

# **1. INTRODUCTION**

The aim of the project is to create a self-sufficient website where the student can apply scholarship online and have their details provided to the scholarship authority in an efficient manner and so which in turn helps proceeding with sanctioning the requested scholarship. Currently, the procedures of applying for scholarships, managing scholarship and evaluating application forms at Al-Ameen Scholarship Committee are all done manually using paper-based processing. Applicants have to fill out their application forms and submit them manually to the office. If there is any problem with their applications while they are processed, it will also take an extra time for both the reviewing committee as well as the applicant to communicate and correct the errors. Therefore, additional paperwork for the review may cause a delay in the entire procedure. The processes of screening the applicant's credentials, evaluation of applicant's form, conducting aptitude test and oral interview are also tedious. This informed the development of an online web-based system (e-scholarship system) which can facilitate the processes of various scholarship applications.

## **MODULE DESCRIPTION**

### **BASE/GENERAL MODULE**

This module is most basic part of the website where irrespective of the authority level, all users can freely access the website. This module is made public to allow all user in internet to have access to it like general audience, students, etc. The intention of this module is to make sure to deliver the information related to the scholarship and its scheme to everyone. Details such as Scholarship Committee contact info, eligibility criteria for scholarship and other updates related to the scholarship are displayed in this module.

### **STUDENT MODULE**

The students are given privilege to apply for the scholarship based on the eligibility criteria. The student are given a unique ID and password to allow secure login in into their own scholarship application interface where they can apply fresh/renewal scholarship, upload required documents, check verification status, etc. They also undergo E-mail verification process and using which their scholarship status is also sent.

### **ADMIN/MASTER MODULE**

This module is the highest level available for non-tech user. Here the user has access and control over almost most data. This module is just a safety measure in case of changing data by glitch or accident. And this module is protected by a strong password which can't be easily broken by any normal password generator.

## VERIFICATION OFFICER MODULE

This module is specially made for the scholarship committee members to approve students scholarship and sanction the scholarship for students based on their eligibility

## **OBJECTIVE OF THE PROJECT**

The main purpose of Scholarship Management System is to help automate the entire Scholarship process performed in the college. The main objective of the proposed system is to eliminate the limitations of the existing system. Computers are fast and tireless machines that can process large amount of results. In short, it provides quality reports and registers.

### GOALS:

- To Minimize the time delay for giving scholarship.
- Minimize the amount of paper work require
- Quick processing
- To have data organised
- Most of the works should be done by the computers, reducing the works.
- To provide a searchable database to view the yearly reports.
- Unnecessary document flow and duplication of data will be eliminated
- To avoid travelling long distance for scholarship enquiry
- Easy access to information
- To make application for scholarship easy
- To make a scholarship trust online

## **2. LITERATURE SURVEY**

The use of the Internet has been extremely fast since it can now be accessed almost anywhere by numerous means. It has also introduced a new era of computing, providing the basis for promising application areas like e-banking, e-exams, e-ticketing. In the late '90s came the introduction of the World Wide Web, and the implementation of the Web browser. This graphically oriented view of data quickly became popular for the Internet. Today we find much of our on-line interaction taking place through the browser. As the number of users on the World Wide Web increases every day, its use in different areas is also growing. One of the most powerful aspects of the web is that anybody who has internet access can browse on the net. This enables sharing the information worldwide. According to Dr. Ernst, Internet has become the means for conducting growing numbers of transactions because of the speed, flexibility, and efficiency that it offers. This technology is required by every organization if it does want to reach out to its customers in this age of globalization.

The term "scholarship" according to K. Peterson, is a form of financial assistance that does not require repayment or employment and which is usually offered to students who show potential for distinction, or who possess certain characteristics important to the scholarship provider (such as religious beliefs, hobbies, ethnicity, etc.). A scholarship is a form of financial aid that is specifically geared towards students who are attending college. It is used as a way of financing their education, and it may pay a part of their education, or it may pay the entire cost of a student's tuition. As A. Exforsy point out, Scholarships will require students to meet certain requirements, both before and after they've obtained it. Most of these scholarships will require students to have a minimum GPA, and they may also require them to take a certain number of credit hours within the first 12 months of their schooling. While some scholarships are based on gender, others are based on the field the student is majoring in. Scholarship, especially in developing countries, has been considered as a means to improve the access, participation, enrolment and achievement of students from the poor and disadvantaged background.

A study was conducted by M. Brumbaugh, on "Increasing Efficiency in a Community College Scholarship Program", the research was designed to ISSN:0975-9646 Mohammed Abdullahi Jibrin et al, / (IJCSIT) International Journal of Computer Science and Information Technologies, Vol. 7 (2), 2016, 523-530 [www.ijcsit.com](http://www.ijcsit.com) 523 increase the efficiency of a community college scholarship program. The research was developed in response to a desire to increase numbers of scholarship applications from students and to streamline the selection and financial reconciliation processes at the research site. Data was gathered through surveys, interviews, and observations. The data analysis suggests that passive information on the part of colleges, lack of student confidence in qualifications, and lack of student awareness of the differences in scholarship criteria are significant contributing factors leading to low rates of application. Data related to recipient selection processes show that committee training, the use of multiple reviewers, and the use of consistently-applied scoring rubrics increase selection efficiency. Results suggest further research possibilities to determine the extent to which various scholarship marketing strategies, and the manner in which individual scholarship criteria are presented, influence application rates. Further research is suggested to determine the factors influencing student confidence and motivation related to scholarship application.

Similarly, R.H. Michael conducted a study at a Canadian university to determine the effects of aid in conjunction with academic support on retention from one year to the next. Using an experimental design, the researcher randomly assigned a sample of 650 first-year students to one of three groups:

- (a) students receiving a large scholarship in Year 2 if they met designated academic performance outcomes;
- (b) students receiving extensive academic support and tutoring services; and
- (c) students who were offered both.

A remaining group of first-year students who received none of the three offers served as a control group against confounding variables. The findings showed that although the financial incentive alone served as a better motivator for persistence than academic support alone, students receiving both offers persisted at the highest rate. The fact that the financial intervention in this study was merit-based and not need-based in nature suggests that money simply served as a catalyst for students already possessing the skills necessary to perform in college. However, the study does not contribute to the argument that academic performance plays a key role in student persistence patterns.

In addition, S.Wen-Kai develops “An Online Scholarship Application System” for a foundation at University of Wisconsin-La Crosse. The foundation deals with a large number of scholarship applications as the foundation uses paper-based processing. In order to automate the task performed by this foundation, a re-engineering approach named “Evolutionary Re-engineering Approach” was used to identify all critical functionalities from the existing system. This evolution focuses on replacement in which portions of the existing system are substituted for reengineered system portions. The system was developed under Java development platform using Java in the business logic layer, JSP in the presentation layer and Oracle 10g Express Edition in the database layer. It was run under IIS application server.

Some basic applications areas like e-exams that are related to E-scholarship System were also reviewed. In a paper titled "An Arabic Web-Based Exam Management System" proposed a web-based online examination system. The system helps to carry out examination and auto-grading for students' exams. The system facilitates conducting exams, collection of answers, auto-marking the submissions and production of reports for the test. It supports many kinds of questions. It was used via Internet and is therefore suitable for both local and remote examination. The system could help lecturers, instructors, teachers and others who are willing to create new exams or edit existing ones as well as students participating in the exams. The system was built using various open source technologies. AJAX, PHP, HTML and MySQL database are used in this system. An auto-grading module was generalized to enable different exam and question types. The system was tested in the Mansoura university quality assurance center. The test proved the validity of using this kind of Web-Based Systems to evaluate students in the institutions with high rate of students.

Another model was Proposed by Turkish Journal for e-Examination in Nigeria where all applicants are subjected to online entrance examination as a way of curbing the irregularities as proposed by the Joint Admissions Matriculation Board (JAMB), the body saddled with the responsibility of conducting entrance examinations into all the Nigerian universities. This model was designed and tested in Covenant University, one of the private universities in Nigeria. Their findings revealed that the system has the potentials to eliminate some of the problems that are associated with the traditional methods of examination such as impersonation and other forms of examination malpractices.

## **3. SYSTEM ANALYSIS**



## EXISTING SYSTEM & DRAWBACKS

In the existing system the traditional manual system is followed where student need to fill the application form. In this system the information spreading is less where every student needs to visit the office room for the clarification. For the proof submission the hot copies are submitted to the authorized faculty. Large amount of document work is needed to achieve the task in the current system and more time is needed to complete necessary record. This system is used extreme and wide and it requires bundle of human efforts and interaction is needed to preserve the records. It is very difficult to get the information about the old students who left the college more than ten years. There is a possibility of data loss in case of any physical spoil is encountered or in case of any natural disaster. It is decentralized and asymmetric way of entering the data. User has to wait in the queue to get information and he has to visit the centre during the dealing hours. So it will take more moment. In this case data treatment, data hacking can be done with no trouble. There is low level of data refuge and high level of data aggressive. There is no clearness about the student information.

### DRAWBACKS:

- More manual effort is needed
- Less accuracy in sharing information
- Notification for the last date is not identified
- Applicant need to know the category of scholarship manually

## PROPOSE SYSTEM

The software development approach that has been employed for this project is the AGILE methodology. After careful analysis of the user requirements the following application scenarios that would be handled by the system were identified.

- 1) Student/Applicant log in to the website to create an account. Log in with account details, upload passport, fill the application form and upload qualifications. The applicants also can view feedback to enable her/him know the progress of their applications
- 2) Admin Officer Log in to website, the officer verifies the documents uploaded by each applicant. The officer view the evaluation report of applicant; can carry out shortlisting of qualified applicants and sends invitation for interview. The Admin officer also sends a notification to qualified applicants via email and SMS on their success and the award of the scholarship. The officer generates reports e.g. list of shortlisted candidate for interview.

3) The System Administrator log in using his user name and password. The administrator configures the system and places various measures for updating the system and maintenance of the server. He creates log in for Admin Officer and always initiate backup for the system.

4) General Audience are people who have access to part websites which is made publically available to all and includes the details about the website and organisation.

## SYSTEM ANALYSIS

In the proposed system, student need to login on scholarship portal where they can view the category of application. The cast based category, rank based category and poor student category is filtered using content based filtering technique. The approval for the scholarship is given by admin where collaborative filtering technique is used. Current system has encounter with many limits. The optional system hits the limits found in the present system. There exists lot of return in a proposed system that is the system is whole package so there is no slipups relating to the statistics of student's attendance and internal evaluation marks etc. Also it eliminates being without a job. It is easy to get in order from single foundation. No latency when bringing back information and status of the student.

Complete statistics of a student can be improved in the method of SMS to the mobile phone through one feel. Notifications will be conveyed to the relevant guardians through SMS when particular student not able to attend the class as per the university guidelines and also email can be sent to relevant parent and also pie and bar charts can be generated as per student's presentation.

Also it allows management to store student and faculty information also admin can track the faculty and student details. The application allows bringing about courses surrounded by a class area. It has got profile based super vision like superintendent, faculty and student. It allows faculties to manage student attendance and their internal evaluation marks. And also it allows students to view their own details and also can produce report. Students get alerted during examination using globular. And also it allows storing internal estimation marks and also generates the average

## FEASIBILITY STUDY

As the name suggest, feasibility study is a study to reveal whether a project is feasible or not. A feasibility study is an analysis that considers all of a project's relevant factors—including economic, technical, legal, and scheduling considerations—to ascertain the likelihood of completing the project successfully.

Whether a project is feasible or not can depend on several factors, including the project's cost and return on investment, meaning whether the project generated enough revenue or sales from consumers.

