



ONE TOUCH

MAKE YOUR DECISION WISE.



GOVINDA DASA COLLEGE
SURATHKAL

SYNOPSIS

CHAPTER-1

SYNOPSIS

1.1-INTRODUCTION OF THE SYSTEM:

In the current world we are leading a busy life, everyone is running behind the time. In today's digital era, technology has transformed various aspects of our lives. In spite of their busy schedule, old age, people cast their valuable votes to perform their duty. They go to poll booth to cast their vote. But some people due to their busy schedule do not perform this duty. So, to overcome this problem, an introduction to new system i.e., digital voting system.

Online voting, also known as e-voting, is the process of casting a vote through electronic means, such as the internet or computer devices. It has been implemented in various countries as a means of increasing voter, participation, reducing paper costs, reducing the use of manpower, improving the speed and accuracy of vote counting.

PROPOSED SYSTEM:

The ONLINE VOTING SYSTEM is a software application which avoids more manual hours that need to spend in record keeping and calculating votes. Through this the user and the candidates are registered online. Their information is stored in the database the admin can easily access the details of the voter and the candidate.

Every user allowed voting only once so there are no chances of duplicated votes. The proposed system has good authentication so only authorized person can be able to vote and also cannot vote multiple time, vote counting can be made very quickly and results will be displayed in few minutes.

A) PROJECT TITLE:

“Online Voting System”

B) CATEGORY:

Web Application.

c) OVERVIEW:

Online Voting System uses electronic means to either aid or take care of casting and counting ballots. Depending on particular implementation, this may use stand-alone Electronic Voting Machine (EVM) or systems connected to internet.

It is the online mediated voting in which voters make their selections with the aid of systems. The voter can select the candidate they wish to vote. Admin can register the candidate who wishes to enroll their names for desired post. He can check the results and check those who are absent for election after the election is completed and also alter details of candidates. Staff can add, move or disable the voter(students) details who are casting the vote. Staff in charge can approve the students who are eligible to vote.

1.2-BACKGROUND:

A) INTRODUCTION OF A COMPANY:

NAME: - Govinda Dasa College.

Address: -Surathkal-575014.

Contact: -0824*****.

B) BRIEF NOTE ON EXISTING SYSTEM:

The voting system currently being used by the association is a paper-based system, in which the voter simply picks up ballot sheet from electoral officials, tick off who they would like to vote for and then cast their votes by merely handing over the ballot sheet back to electoral official.

Counting of votes is done manually which takes lots of time and may be a chance of inaccurate counting is done. It is very difficult to maintain historical data. Also, there is compulsory need in physical presence in the time of election polling or vote counting.

1.3-OBJECTIVES OF THE SYSTEM:

- ✓ Fast and easy of conducting Election.
- ✓ Validating the system to ensure that only legible voters are allowed to vote.
- ✓ Coming up with an automated voting system.
- ✓ Implementing an automated/online voting system.
- ✓ Through online fast counting of votes, so the result will be faster than existing system.
- ✓ Reduce the paper-work by doing electronically.
- ✓ There is a less chance of inaccurate counting.

1.4-SCOPE OF THE SYSTEM:

Online voting system takes a small part of the whole election process. This system guarantees high level secrecy, security and verifiability of a marked allot transmitted over the internet.

This system can also be used by any organization in the world for conducting smooth& fair election. It mainly focuses on less effort& less labor intensive as primary cost and focus primary on creating, managing and running a secure web voting portal.

1.5-STRUCTRE OF THE SYSTEM:

MODULES:

- **STAFF (OFFICE STAFF):**
 - **LOGIN:** This module is for staff authentication.
 - **UPDATE STUDENT DETAILS:** The staff can add the student details after the admission and disable the student record

who is drop out and also who are not paid the fees, and move the record to backup who are completed the degree.

○ **STAFF IN CHARGE (TEACHING STAFF):**

- LOGIN: This module is for staff in charge authentication.
- UPDATED STUDENT DETAILS: View the updated student record after the alteration done by the 'staff'.
- APPROVE: Staff in charge can approve the student (voter) to cast a vote in election process (only those students who are paid their fees they can register).

○ **VOTER:**

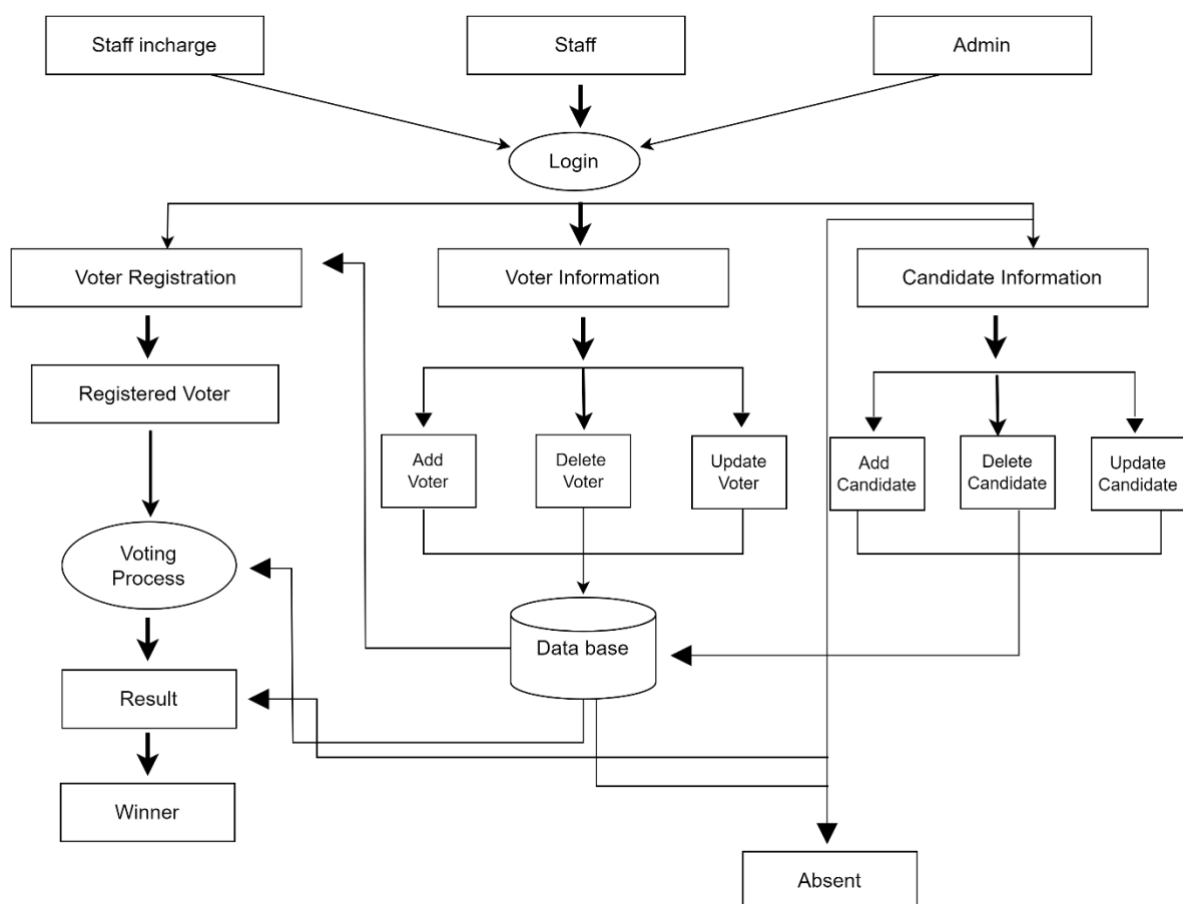
- APPROVED VOTER: Only the voter who is approved by the 'staff in charge' can cast the vote in election.
- SECTION DETAILS: Voter can cast the vote under a particular section he/she is studying.
- CANDIDATE DETAILS: Students who are registered to participate for election of particular section.

