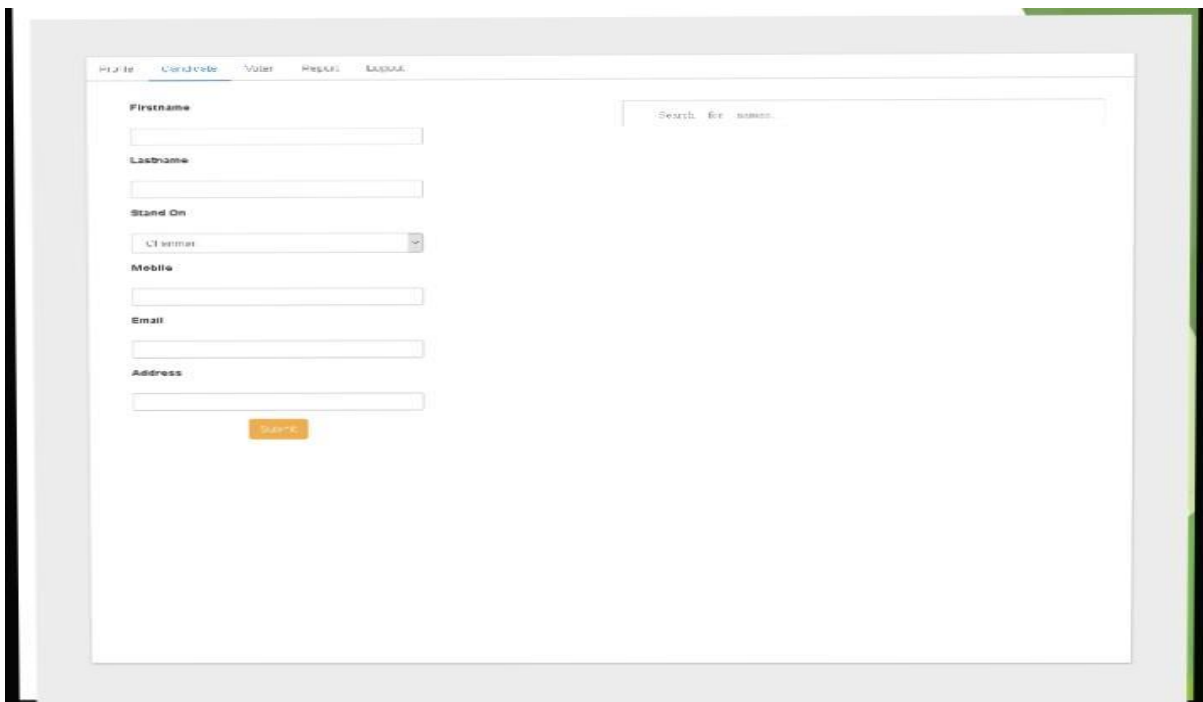
```

## **SAMPLE INPUT & OUTPUT DESIGN**

**Admin page:**

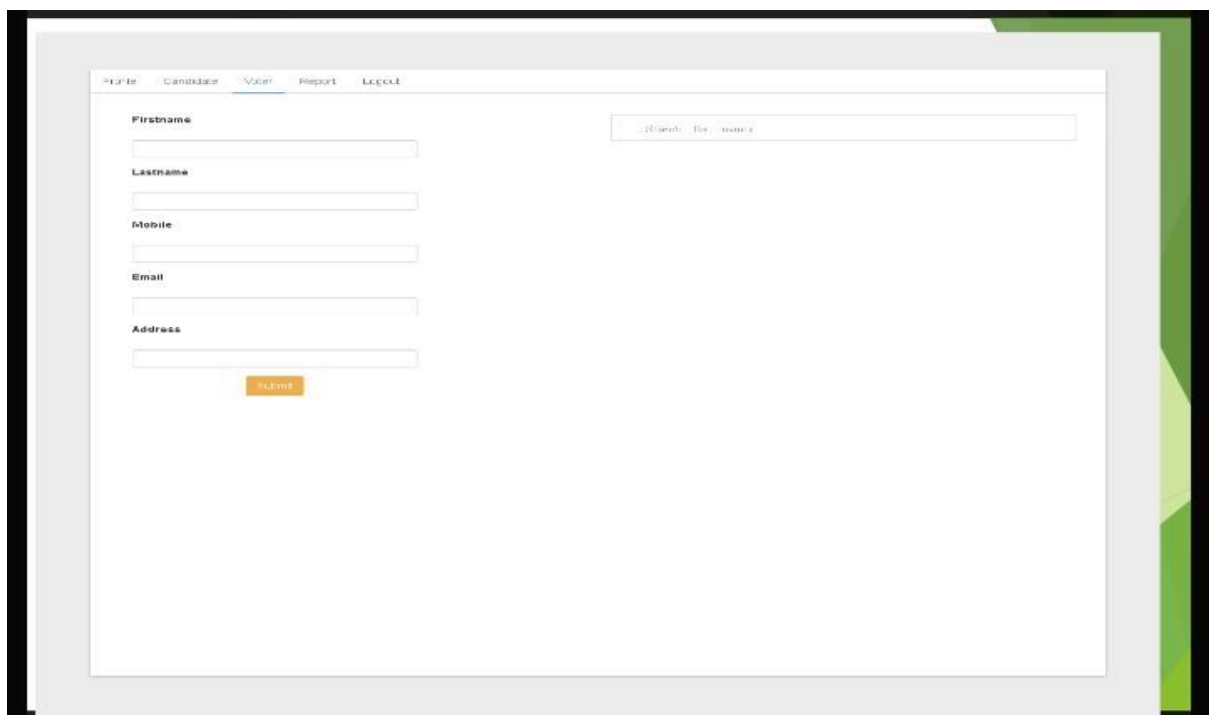


## Candidates details page :



The screenshot shows a web application interface for managing candidates. At the top, there is a navigation bar with tabs: Profile, Candidate, Voter, Report, and Logout. The 'Candidate' tab is currently selected. Below the navigation bar, the page is divided into two main sections. On the left, there is a form for adding or editing candidate details. The form fields are: Firstname, Lastname, Stand On (a dropdown menu currently showing 'CT Inner'), Mobile, Email, and Address. Each field has a corresponding text input box. Below the Address field is an orange 'Submit' button. On the right side of the page, there is a search bar with the placeholder text 'Search for name...'.

## Voter Details:



The screenshot shows a web application interface for managing voters. At the top, there is a navigation bar with tabs: Profile, Candidate, Voter, Report, and Logout. The 'Voter' tab is currently selected. Below the navigation bar, the page is divided into two main sections. On the left, there is a form for adding or editing voter details. The form fields are: Firstname, Lastname, Mobile, Email, and Address. Each field has a corresponding text input box. Below the Address field is an orange 'Submit' button. On the right side of the page, there is a search bar with the placeholder text 'Search for name...'.

## Pooling vote page:

The screenshot shows a web interface for pooling votes. At the top, there is a navigation bar with links: Profile, Candidate, Voter, Report, and Logout. The main content area contains six voting boxes arranged in a 3x2 grid. Each box is for a specific role and contains a dropdown menu for selecting a candidate and a green 'Vote' button. The roles are: Chairman, Vice Chairman, College Secretary, Finance Secretary, Treasurer, and Sports Secretary.

Role	Candidate Selection	Vote Button
Chairman	[Dropdown]	Vote
Vice Chairman	[Dropdown]	Vote
College Secretary	[Dropdown]	Vote
Finance Secretary	[Dropdown]	Vote
Treasurer	[Dropdown]	Vote
Sports Secretary	[Dropdown]	Vote

## Result Page:

The screenshot shows the results page of the election. It features the same navigation bar as the voting page. The main content area displays the results for six roles, arranged in a 3x2 grid. Each role has a title, a table with three columns (Rank, Name, Count), and a green 'Vote' button. The roles are: Chairman, Vice Chairman, College Secretary, Finance Secretary, Treasurer, and Sports Secretary.

Role	Rank	Name	Count
Chairman			
Vice Chairman			
College Secretary			
Finance Secretary			
Treasurer			
Sports Secretary			