The types of feasibility namely:

- Technical feasibility
- Financial feasibility
- Time feasibility
- Operational feasibility

### TECHNICAL FEASIBILITY:

The project is quite feasible technically as it can be implemented using the support and features provided by the programming languages and handy software tools which are easily available to user. Also, with the technical support of the books available, internet resources and internal staff the technical obstacles that are expected/unexpected could be resolved without much delay. Also, there is no special hardware involved in the system. Thus, the overall project is technically feasible.

### FINANCIAL FEASIBILITY:

Since no special hardware is required for the system the direct or indirect cost required for the development and the deployment of the project is reduced. As our project consists of a webpage and a mobile application it does not require any financial help. We will only need a web domain and nothing else. Hence, our project is financially very feasible.

### TIME FEASIBILITY:

As the requirements of the project are not large and the objective of project is well defined, well understood among the team members and the schedule for the project is initially marked out, the project can be satisfactorily completed within the expected timeline. However, some issues may arise due to lot of contents but, they can be solved with proper planning and team efforts. Thus, the project is timely feasible.

### OPERATIONAL FEASIBILITY:

As our project consist of a webpage having a very Simple Graphical User Interface. So to use it a person need not to be a highly technical person, even a common person can use it very easily .The person using our web site does not need to know any kind of programming language and also does not need to have technical knowledge .people belonging to any age group can use our website and application without any issues .Overall ,our project is very much operationally feasible the buyer age profile in which, this wesbites age group is from 13 to 25 where the lower age group students can always take guidance from their elder.

# **4. SOFTWARE** **REQUIREMENT** **SPECIFICATION**

## INTRODUCTION

A software requirements specification (SRS) is a description of a software system to be developed. It lays out functional and non-functional requirements and may include a set of use cases that describe user interactions that the software must provide. In order to fully understand one's project, it is very important that they come up with an SRS listing out their requirements, how are they going to meet them and how will they complete the project.

It helps the team to save upon their time as they are able to comprehend how are going to go about the project. Doing this also enables the team to find out about the limitations and risks early on. The software requirement specification is produced at the culmination of the analysis task. The function and performance allocated to software as part of system engineering are refined by establishing a complete information description, a detailed functional description, a representation of system behavior, an indication of performance.

Requirement and design constraints appropriate validation criteria and other information pertinent to requirement. The introduction to software requirements specification states the goals and objectives of the software, describing it in the context of the computer based system. The information provides a detailed description of the problem which should be solved by the software system. Information content, flow and structure are documented. A description of each function required to solve the problem is presented in the functional description.

Validation Criteria is probably the most important and ironically the most often neglected section of the software requirement specification. Software requirement specification can be used for different purpose. Here are the major uses. Not clearly understood by the developer. If this is the case, a careful analysis-involving much interaction with the user should be devoted to reaching a clear statement of requirements, in order to avoid possible misunderstandings.

The important characteristics of software requirement specification (SRS) are given below

- Correct
- Unambiguous
- Complete
- Consistent
- Stability
- Verifiable
- Modifiable
- Traceable

Sometimes, at the beginning of a project, even the user has no clear idea of what exactly the desired product. Think for instance of user interface, a user with no previous experience with computer products may not appreciate the difference between, say menu driven interaction and a command line interface. Even an exact formation of system functions and performance may be missing an initial description produced by an in experienced user. An SRS often describes the software as a series of

individual functional modules. A systems analyst or product manager typically puts together an SRS in collaboration with relevant stakeholders, such as the developer staff.

Ideally, every requirement delineated in an SRS should correspond with business objectives a BRD outlines. For third-party software contractors, the completed SRS provides the basis for cost estimation and contract compliance. While the SRS typically includes functional and nonfunctional requirements, some organizations might differentiate between an SRS and a functional requirements specification (FRS). In these cases, the FRS serves as a separate document and delves into the how of a software product.

An FRS often stipulates all of the fields and user interactions throughout the entire software product. The plan will include, but is not restricted to, a summary of the system functionality, the scope of the project from the perspective of the, scheduling and delivery estimates, project risks and how those risks will be mitigated, the process by which I will develop the project, and metrics and measurements that will be recorded throughout the project.

## OVERVIEW OF SYSTEM

This SRS Document contains the complete software requirements specification for the working of the Al-Ameen Scholarship Trust, describes the design decisions, architectural design and also the detailed design needed to implement the system. It provides the visibility in the design and provides information needed for software support.

The old manual system was suffering from a series of drawbacks. Since whole of the system was to be maintained with hands the process of keeping, maintaining and retrieving the information was very tedious and lengthy. There records were never used to be systematic order. There used to be lots of difficulties in associate in particular transaction with a particular content. If any information was to be found it was required to go through the different registers.

In today's world, owing to the heavy workload on the employees, they are having a huge amount of stress in their lives. Even with the presence of so many gadgets in and around them, they are not able to relieve their stress. I aim to develop an application that would enable them to share the thing of their liking and meet the person who has the same passion as theirs. Anyone can use this application ranging from a child to an old-age person.

If someone wants to share their art, they can share it through the platform, if someone wants to sing any song; they can record it and share the same. They can also share videos (with some funny commentary in the background), share mysteries that other people can solve, post any question. Through my platform, I'll enable them to meet people who share common interests and passions, chat with them, and have some fun.

Documents there would never exist like report generation. There would always be unnecessary consumption of time while entering records and retrieving records. One more problem was that it was very difficult to find errors while entering the records. Once the records were entered it was very difficult to update the records. There as on behind it is that, there is lot of information to be maintained and have to be kept in mind while running the business.

For this reason, we have provided features in present system which is automated (computerized). Actually existing system is quite laborious as one has to enter same information at different places. The SRS is technical specification requirement of the Al-Ameen Scholarship Trust. This specification describes what the proposed system should do without describing how it will do it. It describes complete external behavior of proposed system.

Some important features of the system are given below

- It supports functional and structured programming methods as well as OOP.
- It can be used as a scripting language or can be compiled to byte-code for building large applications.
- It provides very high-level dynamic data types and supports dynamic type checking.
- It supports automatic garbage collection.
- It can be easily integrated with C, C++, COM, ActiveX, CORBA, and Java.

## **FUNCTIONAL & NON-FUNCTIONAL REQUIREMENT**

Requirements analysis is very critical process that enables the success of a system or software project to be assessed. Requirement analysis is significant and essential activity after elicitation. We analyze, refine, and scrutinize the gathered requirements to make consistent and unambiguous requirements. This activity reviews all requirements and may provide a graphical view of the entire system. After the completion of the analysis, it is expected that the understandability of the project may improve significantly. Here, we may also use the interaction with the customer to clarify points of confusion and to understand which requirements are more important than others.

Requirements are generally split into two types:

- Functional Requirements.
- Non-functional Requirements..

### **FUNCTIONAL REQUIREMENT:**

These are the requirements that the end user specifically demands as basic facilities that the system should offer. All these functionalities need to be necessarily incorporated into the system as a part of the contract. These are represented or stated in the form of input to be given to the system, the operation performed and the output expected. They are basically the requirements stated by the user which one can see directly in the final product, unlike the non-functional requirements.



Some important features of functional requirements are given below

- The functional requirement for a system describes the functionality services the system is expected to provide.
- This depends on type of software which is being developed and the expected users of the system.
- Every page developed in the project should be user friendly and it should be unambiguous.
- It should provide high level of security for the user, it should be attractive interface.
- Users should be able to register through their already existing accounts.
- They should be able to share their experience while interaction with the website.
- People should be able to like and comment on any post.
- One person can follow another person who shares common interests and likings .
- Each user can have his/her profile picture, status.
- People can post mysteries and other people can solve the mysteries.
- Add own funny commentary on any video and share their experience.
- Post any questions regarding their interests and people can answer.

### NON-FUNCTIONAL REQUIREMENT:

Non-functional requirements are not directly concerned with the specific functions delivered by the system. They may relate to reliability, response time and store occupancy. They relate to system as a whole rather than to individual system features. These are basically the quality constraints that the system must satisfy according to the project contract. The priority or extent to which these factors are implemented varies from one project to other. They are also called non-behavioral requirements.

Some important features of functional requirements are given below

- A non-functional requirement defines the quality attribute of a software system.
- It places constraints on “How should the software system fulfill the functional requirements?”
- Non-functional requirement is specified by technical peoples such as the architect, technical leaders and software developers.
- It is not mandatory to have non-functional requirements of a system.
- It is captured as a quality attribute of a software system.
- Applied to a system as a whole attribute of a software system.
- Helps you to verify the performance of the software.
- Non-Functional Testing like performance, stress, usability, security testing, etc are done.
- Usually more difficult to define non-functional requirements of a software system.
- Emails should be sent with a latency of no greater than 12 hours from such an activity.
- The processing of each request should be done within 10 seconds.
- The site should load in 3 seconds when the numbers of simultaneous users are more than ten

thousand users at once on a software system.

- This system provides security, changing of the password and the facility of notifications for the attendance.

## DOMAIN REQUIREMENTS

Domain requirements are expectations related to a particular type of software, purpose or industry vertical. Domain requirements can be functional or non- functional. The common factor for domain requirements is that they meet established standards or widely accepted feature sets for that category of software project. Domain requirements typically arise in military, medical and financial industry sectors, among others. One example of a domain requirement is for software in medical equipment. Software can be functional and usable but not acceptable for production because it fails to meet domain requirements. The interface that translates marking image files into control signals for the laser beam. A UI that allows an operator to log in, select products from a library, and start or stop marking cycles and a test mode to calibrate the system.

- Requirements that come from the application domain of the system that reflect the characteristics of that domain.
- Describe system characteristics and features that reflect the domain.
- If domain requirement are not satisfied, the system may be in a condition of not functioning properly.
- Requirements are expressed in the language of the application domain; this is often not understood by software engineers developing the system.
- Domain specialists understand the area so well that they do not think of making the domain requirements explicit.
- One example of a domain requirement is for software in medical equipment.
- Software can be functional and usable but not acceptable for production because it fails to meet domain requirements.
- The interface that translates marking image files into control signals for the laser beam.
- A UI that allows an operator to log in, select products from a library, and start or stop marking cycles and a test mode to calibrate the system.
- Domain requirements are the requirements which are characteristic of a particular category or domain of projects.
- The basic functions that a system of a specific domain must necessarily exhibit come under this category.
- For instance, in academic software that maintains records of a school or college, the functionality of being able to access the list of faculty and list of students of each grade is a domain requirement.
- These requirements are therefore identified from that domain model and are not user specific.

## **SYSTEM REQUIREMENTS**

### **HARDWARE SPECIFICATION:**

- Processor: Intel core 1.64 GHz processor.
- RAM:4GB
- HDD:50GB

### **SOFTWARE SPECIFICATION:**

- OS: Windows XP
- Front-end: HTML, CSS, JS
- Back-end: ASP.NET, MSSQL 2019
- Language: C#

## **5. SYSTEM DESIGN**

## **INTRODUCTION**

Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm and area of application. Design is the first step in the development phase for any engineered product or system. The designer's goal is to produce a model or representation of an entity that will later be built. Beginning, once system requirement have been specified and analysed, system design is the first of the three technical activities - design, code and test that is required to build and verify software.

The importance can be stated with a single word "Quality". Design is the place where quality is fostered in software development. Design provides us with representations of software that can assess for quality. Design is the only way that we can accurately translate a customer's view into a finished software product or system. Software design serves as a foundation for all the software engineering steps that follow. Without a strong design we risk building an unstable system – one that will be difficult to test, one whose quality cannot be assessed until the last stage.

During design, progressive refinement of data structure, program structure, and procedural details are developed reviewed and documented. System design can be viewed from either technical or project management perspective. From the technical point of view, design is comprised of four activities – architectural design, data structure design, interface design and procedural design.