○ **ADMIN (PRINCIPAL):**

- LOGIN: This module is for admin authentication.
- RESULT: Admin can get result of the election process when he/she logged in after specified period.
- ABSENT DETAILS: He/she can get the details of student who are not cast their vote in particular period.
- REGISTRATION (Add/Delete): Student who want to participate in election they can enroll their name for both "SECRETARY" and "JOINT SECRETARY" and these details registered to voting process is done by the admin. For

Secretary post only third year student can participate male/female, for Joint Secretary post only second year female candidate can participate. And also, admin can delete the candidate details if they want to take back their name from the election process.

1.6-SYSTEM ARCHITECHTURE:



1.7-END USERS:

- Admin role (PRINCIPAL): admin can register the name of the students who are participating in election also, delete the record if candidate want to take back their name from the election. While he/she logged in

they will come to know who is the winner in election process and also, he/she can get record of the student who are not voted.

- Staff role (OFFICE STAFF): Staffs can add newly joined student details, disable the degree dropout students and the students who are not paid the fees, update the record and move the student record to backup who are passed out.
- Staff in charge (TEACHING STAFF): Staff in charge can approve the voter for the election process they can get the student data (only those who are paid fees) from the 'staff'.
- Voter role: Voters can cast their valuable vote to whom they like, according to the section he/she belongs.

1.8-SOFTWARE/HARDWARE USED FOR THE DEVELOPMENT:

FRONT-END: MICROSOFT VISUAL STUDIO 2022, ASP.NET, C#.

BACK-END: MICROSOFT ACCESS

WEB-SERVER:

OS:

1.9-SOFTWARE/HARDWARE REQUIRED FOR THE IMPLEMENTATION:

PROCESSORS:

RAM:

STORAGE:

INTERNET SPEED:

SOFTWARE REQUIREMENT SPECIFICATION

CHAPTER-2

SOFTWARE REQUIREMENT SPECIFICATION

2.1-INTRODUCTION:

A Software Requirement Specification (SRS) is documents that describe the nature of a project, software or application. In simple words, SRS document is a manual of a project provided it. It is prepared before you kick-start a project/ application. This document is also known by the names SRS report or software document.

2.2-OVERALL DESCRIPTION:

This software platform allows organization to securely conduct votes & elections. High-quality “online voting system” balance ballot security, accessibility and overall requirements of an organizations voting system. And maintain the secrecy of voting.

2.2.1-PRODUCT PERSPECTIVE:

This software is a standalone system. The system will be made up of two parts, one running visible directly to the administrator on the server machine and other visible to the end users, in this case the voters, through web pages. The users such as admin (PRINCIPAL), staff in charge (TEACHING STAFF), staff (OFFICE STAFF) and voter(STUDENT) interact with the system in different ways. The admin, staff in charge and staff configures the whole system according to their needs. Where the system is running. The voters cast their vote using the web interface provided (only those who paid the fees). These voters are accepted by system on the server.

2.2.2-PRODUCT FUNCTION:

On the admin side, the system can be used to add/delete/update candidate information. Admin can also able to view the election result once it is finished and also, he can check the absent. From the staff perspective the

system can be used to add, update for newly admitted student and disable the voting option for the pass-out, drop-out student and those who are not paid the fee. On the staff in charge side, they can enable the specific voters who have the right to vote by approving them from the information in database (only those who are paid fees). From the voter's perspective, the system is used to help them cast their votes.

2.2.3-USER CHARACTERISTICS:

- **Admin (PRINCIPAL)**: Admin can register students name who are participate in election. While he/she logged in to the site they will come to know who is the winner in election process and the student who are not voted.
- **Staff (OFFICE STAFF)**: Staffs can add newly joined student details, move the degree completed students to backup and disable the record of students who are drop-out and not paid the fees.
- **Staff in charge (TEACHING STAFF)**: Staff in charge can approve the voter for the election process they can get the student data who are paid the fees, from the 'staff'.
- **Voter (STUDENT)**: Voters can cast their valuable vote to whoever they like under the section they he/she studying.

2.2.4-GENERAL CONSTRAINTS:

Even though system enables voter to poll their vote from any terminal connected to the internet, the voter should be registered by the staff long before. This constraint is imposed to ensure that only genuine person is allowed to vote in the elections. Also, it is assumed that admin, staff in charge, staff has access to the server that hosts election. Staff in charge can enable only the students those who are paid their fees.

2.2.5-ASSUMPTION:

Password for the admin(principal), staff (office staff), staff in charge (teaching staff) is already created they have to just login. This system will strictly not allow the wrong vote.

2.4-FUNCTIONAL REQUIREMENTS:

2.4.1-MODULES 1 (STAFF): (OFFICE STAFF)

1. LOGIN: This module is for staff authentication.
2. UPDATE STUDENT DETAILS: The staff can add the student details after the admission and move the student record to backup who are passed out and disable the records who are drop-out and not paid the fees.

2.4.2-MODULES 2 (STAFF IN CHARGE): (TEACHING STAFF)

1. LOGIN: This module is for staff in charge authentication.
2. UPDATED STUDENT DETAILS: View the updated student record after the alteration done by the 'staff'.
3. APPROVE: Staff in charge can approve the student (voter) who are paid the fees, to cast a vote in election process.

2.4.3-MODULES 3 (VOTER): (STUDENT)

1. APPROVED VOTER: Only the voter who is approved by the 'staff in charge' can cast the vote in election.
2. SECTION DETAILS: Voter can cast the vote under a particular section he/she is studying.
3. CANDIDATE DETAILS: Students who are registered to participate for election.

