SCHOLARSHIP MANAGEMENT SYSTEM

Mini Project 2022

Done By

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DECLARATION

I undersigned hereby declare that the project report **"SCHOLARSHIP MANAGEMENT SYSTEM"** , submitted for partial fulfillment of the requirements for the award of degree of Master of Computer Applications of the APJ Abdul Kalam Technological University Kerala is a bonafide work done by me under supervision of PG Dean Dr. Shreelekshmi R. This submission represents my ideas in my words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity as directed in the ethics policy of the college and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title.

Place : Trivandrum **ADITHYA A V**
Date : 22-11-2022

ABSTRACT

Scholarship Management System is a software developed for managing various types of scholarship in College of Engineering Trivandrum. The proposed system has been designed to replace the existing manual system and is user friendly. This will reduce the human effort and human errors. The proposed system is a website developed for collge students. There are many scholarships offered by the government and other organizations and also the alumini association .But all students are not aware of many of them and its procedures and eligibility. Scholarship management system is developed for managing students scholarship details. By using this website students can easily know about scholarships . The scholarship officer or the admin can upload the eligibility criteria and the details regarding to the scholarships. Students can view the details and find out the links for application.

ACKNOWLEDGEMENT

If words are considered as symbols of approval and tokens of acknowledgement, then let words play the heralding role of expressing our gratitude.

First of all I would like to thank God almighty for bestowing with wis- dom,courage and perseverance which had helped to complete this project AI Music Composer. This project has been a reality as a result of the help given by a large number of personalities.

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ADITHYA A V

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Chapter 1

Introduction

1.1 ABOUT THE PROJECT

The aim of this project is to computerize the operation of the available SCHOLARSHIPS in the college. It is very difficult to manage all the works manually. There may have many problems in accuracy, managing information etc. The proposed system has been designed to replace the existing manual system and is user friendly.

1.1.1 THE PURPOSE AND SCOPE

The main objective of the proposed system is to eliminate the limitations of the existing manual system. Most of the limitations of the existing system can be overcome by the proposed system. Speed and accuracy are the main advantages of proposed system. There is no redundancy of data. Since all the details are stored in computer searching time can be reduced. The information can be more secure because the computer systems are more secure. The proposed system eliminates the drawbacks of the existing system to a great extent and it provides security of data.

Chapter 2

Requirement Analysis

Requirements specification is the starting step for the development activities. It is currently one of the weak areas of software engineering. During requirement specification, the goal is to produce a document of the client's requirements. This document forms the basis of development and software validation. The basic reason for the difficulty in software requirements specification comes from the fact that there are three interested parties- the client, the end users and the software developer

2.1 Purpose

The origin of most software system is in the need of a client, who either want to automate an existing manual system or desires a new software system. The software system itself is created by the developer. Finally, the completed system will be used by the end users. Thus, there are three major parties interested in a new system: the client, the users and the developer. A basic purpose of software requirements specification is to bridge the communication gap. SRS is the medium through which the client and user needs are accurately specified; indeed SRS forms the basis of software development. A good SRS should satisfy all the parties- something very hard to achieve-and involves trade-offs and persuasion.

2.2 Scope

This system has developed to automate the scholarship processes that are running in the college. This includes student details, details of the scholarship and the links to apply. The students can also view the scholarships for which they are eligible.

2.3 Hardware requirements

- Processor:Intel core i5
- Storage:512 GB SSD

- Memory:8 GB RAM

2.4 System requirements

The systems intended behaviour is defined by functional requirements. Tasks or functions that the specified system is supposed to do can be used to describe this behaviour. The parts of the proposed system are as follows. They are given below:

- React: React is a JavaScript-based UI development library. Facebook and an open-source developer community run it. Although React is a library rather than a language, it is widely used in web development. The library first appeared in May 2013 and is now one of the most commonly used frontend libraries for web development.

  React offers various extensions for entire application architectural support, such as Flux and React Native, beyond mere UI.

- Firebase: Firebase is a mobile application development platform from Google with powerful features for developing, handling, and enhancing applications. Firebase is a backend platform for building web and mobile applications. It is fundamentally a collection of tools developers can rely on, creating applications and expanding them based on demand.

- Dialogflow: Dialogflow is a natural language understanding platform that makes it easy to design and integrate a conversational user interface into your mobile app, web application, device, bot, interactive voice response system, and so on. Using Dialogflow, you can provide new and engaging ways for users to interact with your product.

  Dialogflow can analyze multiple types of input from your customers, including text or audio inputs (like from a phone or voice recording). It can also respond to your customers in a couple of ways, either through text or with synthetic speech.