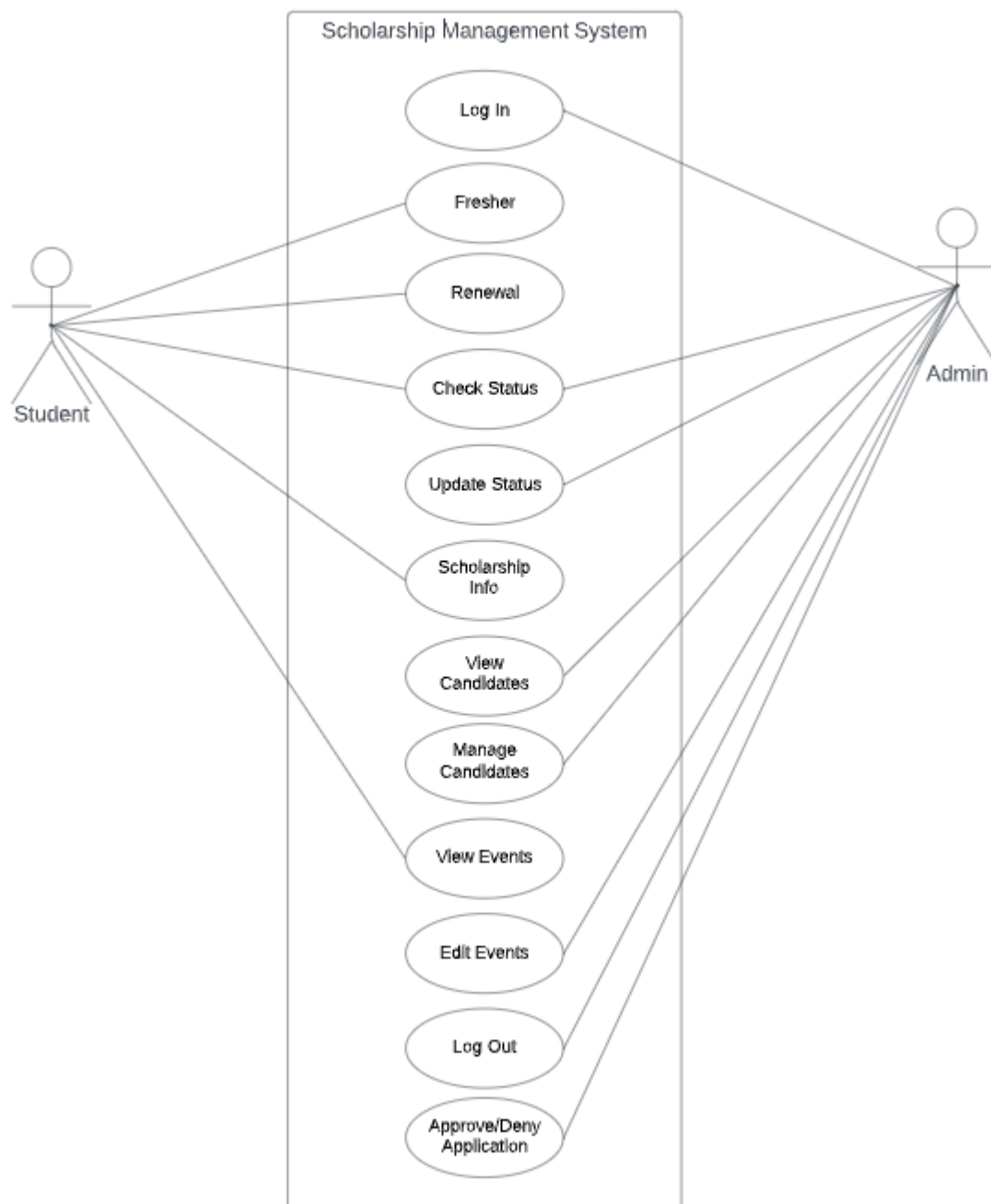
## **UML DIAGRAMS**

UML stands for Unified Modeling Language which is used in object oriented software engineering. Although typically used in software engineering it is a rich language that can be used to model an application structure, behavior and even business process. There are 14 UML diagram types to help you model this behavior.

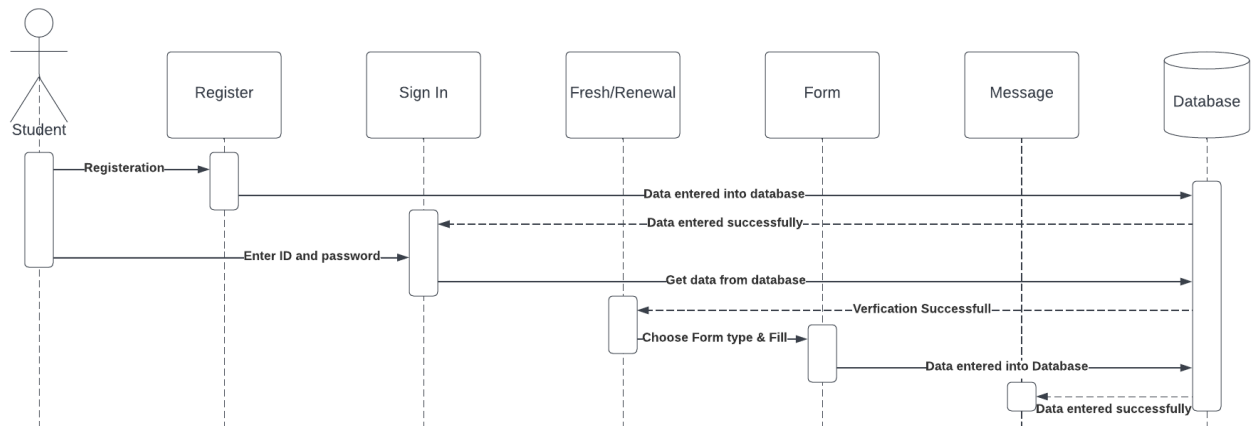
They can be divided into two main categories; structure diagrams and behavioral diagrams. Few diagrams are listed below:

1. Use Case Diagram
2. Sequence Diagram
3. Activity Diagram
4. DFD Diagram

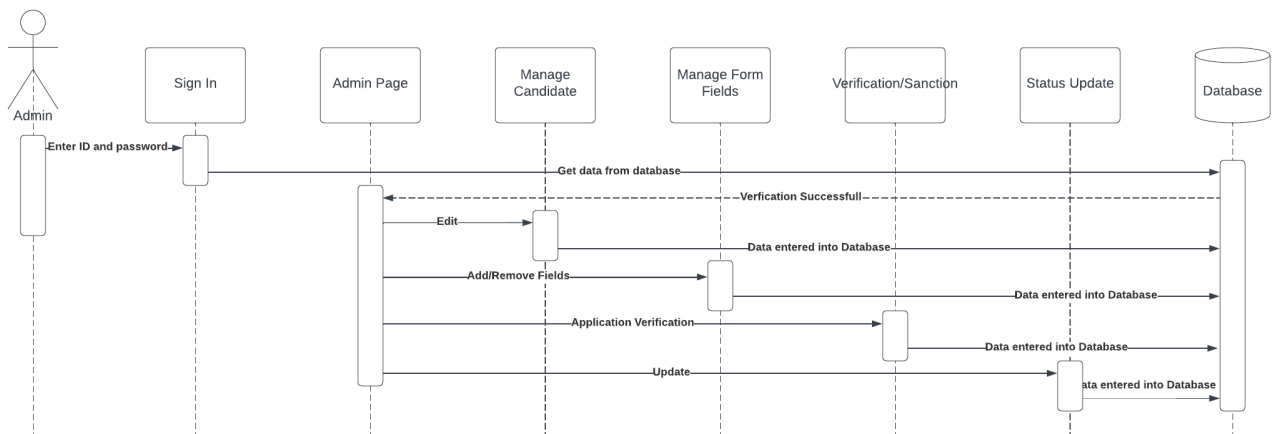
## USECASE DIAGRAM



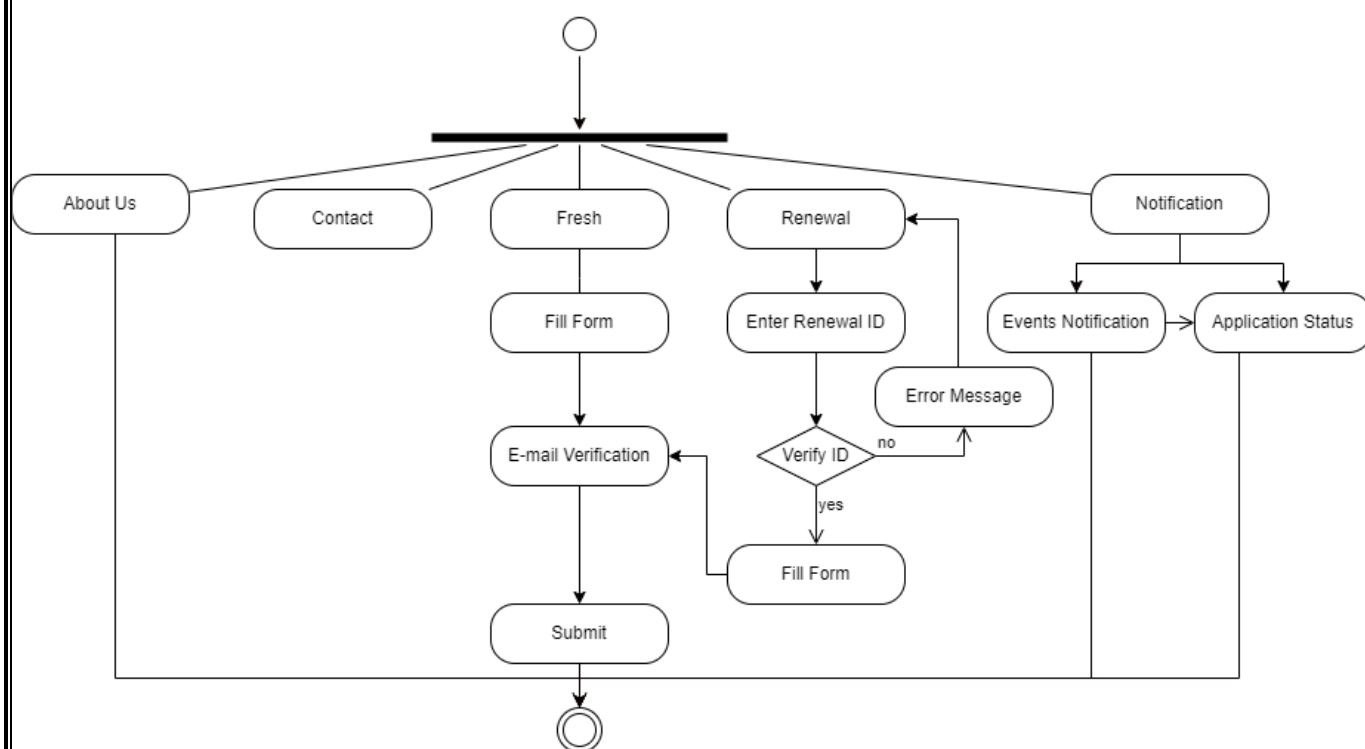
## SEQUENCE DIAGRAM-Student



## SEQUENCE DIAGRAM-Admin

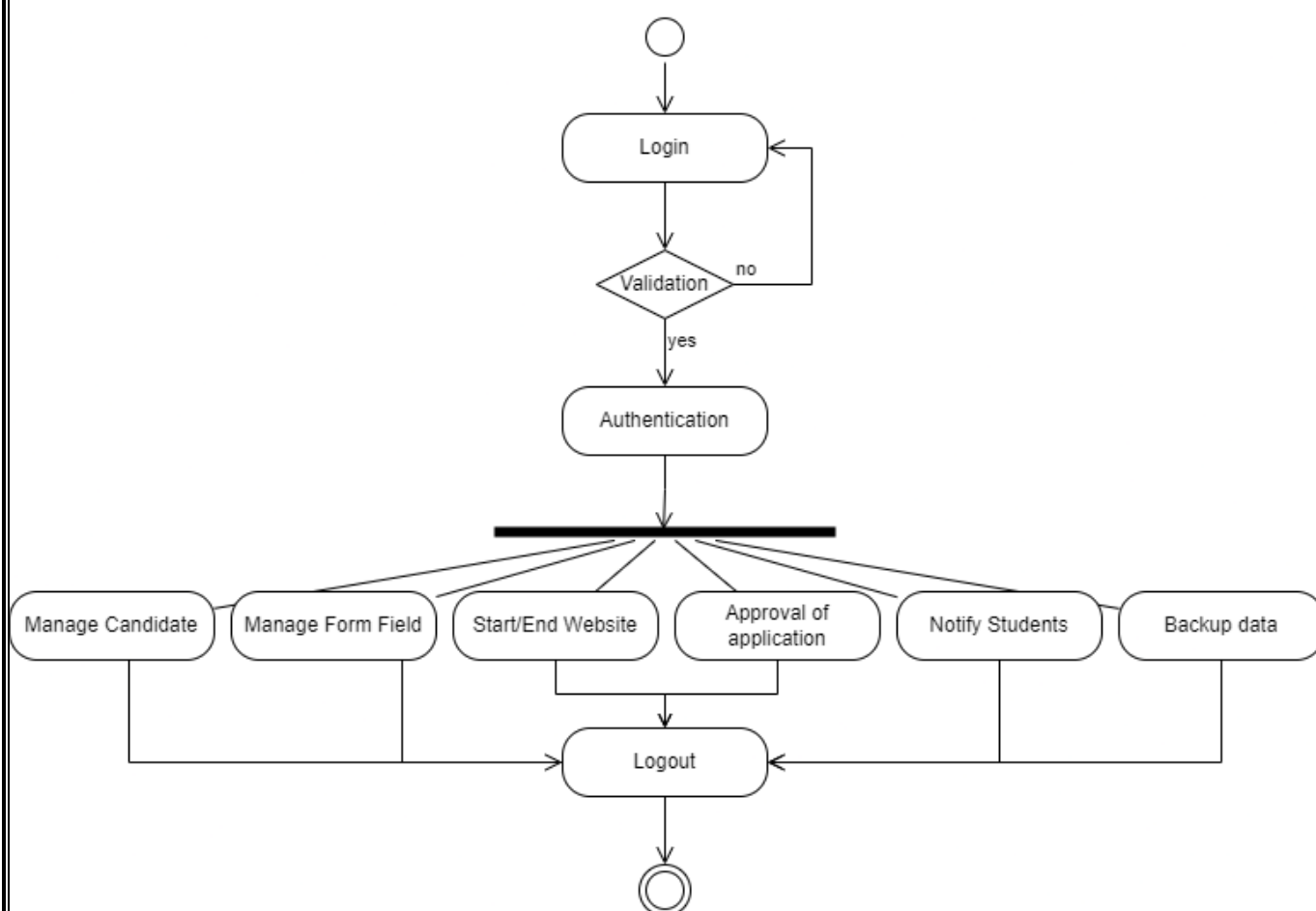


## ACTIVITY DIAGRAM-USER

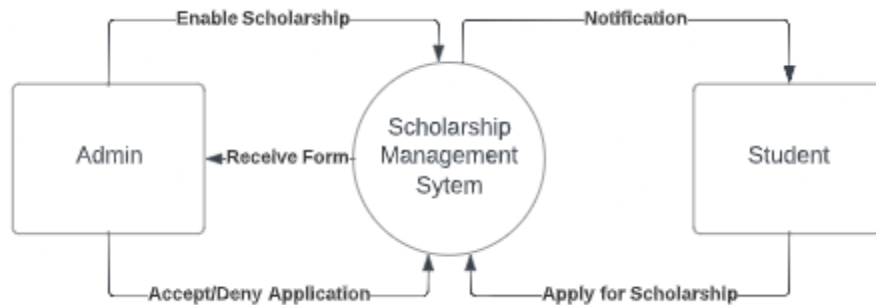




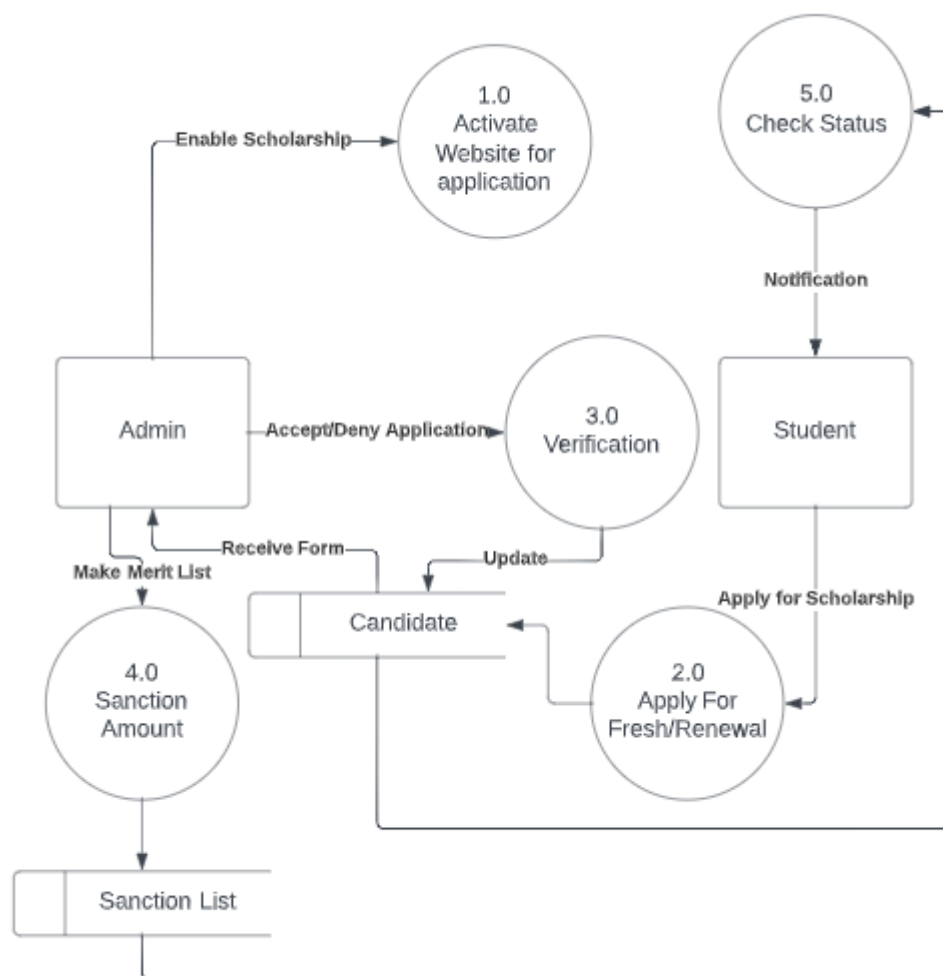
## ACTIVITY DIAGRAM-ADMIN



## DATA FLOW DIAGRAM(Level-0)



## DATA FLOW DIAGRAM(Level-1)



## **6. DATABASE DESIGN**

Database design is the process of producing a detailed data model of database. This data model contains all the needed logical and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity.

The term database design can be used to describe many different parts of the design of an overall database system. Principally and most correctly, it can be thought of as the logical design of the base data structures used to store the data. In relational model these are the tables and views. In an object database the entities and relationships map directly to object classes and named relationships. However, the term database design could also be used to apply to the overall process of designing, not just the base data structure, but also the forms and queries used as part of the overall database application within the database application within the database management system (DBMS).

The process of doing database design generally consists of number of steps which will be carried out by the database designer. Usually, the designer must:

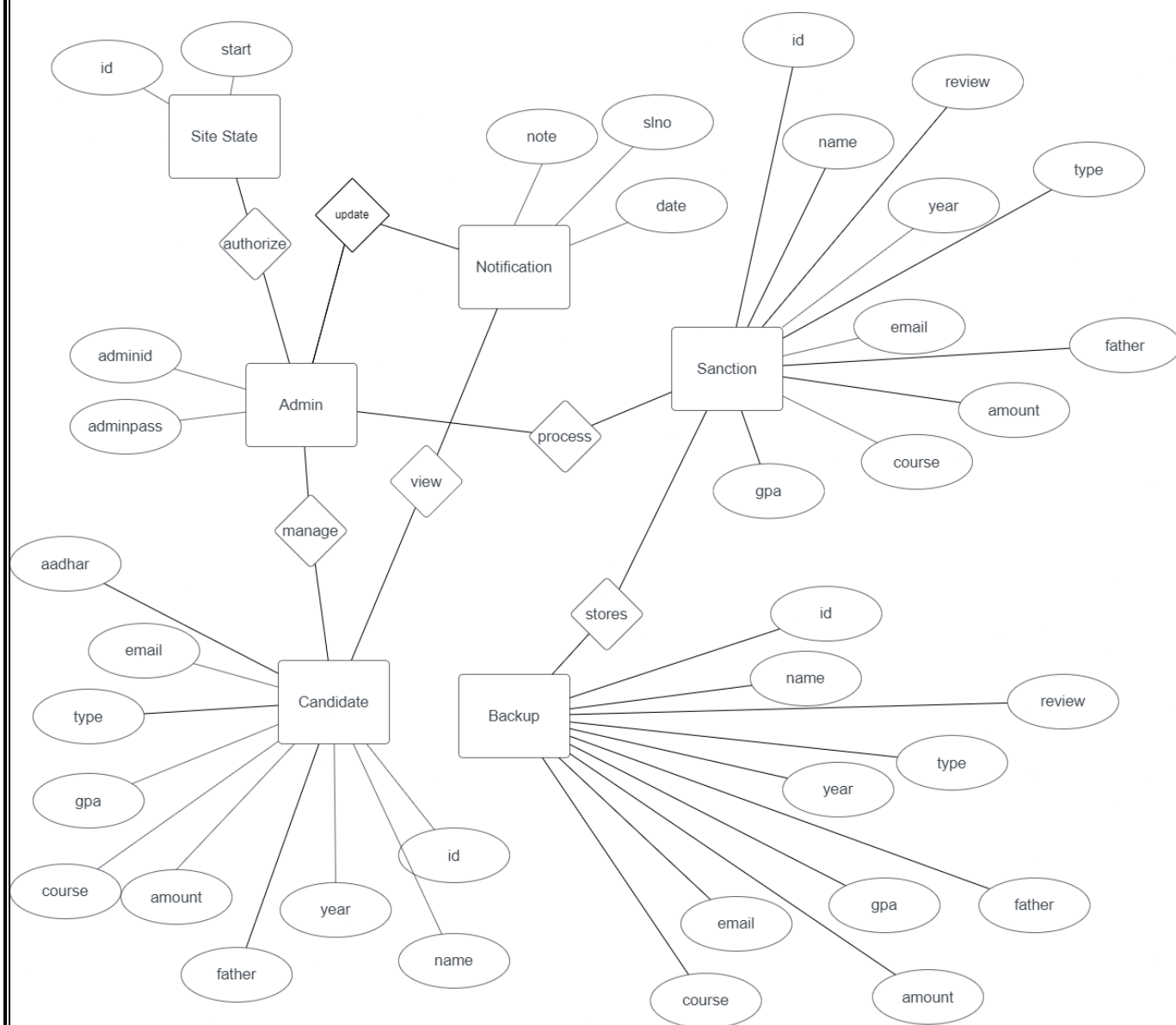
- Determine the data to be stored in the database.
- Determine the relationship between the different data elements.