2.4.4-MODULES 4 (ADMIN): (PRINCIPAL)

1. LOGIN: This module is for admin authentication.
2. RESULT: Admin can get result of the election process when he/she logged in after specified period.

3. ABSENT DETAILS: He/she can get the details of student who are not cast their vote in particular period.
4. REGISTRATION: Student who want to participate in election they can enroll their name for both “SECRETARY” and “JOINT SECRETARY”.

2.5-DESIGN CONSTRAINTS:

There are few restrictions that the device has to meet. They are:

1. The system shall not have the ability to overwrite any previously written vote data.
2. Ballot information cannot be changed once a vote has been cast.
3. The registered voter information should be maintained in the database.

2.6-SYSTEM ATTRIBUTES:

1. DEBUG ABILITY:
2. EXTENSIBILITY: In future we can extend it to different option like candidate can register through this and take approval from the admin. And make the website more consistent by extending or updating it.
3. PORTABILITY: It is portable in all the browser such as Firefox, Google chrome, Opera mini, etc.
4. SCALABILITY:
5. UNDERSTANDABILITY: The website is very simple and easily understandable to anyone. Everyone can use the website without having a user manual.

SYSTEM DESIGN

CHAPTER-3

SYSTEM DESIGN

3.1-INTRODUCTION:

System design is the solution for the creation of a new system. This phase focuses on the detailed implementation of the feasible system. Its emphasis on translating design. Specification to performance specification. System design has two phases of development:

- ❖ Logical design
- ❖ Physical design

During logical design phase the analyst describe inputs, outputs, databases and procedures all in the format that meets the user requirements. The analyst also specifies the needs of the user at a level that virtually determines the information flow in and out of the system and the data resource. Here the logical design is done through the data flow diagrams and database design. The physical design is followed by physical design or coding. Physical design produces the working system is defining the design specifications, which specify exactly what the candidate system must do. The programmers write the necessary programs that accept the input from the user, perform necessary processing on accepted data and produce the required report on a hard copy or display it on the system.

3.2-ASSUMPTION AND CONSTRAINTS:

- User should be provided with a system to cast his/her vote.
- Password for the admin, staff, staff in charge is already created.
- Invalid vote/wrong vote is not supported by this system

3.3-FUNCTIONAL DECOMPOSITION:

➤ SYSTEM SOFTWARE ARCHITECTURE:

Software architecture is simply, the organization of system. The organization includes all the components, how they interact with each other, with the environment in which they operate and the principle used to design

the software. In many cases, it can also include the evolution of the software into the future.

Here the voter casts his/her valuable vote. The information is stored in database and the admin who is able to check the result, announces it once the voting process is finished.

➤ **SYSTEM TECHNICAL ARCHITECTURE:**

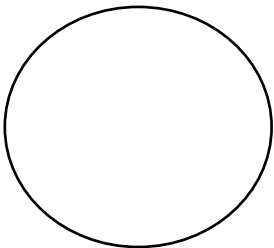

Technical Architecture (TA) is a form of IT architecture that is used to design the computer system. It involves the technical blueprint with regard to the agreement interaction, interdependence of the entire element so that system relevant requirement is met.



➤ **SYSTEM HARDWARE ARCHITECTURE:**

Hardware architecture is a representation of an engineered (or to be engineered) electronic or electro mechanical hardware system, and the process and discipline for effectively implementing the design for such system.

3.4-DESCRIPTION OF PROGRAMS:

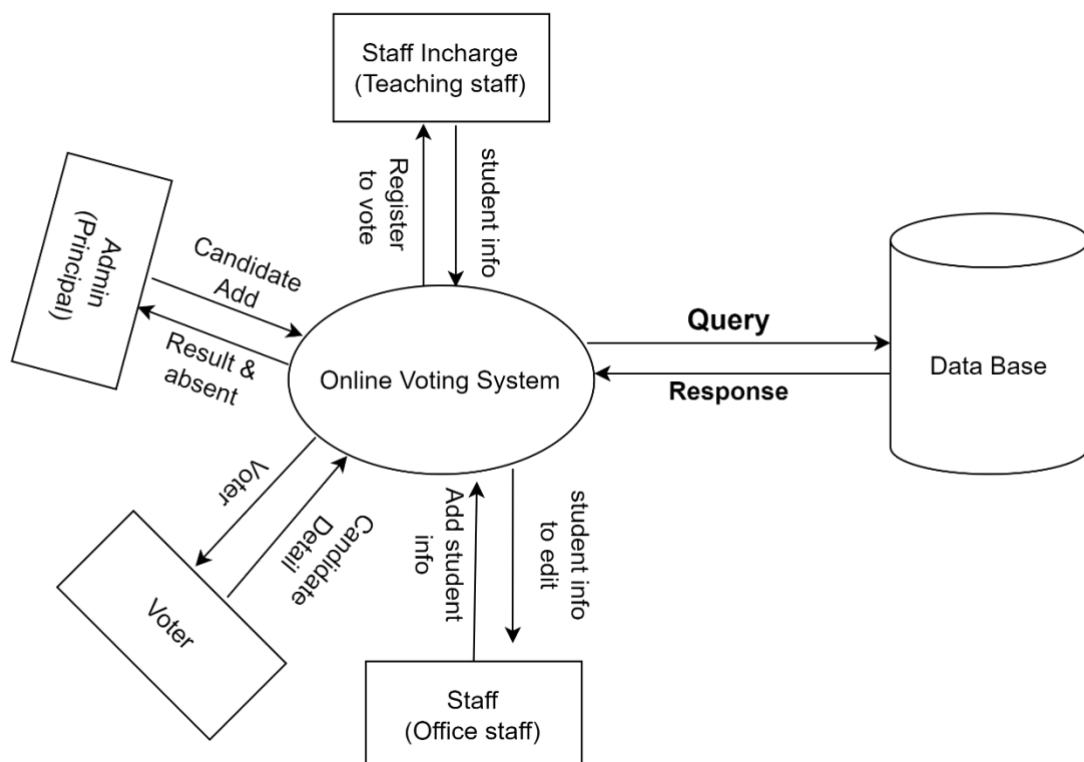
DIAGRAM	DESCRIPTION
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	The bubble represents a process or transformation that is applied to the data which changes in some way. Each bubble is assigned a number.
	This rectangle is called an entity which represents a producer or a customer of information.

	<p>The arrow represents a dataflow. All arrows in the dataflow diagrams are labeled. The arrow head indicates the direction of data flow.</p>
	<p>Represents the repository of data that is to be stored for use by one or more processes.</p>

3.4.1-CONTEXT FLOW DIAGRAM (CFD):

A system context diagram in engineering is diagram that defines the boundary between the systems, or part of the system, and its environment, showing the entities that interact with it. This diagram is high-level view of website. It is similar to a block diagram.