## ER DIAGRAM

An entity-relationship (ER) diagram is a specialized graphic that illustrates the interrelationships between entities in a database. An **entity-relationship model** (ERM) in software engineering is an abstract and conceptual representation of data. Entity-relationship modeling is a relational schema database modeling method, used to produce a type of conceptual schema or semantic data model of a system, often a relational database

- The relation upon the system is structure through a conceptual ER-Diagram, which not only specifics the existential entities but also the standard relations through which the system exists and the cardinalities that are necessary for the system state to continue.
- The entity Relationship Diagram (ERD) depicts the relationship between the data objects. The ERD is the notation that is used to conduct the data modelling activity the attributes of each data object noted is the ERD can be described resign a data object descriptions.
- The set of primary components that are identified by the ERD are
  - Data object
  - Relationships
  - Attributes
  - Various types of indicators.

The primary purpose of the ERD is to represent data objects and their relationships.



## NORMALIZATION

It is a process of converting a relation to a standard form. The process is used to handle the problems that can arise due to data redundancy i.e. repetition of data in the database, maintain data integrity as well as handling problems that can arise due to insertion, updating, deletion anomalies.

Decomposing is the process of splitting relations into multiple relations to eliminate anomalies and maintain anomalies and maintain data integrity. To do this we use normal forms or rules for structuring relation.

- **Insertion anomaly:** Inability to add data to the database due to absence of other data.
- **Deletion anomaly:** Unintended loss of data due to deletion of other data.
- **Update anomaly:** Data inconsistency resulting from data redundancy and partial update
- **Normal Forms:** These are the rules for structuring relations that eliminate anomalies.

### FIRST NORMAL FORM (1NF):

A relation is said to be in first normal form if the values in the relation are atomic for every attribute in the relation. By this we mean simply that no attribute value can be a set of values or, as it is sometimes expressed, a repeating group. Consider the following example-

College	Course	Name
Al-Ameen Degree College	M.com	Mubasheera, Md Rashid
Al-Ameen Degree College	B.com	Abid Khan, Hajira Samren
Al-Ameen Degree College	BCA	Md Hisham, Md Anas

The above table satisfies both the rules and hence the above table is in 1NF.

**Rule 1-** column with atomic data cannot have several values of same type in it.

In the above table there are multiple values for Course column, hence we create multiple columns.

College	Course	Name
Al-Ameen Degree College	M.com	Mubasheera
Al-Ameen Degree College	M.com	Md Rashid
Al-Ameen Degree College	B.com	Abid Khan
Al-Ameen Degree College	B.com	Hajira Samren
Al-Ameen Degree College	BCA	Md Hisham
Al-Ameen Degree College	BCA	Md Anas

It satisfies Rule 1, but the table is not in 1NF

**Rule 2-** A table with atomic data cannot have multiple columns with same type of data.

College	Course	Name(1)	Name(2)
Al-Ameen Degree College	M.com	Mubasheera	Md Rashid
Al-Ameen Degree College	B.com	Abid Khan	Hajira Samren
Al-Ameen Degree College	BCA	Md Hisham	Md Anas

The above table satisfies both the rules and hence the above table is in 1NF.

## Second Normal Form (2 NF):

A relation is said to be in second Normal form if it is in first normal form and it should satisfy any one of the following rules.

1. Primary key is not a composite primary key
2. No non key attributes are present
3. Every non key attribute is fully functionally dependent on full set of primary key.

Consider the following example-

College	Course	Name
Al-Ameen Degree College	M.com	Mubasheera, Md Rashid
Al-Ameen Degree College	B.com	Abid Khan, Hajira Samren
Al-Ameen Degree College	BCA	Md Hisham, Md Anas

In the above example **Muscle used** depends on **Eq\_Id**, similarly **Muscle used** depends on **Equipment name**. Therefore, the tables are split into two smaller tables as shown below.

College	Name
Al-Ameen Degree College	Mubasheera, Md Rashid
Al-Ameen Degree College	Abid Khan, Hajira Samren
Al-Ameen Degree College	Md Hisham, Md Anas

As the tables are divided into two separate tables, now **Muscle used** is fully functionally dependent on **Equipment name** and on **Eq\_Id** is fully functionally dependent on Password.



Course	Name
M.com	Mubasheera, Md Rashid
B.com	Abid Khan, Hajira Samren
BCA	Md Hisham, Md Anas

## TABLES

COLUMN-NAME	DATA-TYPE	NULL	DEFAULT-VALUES
id	bigint	False	
name	nvarchar(50)	False	
father	nvarchar(50)	False	
occupation	nvarchar(50)	False	
course	nvarchar(50)	False	
courseyear	nvarchar(50)	False	
pcourse	nvarchar(50)	False	
pcourseyear	nvarchar(50)	False	
pcoursemarks	nvarchar(50)	False	
sslc	nvarchar(50)	True	((0))
pu	nvarchar(50)	True	((0))
institute	nvarchar(MAX)	False	
totalfee	nvarchar(50)	False	
balancefee	nvarchar(50)	False	
aadhar	bigint	False	
year	nvarchar(50)	False	
doc	nvarchar(MAX)	False	
email	nvarchar(50)	False	
income	nvarchar(MAX)	True	
review	text	True	
type	nvarchar(50)	True	
sancamount	bigint	True	
stat	nvarchar(50)	True	

COLUMN-NAME	DATA-TYPE	NULL	DEFAULT-VALUES
slnno	int	False	
note	varchar(MAX)	False	
date	varchar(MAX)	False	

COLUMN-NAME	DATA-TYPE	NULL	DEFAULT-VALUES
Adminid	nvarchar(50)	True	
adminpass	nchar(10)	True	

COLUMN-NAME	DATA-TYPE	NULL	DEFAULT-VALUES
id	int	False	
start	nvarchar(50)	True	

COLUMN-NAME	DATA-TYPE	NULL	DEFAULT-VALUES
id	bigint	False	
name	nvarchar(50)	False	
father	nvarchar(50)	False	
occupation	nvarchar(50)	False	
course	nvarchar(50)	False	
courseyear	nvarchar(50)	False	
pcourse	nvarchar(50)	False	
pcourseyear	nvarchar(50)	False	
pcoursemarks	nvarchar(50)	False	
sslc	nvarchar(50)	False	
pu	nvarchar(50)	False	
institute	nvarchar(MAX)	False	
balancefee	nvarchar(50)	False	
year	nvarchar(50)	False	
email	nvarchar(50)	False	
aadhar	bigint	True	
type	nvarchar(50)	True	
sancamount	bigint	True	
income	nvarchar(MAX)	True	
review	text	True	

COLUMN-NAME	DATA-TYPE	NULL	DEFAULT-VALUES
id	bigint	False	
name	nvarchar(50)	False	
father	nvarchar(50)	False	
occupation	nvarchar(50)	False	
course	nvarchar(50)	False	
courseyear	nvarchar(50)	False	
pcourse	nvarchar(50)	False	
pcourseyear	nvarchar(50)	False	
pcoursemarks	nvarchar(50)	False	
sslc	nvarchar(50)	False	

pu	nvarchar(50)	False	
institute	nvarchar(MAX)	False	
balancefee	nvarchar(50)	False	
year	nvarchar(50)	False	
email	nvarchar(50)	False	
aadhar	bigint	True	
type	nvarchar(50)	True	('R')
sancamount	bigint	True	
income	nvarchar(MAX)	True	
review	text	True	

# **7.IMPLEMENTATION**

**FRESH FORM C#:**

```
using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

using System.Data.SqlClient;

using System.Configuration;

using System.Data;

using System.Net.Mail;

using System.Net;

using System.IO;

using System.Threading;

using System.Text.RegularExpressions;

using iTextSharp.text;

using iTextSharp.text.pdf;

using iTextSharp.tool.xml;

using iTextSharp.tool.xml.html;

using iTextSharp.tool.xml.parser;

using iTextSharp.tool.xml.pipeline.css;

using iTextSharp.tool.xml.pipeline.end;

using iTextSharp.tool.xml.pipeline.html;

public partial class fresh : System.Web.UI.Page

{

    String randomcode;

    public static String to;

    String containcode;
```

```
string con = ConfigurationManager.ConnectionStrings["ConnectionString"].ConnectionString;

protected void Page_Load(object sender, EventArgs e)
{
    SqlConnection sql = new SqlConnection(con);
    sql.Open();
    SqlCommand cmd = new SqlCommand("select start from statustbl where id='1'", sql);
    string status = (string)cmd.ExecuteScalar();
    if (status == "no")
    {
        Response.Redirect("home.aspx");
    }
    Panel5.Visible = false;
    Panel2.Visible = false;
    Panel4.Visible = false;
    Panel3.Visible = false;
    Panel6.Visible = false;
    Panel7.Visible = false;
    form.Visible = false;
    docsec.Visible = false;
    Button1.Visible = false;
    Button2.Visible = false;
    tick.Visible = false;
    v.Visible=false;
    if (!IsPostBack)
    {
        chainddl();
        chainddl2();
        chainddl3();
    }
}

protected void chainddl()
```

```
{
    SqlConnection sqlcon = new SqlConnection(con);
    sqlcon.Open();
    SqlCommand sqlcmd = new SqlCommand("select * from [dbo].[religiontbl]", sqlcon);
    sqlcmd.CommandType = CommandType.Text;
    ddlreligion.DataSource = sqlcmd.ExecuteReader();
    ddlreligion.DataTextField = "religionname";
    ddlreligion.DataValueField = "religionid";
    ddlreligion.DataBind();
    ddlreligion.Items.Insert(0, new System.Web.UI.WebControls.ListItem("--Select Religion--", "0"));
}

protected void ddlreligion_SelectedIndexChanged(object sender, EventArgs e)
{
    int religionid = Convert.ToInt32(ddlreligion.SelectedValue);
    SqlConnection sqlcon = new SqlConnection(con);
    sqlcon.Open();
    SqlCommand sqlcmd = new SqlCommand("select * from [dbo].[castetbl] where religionid= " +
religionid, sqlcon);
    sqlcmd.CommandType = CommandType.Text;
    ddlcaste.DataSource = sqlcmd.ExecuteReader();
    ddlcaste.DataTextField = "castename";
    ddlcaste.DataValueField = "casteid";
    ddlcaste.DataBind();
    ddlcaste.Items.Insert(0, new System.Web.UI.WebControls.ListItem("--Select Caste--", "0"));
}

protected void chainddl2()
{
    SqlConnection sqlcon = new SqlConnection(con);
    sqlcon.Open();
    SqlCommand sqlcmd = new SqlCommand("select * from [dbo].[coursetbl]", sqlcon);
    sqlcmd.CommandType = CommandType.Text;
```

```
ddlcourse.DataSource = sqlcmd.ExecuteReader();

ddlcourse.DataTextField = "coursename";

ddlcourse.DataValueField = "courseid";

ddlcourse.DataBind();

ddlcourse.Items.Insert(0, new System.Web.UI.WebControls.ListItem("--Select Course--", "0"));
}

protected void DropDownList2_SelectedIndexChanged(object sender, EventArgs e)
{
    int courseid = Convert.ToInt32(ddlcourse.SelectedValue);

    SqlConnection sqlcon = new SqlConnection(con);

    sqlcon.Open();

    SqlCommand sqlcmd = new SqlCommand("select * from [dbo].[courseyeartbl] where courseid= " +
courseid, sqlcon);

    sqlcmd.CommandType = CommandType.Text;

    ddlcourseyear.DataSource = sqlcmd.ExecuteReader();

    ddlcourseyear.DataTextField = "courseyearname";

    ddlcourseyear.DataValueField = "courseyearid";

    ddlcourseyear.DataBind();

    ddlcourseyear.Items.Insert(0, new System.Web.UI.WebControls.ListItem("--Select Course year--", "0"));
}

protected void chainddl3()
{
    SqlConnection sqlcon = new SqlConnection(con);

    sqlcon.Open();

    SqlCommand sqlcmd = new SqlCommand("select * from [dbo].[coursetbl]", sqlcon);

    sqlcmd.CommandType = CommandType.Text;

    ddlprecourse.DataSource = sqlcmd.ExecuteReader();

    ddlprecourse.DataTextField = "coursename";

    ddlprecourse.DataValueField = "courseid";

    ddlprecourse.DataBind();

    ddlprecourse.Items.Insert(0, new System.Web.UI.WebControls.ListItem("--Select Course--", "0"));
}
```



```
}

protected void ddlprecourse_SelectedIndexChanged(object sender, EventArgs e)
{
    int courseid = Convert.ToInt32(ddlprecourse.SelectedValue);
    SqlConnection sqlcon = new SqlConnection(con);
    sqlcon.Open();

    SqlCommand sqlcmd = new SqlCommand("select * from [dbo].[courseyeartbl] where courseid= " +
courseid, sqlcon);

    sqlcmd.CommandType = CommandType.Text;
    ddlprecourseyear.DataSource = sqlcmd.ExecuteReader();
    ddlprecourseyear.DataTextField = "courseyearname";
    ddlprecourseyear.DataValueField = "courseyearid";
    ddlprecourseyear.DataBind();

    ddlprecourseyear.Items.Insert(0, new System.Web.UI.WebControls.ListItem("--Select Course year--",
"0"));
}

protected void TextBox1_TextChanged(object sender, EventArgs e)
{
    if (!string.IsNullOrEmpty(feetxt.Text) || string.IsNullOrEmpty(TextBox2.Text))
    {
        try
        {
            Int64 trial = Convert.ToInt64(feetxt.Text);

            balancetxt.Text = (Convert.ToInt32(feetxt.Text) - Convert.ToInt32(TextBox2.Text)).ToString();
        }
        catch
        {
            Panel5.Visible = true;
        }
    }
}

protected void TextBox2_TextChanged(object sender, EventArgs e)
```

```

{
    if (!string.IsNullOrEmpty(feetxt.Text) || string.IsNullOrEmpty(TextBox2.Text))

    {
        try
        {
            Int64 trial = Convert.ToInt64(feetxt.Text);

            balancetxt.Text = (Convert.ToInt32(feetxt.Text) - Convert.ToInt32(TextBox2.Text)).ToString();
        }
        catch
        {
            Panel5.Visible = true;
        }
    }
}

protected void Button3_Click(object sender, EventArgs e)
{
    int er=1;

    Regex reg = new Regex(@"^[0-9]{12}$");

    Regex reg2 = new Regex(@"^[0-9]");

    Regex regmail = new Regex(@"([a-zA-Z0-9]+)([\.{1}])?([a-zA-Z0-9-9])+\@(?:(?:gmail|GMAIL)([\.])?(?:com|COM)");

    if (String.IsNullOrWhiteSpace(nametxt.Text) || String.IsNullOrWhiteSpace(txtincom.Text) ||
        String.IsNullOrWhiteSpace(ddlreligion.Text) || String.IsNullOrWhiteSpace(rdlgen.Text) ||
        String.IsNullOrWhiteSpace(emailtxt.Text) || String.IsNullOrWhiteSpace(fathertxt.Text) ||
        String.IsNullOrWhiteSpace(occupationtxt.Text) || String.IsNullOrWhiteSpace(adhartxt.Text) ||
        String.IsNullOrWhiteSpace(ddlcol.Text) || String.IsNullOrWhiteSpace(ddlcourse.Text) ||
        String.IsNullOrWhiteSpace(ddlcourseyear.Text) || String.IsNullOrWhiteSpace(ddlprecourse.Text) ||
        String.IsNullOrWhiteSpace(ddlprecourseyear.Text) || String.IsNullOrWhiteSpace(feetxt.Text) ||
        String.IsNullOrWhiteSpace(TextBox2.Text) || String.IsNullOrWhiteSpace(markstxt.Text) ||
        String.IsNullOrWhiteSpace(txtaccno.Text) || String.IsNullOrWhiteSpace(txtifsc.Text))
    {
        Panel4.Visible = true;

        er = 0;
    }
}

```

```
}  
if (!reg.IsMatch(adhartxt.Text) )  
{  
    Panel2.Visible = true;  
    er = 0;  
}  
if (!reg2.IsMatch(txtincom.Text))  
{  
    Panel7.Visible = true;  
    er = 0;  
}  
if (!regmail.IsMatch(emailtxt.Text))  
{  
    Panel3.Visible = true;  
    er = 0;  
}  
try  
{  
    SqlConnection sql = new SqlConnection(con);  
    sql.Open();  
    SqlCommand cmd = new SqlCommand("select count(aadhar) from cantbl where aadhar=" +  
adhartxt.Text, sql);  
    int rowCount = Convert.ToInt32(cmd.ExecuteScalar());  
    if (rowCount >= 1)  
    {  
        Panel6.Visible = true;  
        er = 0;  
    }  
}  
catch  
{
```

```
Panel2.Visible = true;

er = 0;
}
try
{
    if (Convert.ToInt64(feetxt.Text) < Convert.ToInt64(TextBox2.Text))
    {
        Panel5.Visible = true;

        er = 0;
    }
}
catch
{
    Panel5.Visible = true;

    er = 0;
}
if(er==1)
{
    Panel4.Visible = false;

    Button3.Visible = false;

    Button2.Visible = true;

    String from, pass, msgbody;

    Random rand = new Random();

    randomcode = (rand.Next(999999)).ToString();

    MailMessage msg = new MailMessage();

    to = (emailtxt.Text).ToString();

    from = "mohammedanas1581@gmail.com";

    pass="bvdoxtduxkfkecog";

    msgbody = "Your OTP code is " + randomcode;

    Label1.Text = randomcode;

    msg.To.Add(to);
```

```
msg.From = new MailAddress(from);  
msg.Body = msgbody;  
msg.Subject = "E-mail confirmation OTP code";  
SmtpClient smtp = new SmtpClient("smtp.gmail.com");  
smtp.EnableSsl = true;  
smtp.Port = 587;  
smtp.DeliveryMethod = SmtpDeliveryMethod.Network;  
smtp.Credentials = new NetworkCredential(from, pass);  
try  
{  
    smtp.Send(msg);  
    ScriptManager.RegisterClientScriptBlock(this, this.GetType(), "alertMessage", "alert('Sent  
Successfully')", true);  
}  
catch (Exception ex)  
{  
    ScriptManager.RegisterClientScriptBlock(this, this.GetType(), "alertMessage", "alert('" +  
ex.Message + "')", true);  
}  
}  
  
protected void Button2_Click(object sender, EventArgs e)  
{  
    containcode = (TextBox8.Text).ToString();  
    Label2.Text = containcode;  
    if (Label1.Text == Label2.Text)  
    {  
        docsec.Visible=true;  
        Button1.Visible = true;  
        adhartxt.ReadOnly = true;  
        emailtxt.ReadOnly = true;  
        nametxt.ReadOnly = true;
```

```
Panel1.Visible = false;

v.Visible = true;

tick.Visible = true;

tick.Width = 75;

}

else

{

    Button2.Visible = true;

    ScriptManager.RegisterClientScriptBlock(this, this.GetType(), "alertMessage", "alert('Entered OTP is
Incorrect')", true);

}

}

protected void Button1_Click(object sender, EventArgs e)

{

    status.Text = "five";

    SqlConnection sqlconn = new SqlConnection(con); //makes connection to sql

    status.Text = "six";

    if (FileUpload1.HasFile) //checks if image is choosen

    {

        status.Text = "seven";

        string path = Server.MapPath("~/appdocs/");

        status.Text = "one";

        if (FileUpload1.HasFile)

        {

            status.Text = "eight";

            string ext = System.IO.Path.GetExtension(FileUpload1.PostedFile.FileName);

            FileUpload1.SaveAs(path + DateTime.Now.Year.ToString() + adhartxt.Text + ext);

            sqlconn.Open();

            string filepn = path + DateTime.Now.Year.ToString() + adhartxt.Text + ext;
```

```
SqlCommand cmd2 = new SqlCommand("insert into cantbl" +  
"(id,name,father,occupation,course,courseyear,pcourse,pcourseyear,pcoursemarks,sslc,pu,institute,totalfee,balancefee,aadhar,year,doc,email,type,stat,income)" +  
"values(@aadhar,@name,@father,@occupation,@course,@courseyear,@pcourse,@pcourseyear,@pcoursemarks,@sslc,@pu,@institute,@totalfee,@balancefee,@aadhar,@year,@doc,@email,@stat,@income)", sqlconn);  
  
cmd2.Parameters.AddWithValue("@type", 'F');  
cmd2.Parameters.AddWithValue("@stat", "Unapproved");  
cmd2.Parameters.AddWithValue("@income", txtincom.Text);  
cmd2.Parameters.AddWithValue("@name", nametxt.Text);  
cmd2.Parameters.AddWithValue("@father", fathertxt.Text);  
cmd2.Parameters.AddWithValue("@occupation", occupationtxt.Text);  
cmd2.Parameters.AddWithValue("@course", ddlcourse.SelectedItem.Text);  
cmd2.Parameters.AddWithValue("@courseyear", ddlcourseyear.SelectedItem.Text);  
cmd2.Parameters.AddWithValue("@pcourse", ddlprecourse.SelectedItem.Text);  
cmd2.Parameters.AddWithValue("@pcourseyear", ddlprecourseyear.SelectedItem.Text);  
cmd2.Parameters.AddWithValue("@pcoursemarks", markstxt.Text);  
cmd2.Parameters.AddWithValue("@sslc", sslctxt.Text);  
cmd2.Parameters.AddWithValue("@pu", putxt.Text);  
cmd2.Parameters.AddWithValue("@institute", ddlcol.SelectedItem.Text);  
cmd2.Parameters.AddWithValue("@totalfee", feetxt.Text);  
cmd2.Parameters.AddWithValue("@balancefee", balancetxt.Text);  
cmd2.Parameters.AddWithValue("@aadhar", adhartxt.Text);  
cmd2.Parameters.AddWithValue("@year", DateTime.Now.Year.ToString());  
cmd2.Parameters.AddWithValue("@doc", filepn.ToString());  
cmd2.Parameters.AddWithValue("@email", emailtxt.Text);  
cmd2.ExecuteNonQuery();  
sqlconn.Close();  
  
lblname.Text = nametxt.Text;  
lbladhar.Text = adhartxt.Text;  
lblgen.Text = rdlgen.SelectedItem.Text;  
lbldob.Text = dobtxt.Text;
```

```
lblrel.Text = ddlreligion.SelectedItem.Text;
lblcaste.Text = ddlcaste.SelectedItem.Text;
lblocc.Text = occupationtxt.Text;
lblincome.Text = txtincom.Text;
lblmother.Text = txtmother.Text;
lblfather.Text = fathertxt.Text;
lblcol.Text = ddlcol.SelectedItem.Text;
lblcourse.Text = ddlcourse.SelectedItem.Text;
lblcourseyear.Text = ddlcourseyear.SelectedItem.Text;
lblprecourse.Text=ddlprecourse.SelectedItem.Text;
lblprecourseyear.Text = ddlprecourseyear.SelectedItem.Text;
lblmarks.Text = markstxt.Text;
lblbal.Text = balancetxt.Text;
lblacname.Text=txtaccname.Text;
lblaccno.Text = txtaccno.Text;
lblbranch.Text = txtbranch.Text;
lblbank.Text = txtbank.Text;
lblifsc.Text = txtifsc.Text;
lblmob.Text = txtmob.Text;
lblemail.Text = emailtxt.Text;
lblsslct.Text = sslctxt.Text;
lblpu.Text = putxt.Text;
lbldoor.Text = txtdoor.Text;
lblarea.Text = txtarea.Text;
lblstreet.Text = txtstreet.Text;
lblcity.Text = txtcity.Text;
lblpin.Text = txtpin.Text;
Response.Write("<script> alert('Hoga re'); </script>");
status.Text = "nine";
form.Visible = true;
Response.ContentType = "Application/pdf";
```



```
Response.AddHeader("Content-Disposition", "attachment;filename=YourFilename.pdf");

Response.Cache.SetCacheability(HttpCacheability.NoCache);

StringWriter sw = new StringWriter();

HtmlTextWriter hw = new HtmlTextWriter(sw);

form.RenderControl(hw);

StringReader sr = new StringReader(sw.ToString());

Document doc = new Document(PageSize.A4, 25f, 25f, 15f, 15f);

PdfWriter pdfwr= PdfWriter.GetInstance(doc, Response.OutputStream);

HtmlPipelineContext hc = new HtmlPipelineContext(null);

hc.SetTagFactory(Tags.GetHtmlTagProcessorFactory());

ICSSResolver cssResolver = XMLWorkerHelper.GetInstance().GetDefaultCssResolver(false);

cssResolver.AddCssFile(Server.MapPath("~/css/form.css"), true);

IPipeline pipeline = new CssResolverPipeline(cssResolver, new HtmlPipeline(hc, new
PdfWriterPipeline(doc, pdfwr)));

var worker = new XMLWorker(pipeline, true);

var xmlParse = new XMLParser(true, worker);

doc.Open();

xmlParse.Parse(sr);

xmlParse.Flush();

doc.Close();

Response.Cache.SetCacheability(HttpCacheability.NoCache);

Response.Write(doc);

Response.End();

}

status.Text = "ten";

}

else

{

Response.Write("<script>alert('Please upload your file')</script>");

docsec.Visible = true;

Button1.Visible = true;
```

```
        adhartxt.ReadOnly = true;

        emailtxt.ReadOnly = true;

        nametxt.ReadOnly = true;

        Panel1.Visible = false;

        v.Visible = true;

        tick.Visible = true;

        tick.Width = 75;

    }

    docsec.Visible = false;

    Button1.Visible = false;

    adhartxt.ReadOnly = false;

    emailtxt.ReadOnly = false;

    nametxt.ReadOnly = false;

    Panel1.Visible = false;

    v.Visible = false;

    tick.Visible = false;

    form.Visible=false;

}

public override void VerifyRenderingInServerForm(Control control)

{

    /* Confirms that an HtmlForm control is rendered for the specified ASP.NET

        server control at run time. */

}

}
```