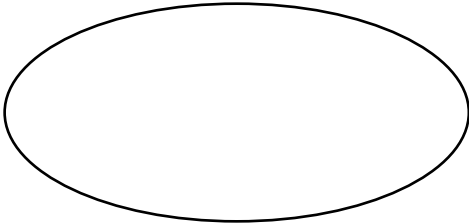



3.4.2-DATA FLOW DIAGRAM:

Data Flow Diagram is the graphical representation of a system or a portion of the system. It consists of data flows, process, sources and sink and stores all the description using easily understandable symbol.

DFD is one of the most important modeling tools. It is used to model the system, components that interact with system, uses the data and information flows in the system. DFD shows the movement of information and how it is modified by a series of transformation. It is a graphical technique that depicts information moves from input or output. DFD is also known as bubble chart or data flow graph. DFD may be used to represent the system at any level of abstraction. DFD's may partition into a level that represent increasing information flows and functional details.

Some of the symbols used in data flow diagram are given below

DIAGRAM	DESCRIPTION
<u>ENTITY</u> 	External entities are outside system, but they either supply input data into system or use system output. External entities are represented as a rectangle. It is used for specifying from where data comes and where it reaches.
<u>PROCESS</u> 	A process shows a transformation or manipulation of data flow within the system. A process transforms incoming data flow into outgoing data flow.
<u>DATA FLOWS</u> 	A data flow shows flow of information from the source to destination. A data flow is represented by line, with arrowhead showing the direction of flow.

TABLES

Tables are the part of database. It is used to store in data.

3.5-DESCRIPTION OF COMPONENTS:**3.5.1-ADMIN:**

INPUT: username, password

PROCESS: validating the username and password entered by him/her.

OUTPUT: It will display manage candidate details and check results menu.

3.5.2-STAFF:

INPUT: username, password

PROCESS: validating the username and password entered by him/her.

OUTPUT: It will display the approve student information option and counting the vote option.

3.5.3-STAFF INCHARGE:

INPUT: username, password

PROCESS: validating the username and password entered by him/her.

OUTPUT: It will display updating student details.

3.5.4-VOTER:

INPUT: username, password

PROCESS: validating the username and password entered by him/her.

OUTPUT: It will display candidate information and thereby cast vote to their preferred candidate.

DATABASE DESIGN

CHAPTER-4

DATABASE DESIGN

4.1-INTRODUCTION:

The word “database”, used to describe everything from a single set of data, to a complex set of tools, such as SQL server, and a whole lot in between. Then term data model to mean the conceptual description of a problem space. This includes the definition of entities, their attributes, and the entity constraints.

The data model also includes a description of the relationships between entities and any constraint on those relationships. It is the translation of the conceptual model into a physical representation, which shall be implemented using a database management system. The main advantages of this software are to reduce the manual work. The system also dos the required calculations, maintains error free reports and validates the final report within a short period of time. The DBMS provides flexibility in the data storage and retrieval of data and production of information. It determines what type of data, is needed and how they are processed, and the operating system of the computer is responsible for placing the data on the storage devices. A schema defines the databases and the sub schema defines the portion of the database of the database that a specific program will use.

- To retrieve data from the database.
- The application program determines what data is needed and communicates the need to the DBMS.
- The DBMS system determines that the data requested are in fact stored in the database.
- The data must be defined in the sub schema.
- The DBMS system instructs the OS to locate and retrieve the data from the specific location on the disk.
- The copy of the data is given to the operating system for processing.
- A database, must be created before it can be used.

4.2-PURPOSE AND SCOPE:

4.2.1-PURPOSE:

A good database design is, therefore, one that: Divides your information into subject-based tables to reduce redundant data. Provides access with the information it requires to join the information in the tables together as needed. Helps support and ensure the accuracy and integrity of your information.

4.2.2-SCOPE:

- 1) Easy to locate the data or information in no time.
- 2) No redundant data.
- 3) No repetition.
- 4) More security. Like if one is accessing or changing the data, other cannot change the same data at that time.
- 5) Table references (key like: Primary and Foreign keys) are easy to maintain.

4.3-DATABASE IDENTIFICATION:

The database identification is a unique string of four alphanumeric characters that defines the database name to the Open Site Search Database Builder 4.0.x/4.1.x software in the database description (.dsc) file. It is automatically stored by the software in region 0 of the physical database file when the file is initialized. The database identification definition is required and must be the first definition that appears in the .dsc file.

4.4-SCHEMA INFORMATION:

Database schema design organization the data into separate entities, determines how to create a relationship between the organized entities, and how to apply the constraints on the data. Designer create database schema to give other database users, such as a programmers and analyst, a logical understanding of the data.

4.6-PHYSICAL DESIGN:

The physical design of the database optimizes performance by ensuring data integrity by avoiding unnecessary data redundancies. Physical database design helps to design the actual database based on the requirements gathered during the logical data design. During physical design we can transform the entities into tables, the instances into two rows, and the attributes into the column.

4.7-DATA DICTIONARY:


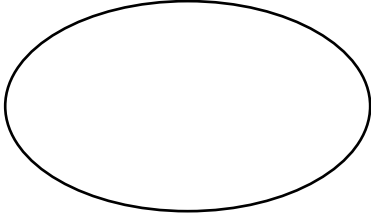
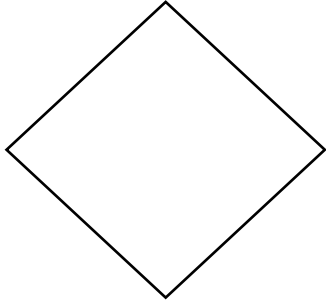
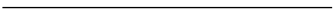
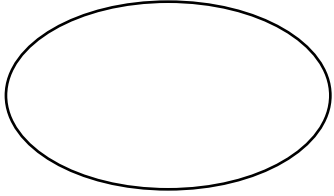
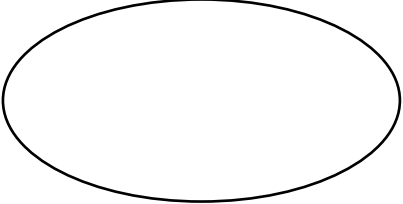
A data dictionary is a collection of names, definitions and the attributes about data elements that are being used or captured in a database, information system or a part of a research project. It helps to understand the overall database design, structure, relationships and data flow.