## ADMIN FRESH ASPX

```

<%@ Page Title="" Language="C#" MasterPageFile="~/admin/adminmaster.master"
AutoEventWireup="true" CodeFile="adminfresh.aspx.cs" Inherits="adminfresh" %>

<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="Server">
<style type="text/css">
    .valid{
        background-color:#BCD7AF;
    }
    .valid:hover {
        background-color: #2196F3;
        color:white;
    }
    .invalid{

        background-color:#F5B4A4;
    }
    .invalid:hover {
        background-color: #2196F3;
        color:white;
    }
    .n{

        background-color:white;
    }
    .n:hover {
        background-color: #2196F3;
        color:white;
    }
    .auto-style3 {
        width: 100%;
    }
    .auto-style4 {
        width: 338px;
    }
    .auto-style5 {
        text-align: center;
        margin-right: 12%;
        margin-left: 40px;
    }
</style>
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="Server">
    <div class="auto-style5">
        <asp:Button ID="Button3" runat="server" Text="Search" CssClass="srch"
OnClick="Button3_Click" />

        <br />
        <asp:Label ID="Label3" runat="server" Text="Search Results..."></asp:Label>
    </div>

    <br />
    <table class="auto-style3" style="width:50%">
        <tr>
            <td class="auto-style4" >
                <asp:TextBox runat="server" style="resize:none;border-radius:5px;padding:5px;"
ID="review" TextMode="MultiLine" Height="131px" Width="366px"></asp:TextBox></td>
                <td style="margin:20%;"><asp:Button ID="Button4" runat="server"
CssClass="butr" Text="Update Review" OnClick="Button4_Click" Width="103px" />
            </td>
        </tr>
    </table>

```

```

</table>
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CssClass="grid" AllowSorting="True" Width="100%" AutoGenerateColumns="False"
CellPadding="2" DataKeyNames="aadhar" GridLines="None"
OnRowCommand="GridView1_RowCommand1" OnRowEditing="GridView1_RowEditing"
OnRowCancelingEdit="GridView1_RowCancelingEdit" OnRowUpdating="GridView1_RowUpdating1"
HorizontalAlign="Left" OnRowDataBound="GridView1_RowDataBound"
OnSelectedIndexChanged="GridView1_SelectedIndexChanged"
OnPageIndexChanging="GridView1_PageIndexChanging" OnSorting="GridView1_Sorting">
    <Columns>
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ShowSelectButton="True" > <ControlStyle Width="20px" Height="20px" />
        </asp:CommandField>
        <asp:TemplateField>
            <ItemTemplate>
                <asp:HiddenField ID="HiddenField1" runat="server"
                    Value='<%# Eval("review") %>' />
            </ItemTemplate>
        </asp:TemplateField>
        <asp:BoundField DataField="name" HeaderText="Student Name"
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            <ItemStyle Width="150px"></ItemStyle>
        </asp:BoundField>
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        </asp:BoundField>
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        <asp:BoundField DataField="pcourse" HeaderText="Previously Studied"
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        <asp:BoundField DataField="pcourseyear" HeaderText="Completed Class"
SortExpression="pcourseyear" />

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%>'></asp:Label>
            </ItemTemplate>
        </asp:TemplateField>

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        <asp:BoundField DataField="pu" HeaderText=" PU(%) " SortExpression="pu"
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        </asp:BoundField>
        <asp:BoundField DataField="institute" HeaderText="Institute"
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        <asp:BoundField DataField="totalfee" HeaderText="totalfee"
SortExpression="totalfee" Visible="false" />
        <asp:TemplateField ItemStyle-Width="100px" HeaderText="Fee Balance">
            <ItemTemplate>

```

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## **8.SCREENSHOTS**

Untitled Diagram - diagrams.net | WhatsApp | sync - Google Drive | Reddit - Dive into anything | Telegram Web | localhost:64097/admin/adm... x + -

localhost:64097/admin/adminapprov.aspx

BCU | movies | Social Community | Google | pgcet | Code Practice | WebDev Material | Udem... | Karnataka PGCET M... | Bangalore Main Din... | My Downloaded So... | Home - arentoine/g...

**aatsADMIN** Search

Fresh Renewal **Approved** Sanctioned Notification Space

Search

ID	Student Name	Father	Occupation	Course	Class/Sem	Previously Studied	Completed Class	Marks Secured(%)	SSLC(%)	PU(%)	Institute	Fee Balance	Income	Year	Type	Sanction Amount
2022433581212	Ali	Syed	Business	BCA	2	BCA	1	60	56	67	Government College	341992	342424	2022	F	80

report-content.docx | report-anas.docx | Final record.docx | Show all x

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Untitled Diagram - diagrams.net | WhatsApp | sync - Google Drive | Reddit - Dive into anything | Telegram Web | localhost:64097/admin/adm... x + -

localhost:64097/admin/adminrenew.aspx

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**aatsADMIN** Search

Fresh **Renewal** Approved Sanctioned Notification Space

Search

ID	Student Name	Father	Occupation	Course	Class/Sem	Previously Studied	Completed Class	Marks Secured(%)	Institute	Fee Balance	Income	Year	Aadhar ID	Type
20224344847421	Mohammed Sana	Akram	IT	PU	2	PU	1	23	Government PUC	212802	31213	2022	123443237421	R
20222330983876	Joy	Bejoy	Police	BCA	3	BCA	2	58	RITC IT College	45997	34234	2022	435765123876	R
20221194018493	Ajay	Vijay	Business	School(SSLC & below)	Class 8	School(SSLC & below)	Class 7	88	AKJ PU College	231110	121313	2022	444555538493	R







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localhost:64097/admin/adminnote.aspx

BCU movies Social Community Google pgcet Code Practice WebDev Material Udemey Karnataka PGCE M... Bangalore Main Din... My Downloaded So... Home - arentoine/g...

**aatsADMIN** Search

Fresh Renewal Approved Sanctioned **Notification** Space

sno	note	date	
16	Scholarship will Begin from 24-07-2022	29-07-2022	 
17	Document List Updated	01-08-2022	 
18	Please Submit Your Form offline	03-08-2022	 

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ENG IN 01:16 09-08-2022

localhost:64097/admin/adminsanction.aspx

BCU movies Social Community Google pgcet Code Practice WebDev Material Udemey Karnataka PGCE M... Bangalore Main Din... My Downloaded So... Home - arentoine/g...

**aatsADMIN** Search

ID	Student Name	Father	Occupation	Course	Class/Sem	Previously Studied	Completed Class	Marks Secured	SSLC(%)	PU(%)	Institute	Fee Balance	Year	Type	Sanctioned Amount	
2022815432	xczcvvcsda	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	fgfdgdfg	2346
123123123121	Mohammed Anas	dfs	Business	School(SSLC & below)	Class 2	BCA	1	23			Collegename-area1-area2-city-state-karnataka	41000	2022		45000	
234234765345	dasdasd	dsadsad	Business	BCA	--Select Course year--	BCA	--Select Course year--	55			Collegename-area1-area2-city-state-karnataka	41000	2022	R	45000	
2022551165345	Hajam	hijam	Business	BCA	2	School(SSLC & below)	Class 2	23			Collegename-area1-area2-city-state-karnataka	45997	2022	R	45000	
20221194018493	sdsad	dsadsad	dsadd	School(SSLC & below)	Class 1	BCA	1	43	43	43	Collegename-area1-area2-city-state-karnataka	231110	2022			
20222330983876	Mohammed Anas	fafafs	Business	BCA	--Select Course year--	PU	--Select Course year--	23			Collegename-area1-area2-city-state-karnataka	45997	2022			
20224344847421	Mohammed Anas	Alaudeen	dsfsf	PU	2	BCA	2	23	34	43	Collegename-area1-area2-city-state-karnataka	212802	2022			
20227921421581	student 1	dwasdsad	dawdsda	BCA	3	BCA	1	34	433	32	Collegename-area1-area2-city-state-karnataka	4300	2021		5000	
20228059693453	Mohammed Anas	dsadad	dsadsad	BCA	2	BCA	2	23	323	3232	Collegename-area1-area2-city-state-karnataka	45966	2022		34	
20228228607385	gafgafdg	gafgag	gafgag	School(SSLC & below)	Class 2	BCA	2	43	43	43	Collegename-area1-area2-city-state-karnataka	42389300	2022		10000	
20228550661212	raziq	sdasd	Business	BCA	--Select Course year--	BCA	--Select Course year--	34			Collegename-area1-area2-city-state-karnataka	341992	2022		36	
20229274437654	Mohammed dd	dsadsad	Business	PU	--Select Course year--	BCA	--Select Course year--	75			Collegename-area1-area2-city-state-karnataka	45957	2022		20000	

excel Renew Application

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Browser tabs: Untitled Diagram - diagrams.net, WhatsApp, sync - Google Drive, Reddit - Dive into anything, Telegram Web, localhost:64097/admin/adm...

Browser address bar: localhost:64097/admin/admspace.aspx

Browser bookmarks: BCU, movies, Social Community, Google, pgcet, Code Practice, WebDev Material, Udemu, Karnataka PGCET M..., Bangalore Main Din..., My Downloaded So..., Home - arentoine/g...