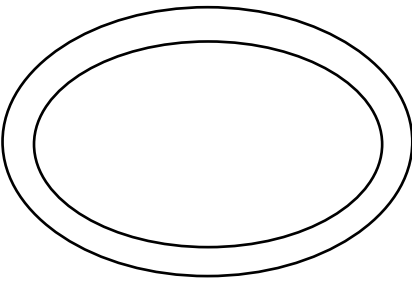
The database of ONLINE VOTING SYSTEM is organized into following tables:

4.8-ER DIAGRAM:

An Entity Relationship Diagram (ERD) shows the relationships of entity sets stored in a database. An entity in this context is an object, a component of data. An entity set is a collection of similar entities. These entities can have attributes that define its properties.

Entity relationship analysis uses three major abstractions to describe data. These are entities which are distinct things in the enterprise. Relationships are meaningful interaction when the objects and the attributes which are the properties of entities and relationship. We can express the overall logical structure of the database graphically with an E-R diagram.

<u>NAME</u>	<u>NOTATION</u>	<u>DESCRIPTION</u>
ENTITY		It may be an object with the physical existence or conceptual existence. It is represented by rectangle.
ATTRIBUTE		The properties of the entity can be attribute. It is represented by an ellipse.
RELATIONSHIP		Whenever an attribute of one entity refers to another entity, some relationship exists. It is represented by diamond.
LINK		Line link attribute to entity sets to relation
DERIVED ATTRIBUTE		Dashed ellipse denotes derived attributes.
KEY ATTRIBUTE		An entity type usually has an attribute whose values are distinct for each individual entry in the entity set. It is represented by an underlined word in ellipse.

<p>MULTIVALUED ATTRIBUTE</p>		<p>Attribute that have a different number of values for a particular attribute. It is represented by a double ellipse.</p>
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4.9-DATABASE ADMINISTRATION:

4.9.1 SYSTEM INFORMATION:

- OS: windows 10
- CPU:
- Disk Storage:

4.9.2-DBMS CONFIGURATION:

A configuration management database is a file. Usually in the form of a standardized database. It contains all relevant information about the hardware and software. A configuration management database provides an organized view of configuration data and a means of examining that data from any desired perspective.

- Microsoft access

4.9.3-SUPPORT SOFTWARE REQUERIED:

4.9.4-STORAGE REQUIREMENTS:

4.9.5-BACKUP AND RECOVERY:

DETAILED DESIGN

CHAPTER-5

DETAILED DESIGN

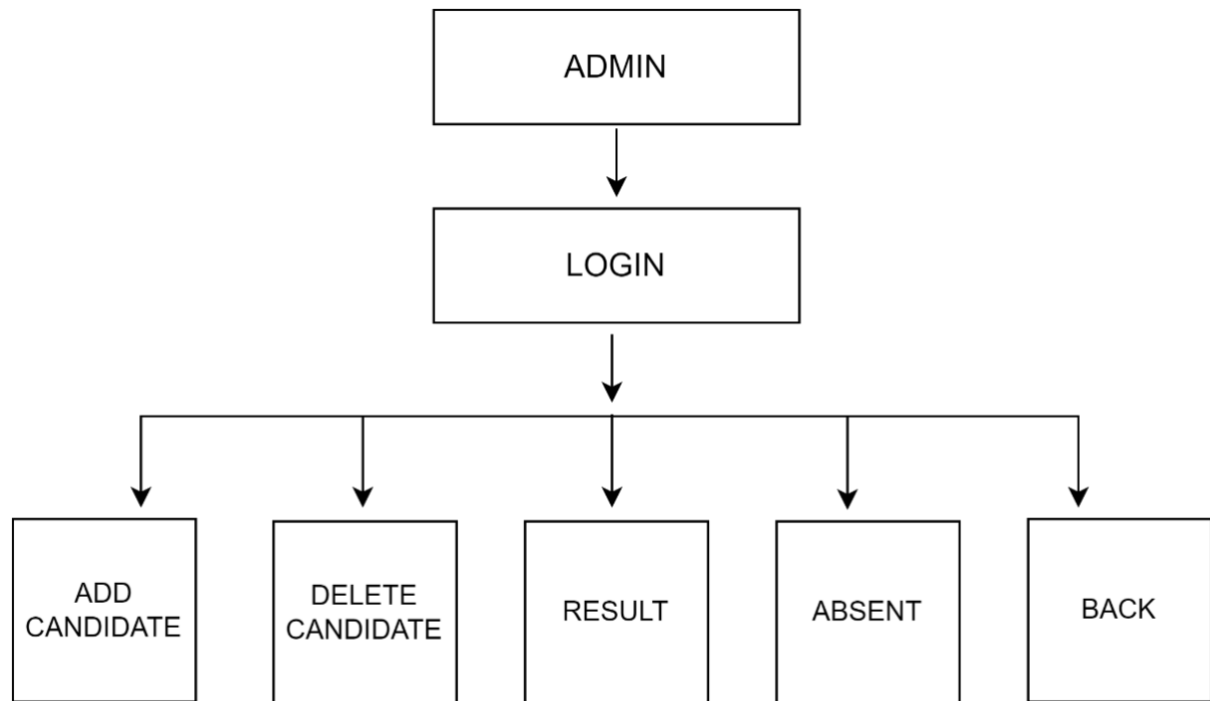
5.1-INTRODUCTION:

Database design can be generally defined as collection of tasks or a process that enhance the designing, development, implementation, and maintenance of enterprise data management system. Designing a proper database reduce the maintenance cost thereby improving data consistency and the cost-effective measure are greatly influenced in term of disk storage space. Therefore, there has to be a brilliant concept of designing a database. The designer should follow the constraints and decide how the elements correlate and what kind of data must be stored.

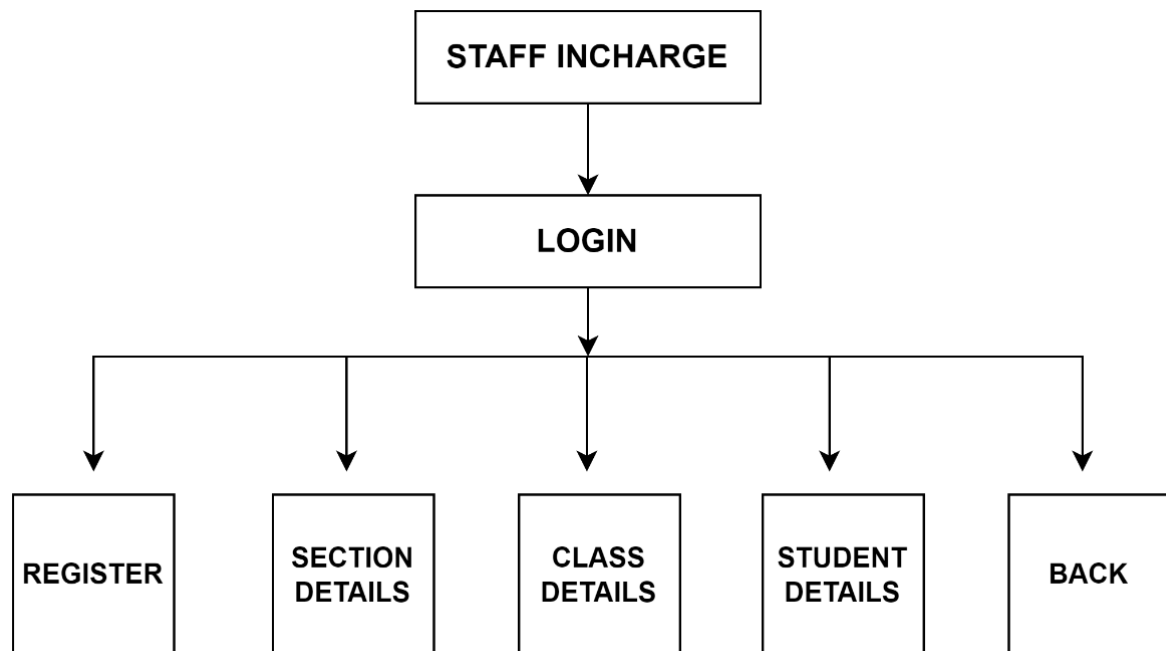
The purpose of designing this document is to explain complete design details of the project. This design document is developer blueprint. It provides precious direction to software programmers about how basic control and data structure will be organized. The design document is written before programming start. It describes how the software will be structured and what functionality will be included. The document forms the basis for all future design and coding

5.2-STRUCTURE OF THE SOFTWARE PACKAGES:

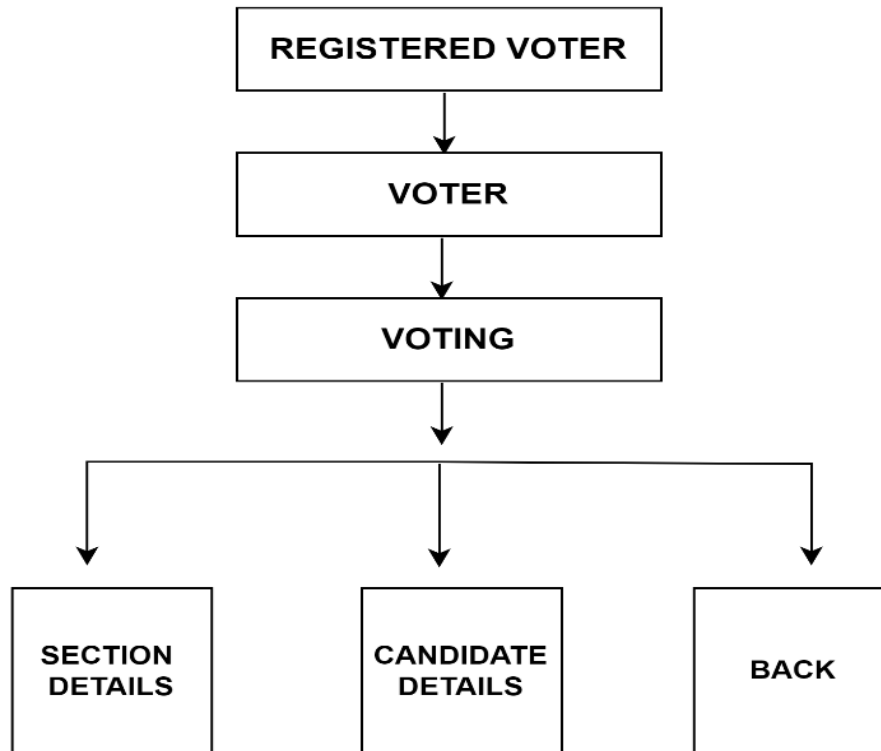
1. Structure of ADMIN (PRINCIPAL) module
2. Structure of STAFF IN CHARGE (TEACHING STAFF) module
3. Structure of VOTER (STUDENT) module
4. Structure of STAFF (OFFICE STAFF) module