**aatsADMIN**

Navigation: Fresh, Renewal, Approved, Sanctioned, Notification, Space

Search:

Buttons: Allow Application Page, Restrict Application Page

System tray: 23°C Partly cloudy, Windows taskbar icons, ENG IN, 01:17 09-08-2022

Browser tabs: Untitled Diagram - diagrams.net, WhatsApp, sync - Google Drive, Reddit - Dive into anything, Telegram Web, localhost:64097/fresh.aspx

Browser address bar: localhost:64097/fresh.aspx

Browser bookmarks: BCU, movies, Social Community, Google, pgcet, Code Practice, WebDev Material, Udemu, Karnataka PGCET M..., Bangalore Main Din..., My Downloaded So..., Home - arentoine/g...

**Validation Errors:**

- The field with \* mark needs to be filled.Please try again.
- Enter Income Field Correctly.
- Please Enter a valid Aadhar ID.
- Please Enter Fee details correctly.

**GENERAL**

Name: \*

Gender: \* ☐ Male ☐ Female ☐ Others

DOB:

Religion:

Category:

Father Name: \*

Mother Name:

Income: \*

Occupation: \*

Aadhaar: \*

**ACADEMICS**

Institute: \*

System tray: 23°C Partly cloudy, Windows taskbar icons, ENG IN, 01:18 09-08-2022

localhost:64097/fresh.aspx

Please Enter a valid E-mail ID.


### ADDITIONAL INFORMATION

Mobile:  E-mail: \*

Door No:  Street:  Area:  City:  Pincode:

Completed SSLC\* ☒ Yes ☐ No

Completed PUC\* ☒ Yes ☐ No



### Verification

We will send you a One Time Password on your E-mail

OTP

Didn't receive the verification OTP? [Resend again](#)

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localhost:64097/fresh.aspx


### ADDITIONAL INFORMATION

Mobile:  E-mail: \*

Door No:  Street:  Area:  City:  Pincode:

Completed SSLC\* ☒ Yes ☐ No

Completed PUC\* ☒ Yes ☐ No



Verified!!!

### DOCUMENTS

A Letter from the Applicant in His/Her own handwriting justifying the need for scholarship

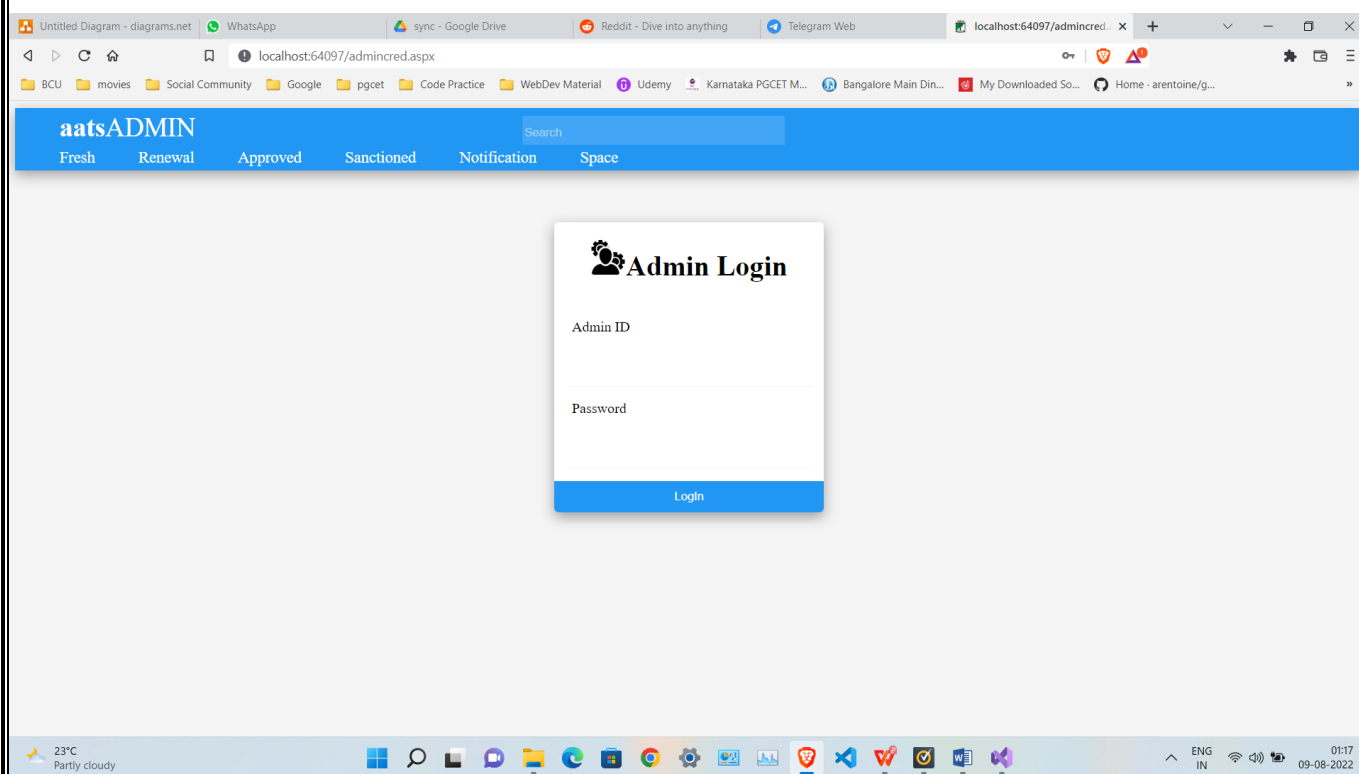
Mark Sheets of SSLC,PUC & DEGREE(based on your current studies)  No file chosen

Fee structure/Demand note from the college

Proof of Residence(Rent Receipt/Aadhaar/College ID,etc)

\*Please upload the above documents as a single pdf

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# **9.TESTING**

## 9.1 INTRODUCTION

Testing is the process of executing a program with the aim of finding errors. To make our software perform well it should be error-free. If testing is done successfully it will remove all the errors from the software.

## 9.2 PRINCIPLES OF TESTING

- i. All the test should meet the customer requirements
- ii. To make our software testing should be performed by a third party
- iii. Exhaustive testing is not possible. As we need the optimal amount of testing based on the risk assessment of the application.
- iv. All the test to be conducted should be planned before implementing it
  - v. It follows the Pareto rule (80/20 rule) which states that 80% of errors come from 20% of program components.
- vi. Start testing with small parts and extend it to large parts.

## 9.3 TYPES OF TESTING

### 1. Unit Testing

It focuses on the smallest unit of software design. In this, we test an individual unit or group of interrelated units. It is often done by the programmer by using sample input and observing its corresponding outputs.

### 2. Integration Testing

The objective is to take unit tested components and build a program structure that has been dictated by design. Integration testing is testing in which a group of components is combined to produce output.

Integration testing is of four types: (i) Top-down (ii) Bottom-up (iii) Sandwich (iv) Big-Bang

### 3. Regression Testing

Every time a new module is added leads to changes in the program. This type of testing makes sure that the whole component works properly even after adding components to the complete program.

#### 4. Smoke Testing

This test is done to make sure that software under testing is ready or stable for further testing. It is called a smoke test as the testing an initial pass is done to check if it did not catch the fire or smoke in the initial switch on.

#### 5. Alpha Testing

This is a type of validation testing. It is a type of acceptance testing which is done before the product is released to customers. It is typically done by QA people.

#### 6. Beta Testing

The beta test is conducted at one or more customer sites by the end-user of the software. This version is released for a limited number of users for testing in a real-time environment

#### 7. System Testing

This software is tested such that it works fine for the different operating systems. It is covered under the black box testing technique. In this, we just focus on the required input and output without focusing on internal working.

In this, we have security testing, recovery testing, stress testing, and performance testing

#### 8. Stress Testing

In this, we give unfavorable conditions to the system and check how they perform in those conditions.

#### 9. Performance Testing

It is designed to test the run-time performance of software within the context of an integrated system. It is used to test the speed and effectiveness of the program. It is also called load testing. In it we check, what is the performance of the system in the given load.

#### 10. Object-Oriented Testing

This testing is a combination of various testing techniques that help to verify and validate object-oriented software. This testing is done in the following manner:

- Testing of Requirements,
- Design and Analysis of Testing,
- Testing of Code,
- Integration testing,
- System testing,
- User Testing.

#### 11. White box testing

White box testing Is a testing case design method that uses the control structure of the procedure design to derive test cases. All independent path in a module are exercised at least once, all logical decisions are exercised at once, execute all loops at boundaries and within their operational bounds

exercise internal data structure to ensure their validity. Here the customer is given three chances to enter a valid choice out of the given menu. After which the control exits the current menu.

## 12.Black box testing

Black box testing attempts to find errors in following area or categories, incorrect or missing functions, interface error, errors in data structures, performance error and initialization and termination error. Here all the input data must match the data type to become a valid entry.

## 9.4 TEST CASES

### FRESH FORM PAGE:

SLNO	Action	Validation	Expected result	Outcome
1	OTP Button	Correct E-mail	Message 'Sent Successfully'	True
2		Invalid E-mail	Display Error Message	True
3	Verify Button	Incorrect Input Format or empty Field	Display Format Error	True
4		Correct OTP	Show Successful verification Message	True
5		Incorrect OTP	Error message 'Entered OTP is Incorrect.'	True
6	Page Load	Check if Status is Disabled	Redirect to Homepage	True
7	Submit Button	If Upload is successful	Carry out SQL queries	True
8		If Upload is empty	Display Message 'Please upload your file'	True

### HOME PAGE:

SLNO	Action	Validation	Expected result	Outcome
1	Page Load	If Website is Closed	Display Message 'Website Closed'	True

### ADMIN RENEWAL PAGE:

SLNO	Action	Validation	Expected result	Outcome
1	Page Load	If Admin Not Logged In	Redirect to Deny Page to show Restriction	True
2	Approve Button		Carry out SQL queries	True
3	Deny Button		Redirect to Rejection Page	True

4	PDF Button		Show PDF documents	True
5	Search Button	If Search Bar is empty	Show complete table	True
6		If Search Bar matches any key column data	Show matched Data Row	True
7		If Search does not match	Show no Table	True
8	Review Button		Update Selected Row Review	True

**SANCTION PAGE:**

SLNO	Action	Validation	Expected result	Outcome
1	Page Load	If Website is Closed	Redirect to Deny Page to show Restriction	True
2	Excel Button		Generate Excel file	
3	Renew Button		Make Renewal Candidates	
4	Search Button	If Search Bar is empty	Show complete table	True
5		If Search Bar matches any key column data	Show matched Data Row	True
6		If Search does not match	Show no Table	True



# **10.CONCLUSION**

## **ON A FINAL NOTE:**

- Ease of access to information.
- Ease of use
- Minimize the amount of paperwork required.
- Quick processing
- Data is organized
- Backup can be made when required.
- Reduce manual work
- Keep the process clean
- Online contact with authority

# **11.FUTURE ENHANCEMENT**

## **FUTURE PROSPECTS:**

- Accept variety of scholarship schemes
- Create Dynamic Webpage generation for every year
- Make Sanctioned amount transfer online
- Multi-Platform
- Stable Responsive Website with all devices

## **12.BIBLIOGRAPHY**

We were able successfully complete this project only due to ease of information access from the internet. Internet truly connects us together. Following are links listed out which made it possible for our team to complete the project in give time:

- <https://www.google.com/>
- <https://www.youtube.com/>
- <https://www.mockplus.com/blog/post/table-ui-design-examples>
- <https://www.flaticon.com/>
- <https://fonts.google.com/>
- <https://stackoverflow.com/>
- <https://www.codeproject.com/>