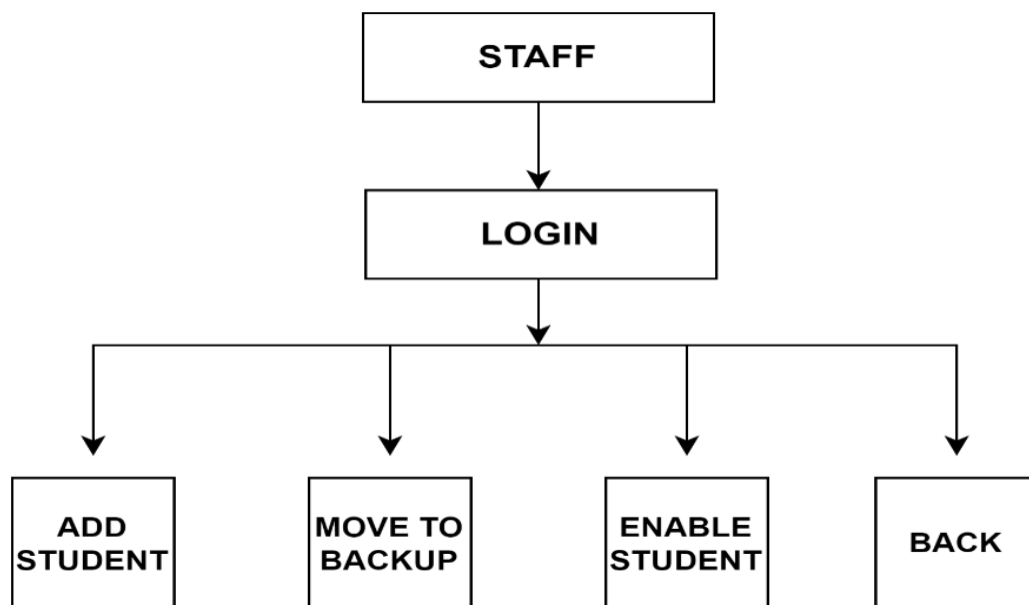
Structure of ADMIN (PRINCIPAL) module



Structure of STAFF IN CHARGE (TEACHING STAFF) module



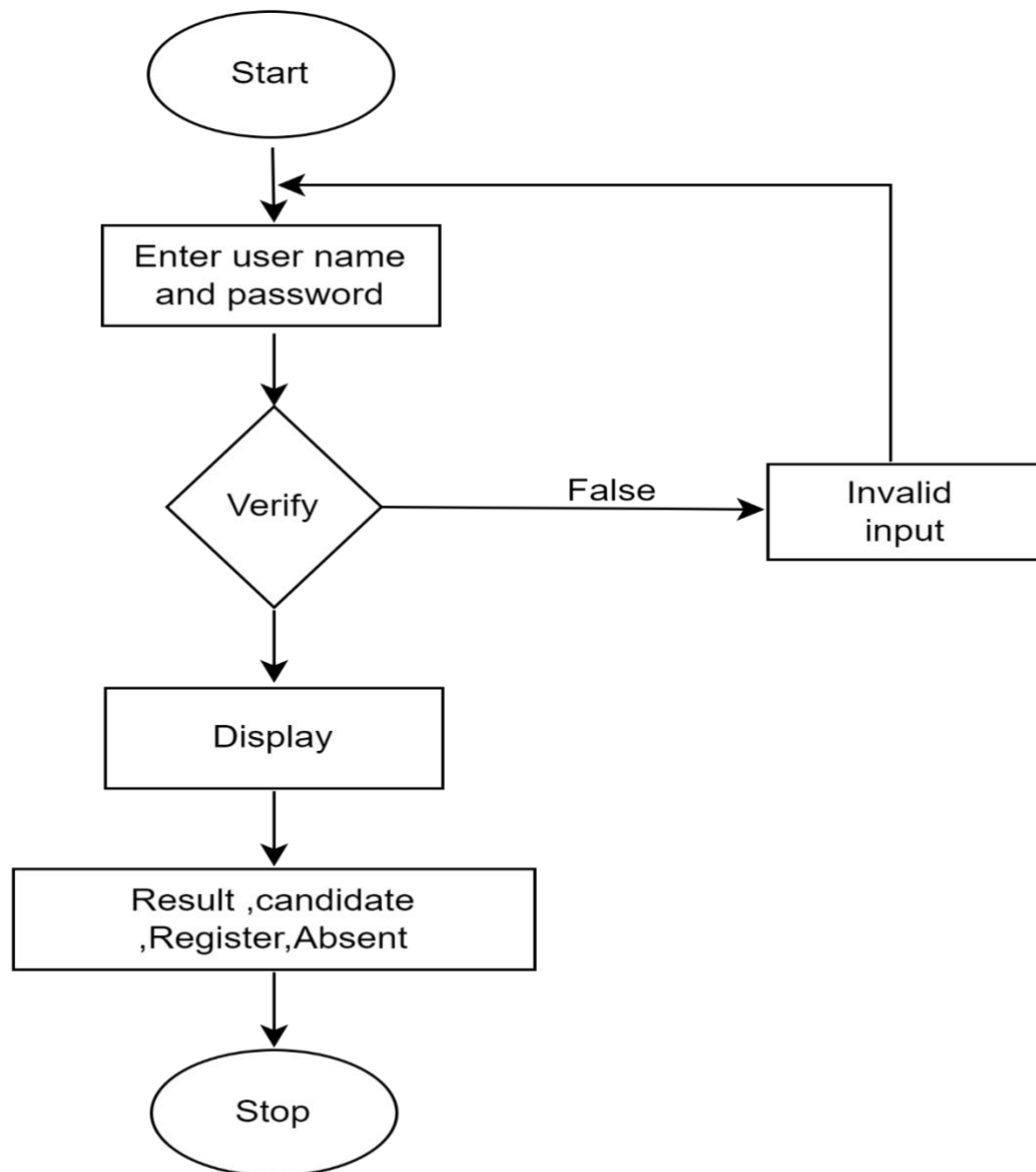
Structure of VOTER (STUDENT) module



Structure of STAFF (OFFICE STAFF) module

5.3-MODULAR DECOMPOSITION OF THE SYSTEM:

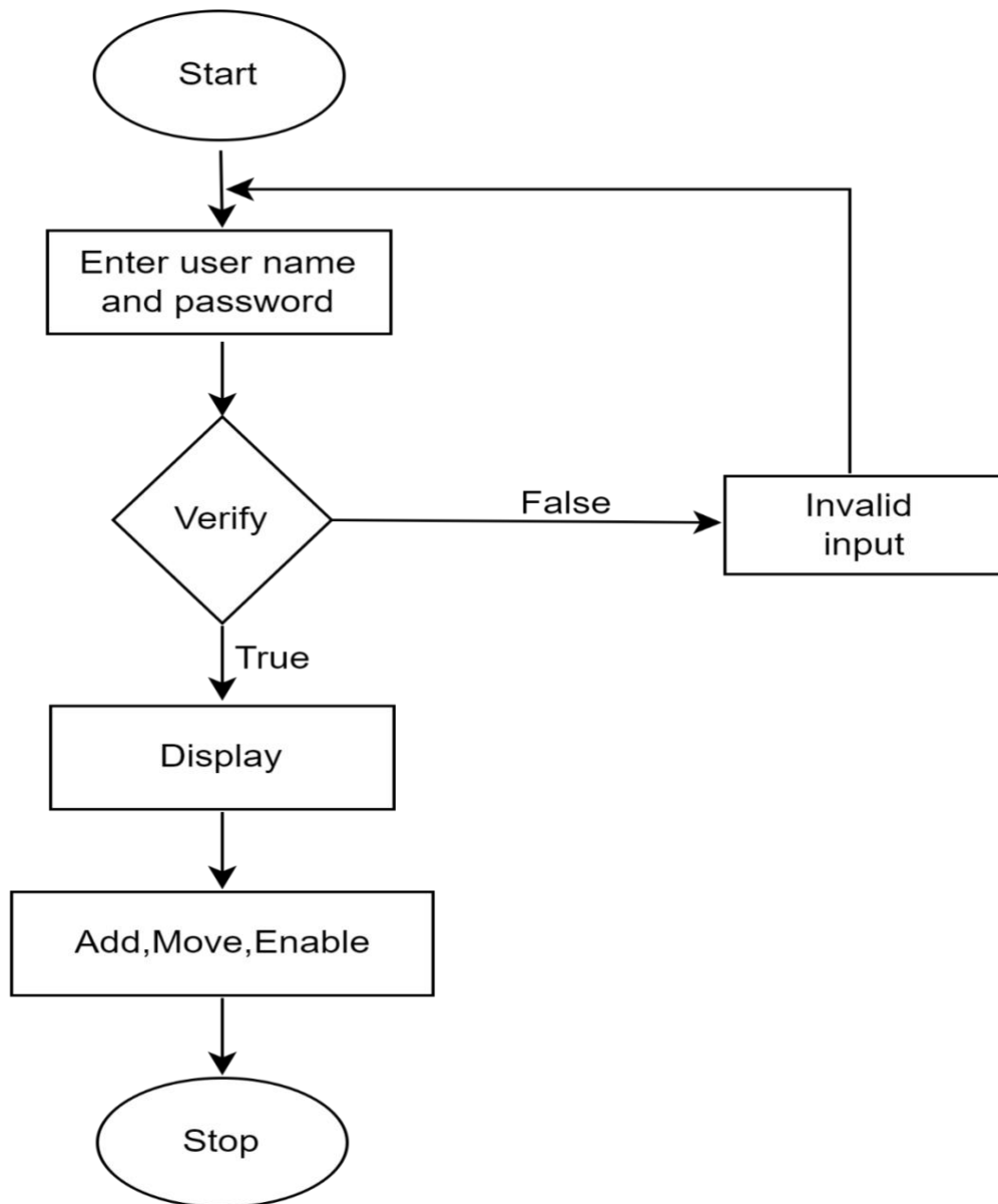
5.3.1-ADMIN (PRINCIPAL) MODULE:



LOGIN:

- Input: Username, Password.
- Procedural Details: Validate username and password.
- File I/O Interface: Login is successfully.

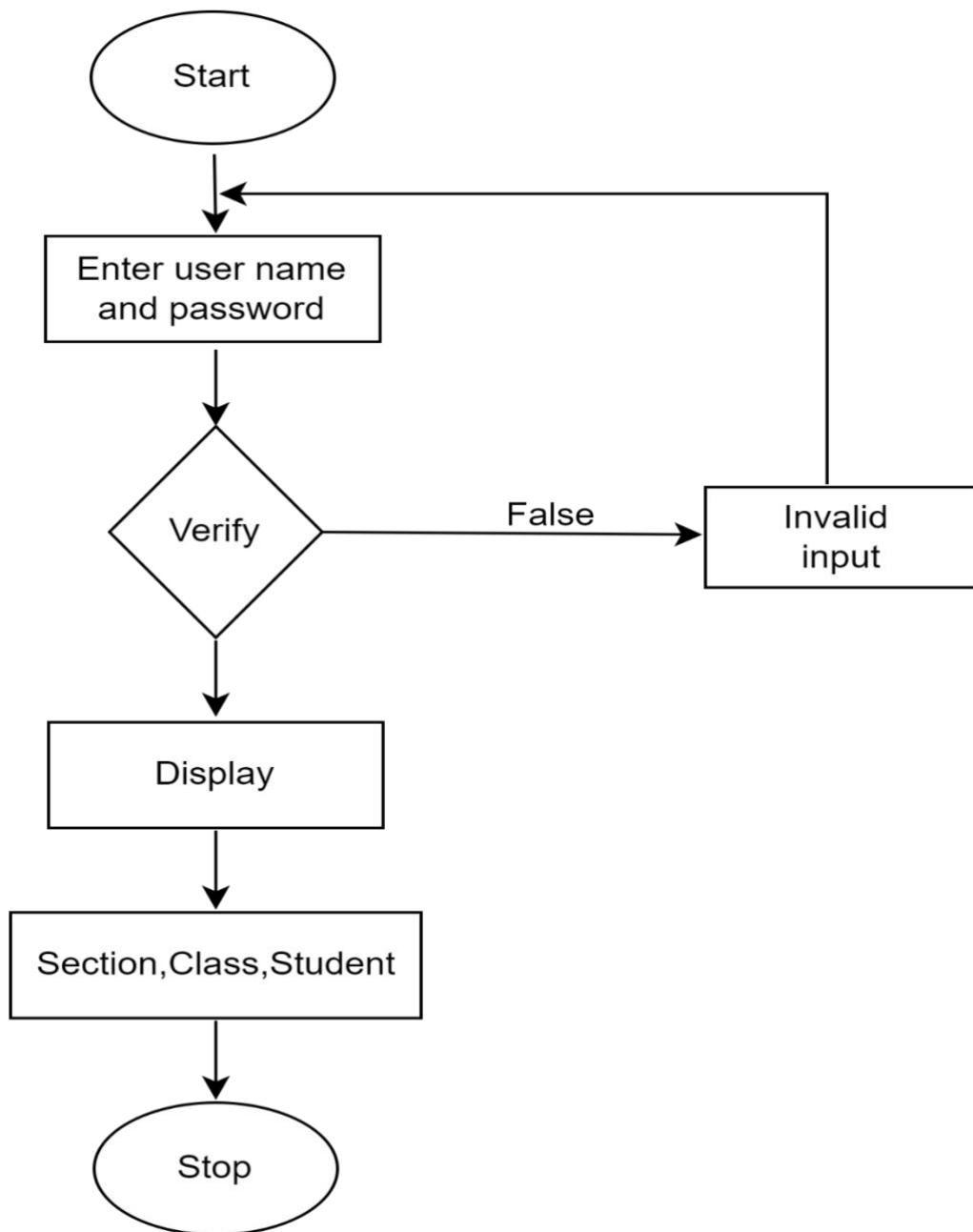
5.3.2-STAFF (OFFICE STAFF) MODULE:



REGISTRATION:

- Input: Username, Password.
- Procedural Details: Validate username and password for login staff and register the student after those details stored in the database.
- File I/O Interface: Registration is successfully completed.

5.3.3-STAFF IN CHARGE (TEACHING STAFF) MODULE:



APPROVAL:

- Input: Username, Password.
- Procedural Details: Validate username and password for login staff in charge and registered student will be approved for vote
- File I/O Interface: Successfully approved the student to vote.

TESTING

CHAPTER-8

TESTING

8.1-INTRODUCTION:

Software testing can be stated as the process of verifying and validating whether a software or application is bug-free, meets the technical requirements as guided by its design and development, and meets the user requirements effectively and efficiently by handling all the exceptional and boundary cases.

The process of software testing aims not only at finding measures to improve the software in terms of efficiency, accuracy, and usability. It mainly aims at measuring the specification, functionality, and performance of a software program or application.

❖ Software testing can be divided into two steps:

1. Verification: It refers to the set of tasks that ensure that the software correctly implements a specific function.
2. Validation: It refers to a different set of tasks that ensure the software that has been built is traceable to customer requirements.

❖ Software testing technique can majorly be classified into two categories.

1. Black-Box Testing: The technique of testing in which the tester doesn't have access to the source code of the software and is conducted at the software interface without any concern with the internal logical structure of the software is known as black box testing.
2. White-Box Testing: The technique of testing in which the tester is aware of the internal working of the product, has access to its source code, and is conducted by making sure that all internal operation are performed according to the specification is known as white box testing.

8.2-TEST REPORTS:

8.2.1- UNIT TESTING: A level of software testing process where individual units/components of software/system are tested. The purpose is to validate that each unit of the software performs as designed.

8.2.2- INTEGRATE TESTING: A level of software testing process where individual units are combined and tested as a group. The purpose of this level of testing is to expose faults in the interaction between integrated units.

8.2.3- SYSTEM TESTING: A level of software testing process where a complete, integrated system/software is tested. The purpose of this test is to evaluate the system's compliance with the specified requirements.