- Kommunicate: Kommunicate is a customer support automation platform that will help you build your own AI chatbot that can qualify leads, schedule meetings, and support your customers 24/7. The way customer conversations and support are happening is broken, redundant, and time and cost-inefficient.

2.5 Non Functional requirements

Non functional requirements are the quality requirements that the system must meet in order to fulfill the project contract. non behavioural requirements are another name for them.

2.5.1 Performance Requirements

- Portability: As this is a mobile application it will be available for a vast majority of students.
- Usability: The system must be simple to use and comprehend. This software will be simple to use and uses will be able to access all of the app features without difficulty.
- Privacy: The application must ensure that no personal profile information is shared with other users. only relevant and required information should be accessible.
- Performance: The app should respond to users in a considerable time window. it should not be too slow or too fast for the users.
- Speed: the system must be capable of offering speed.
- Reliability: The program must be dependable in order to do its responsibilities.

2.5.2 Quality Requirements

- Scalability: The software will meet all of the functional requirements.
- Maintainability: The system should be maintainable. It should keep backups to atone for system failures and should log it's activities periodically.
- Availability: This system is easily available as the core equipment in building the application is easily obtained.
- Consistency: The data should be consistent and precise the system would need a stable internet connection to store and retrieve data from the database.
- High-Functionality: This system is highly functional in all environment since they are highly adaptable.

Chapter 3

Design And Implementation

The purpose of design phase is to plan a solution of the problem specified by the analysis phase. This phase is the first step in moving from the problem domain to solution domain.

3.1 Overall Design

The Sysetm Architecture of the proposed system gives an overall idea about the project.The proposed system includes modules such as Admin registration,student registration,add scholarship,check eligibility etc.

3.1.1 System Design

System design describes the desired features and operation in detail, including screen layouts, business rules, process diagrams, pseudo code and other documentation. In this phase, the software's overall structure and its nuances are defined. In terms of the client/server technology, the number of tiers needed for the package architecture, input design, output design, the database design, the data structure design etc are all defined in this phase. Analysis and design are very crucial in the whole development cycle. Any glitch in the design phase could be very expensive to solve in the later stage of the software development. So much care is taken during this phase. The logical system of the product and the physical characteristics of the system are designed during this phase. The operating environment is established, major resources. Everything requiring user input or approval must be documented and reviewed by the user. The physical characteristics of the system are specified and a detailed design is prepared.

3.1.2 Modules

The modules are:

- Admin
- Student

3.1.3 Admin Module

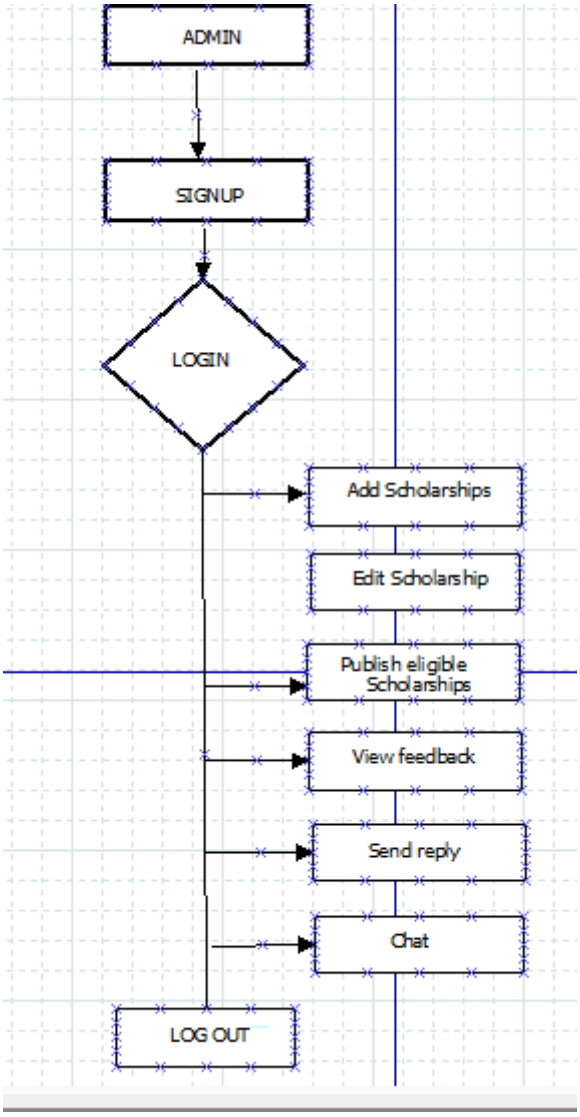

Figure 3.1: admin

3.1.4 Student(User) Module

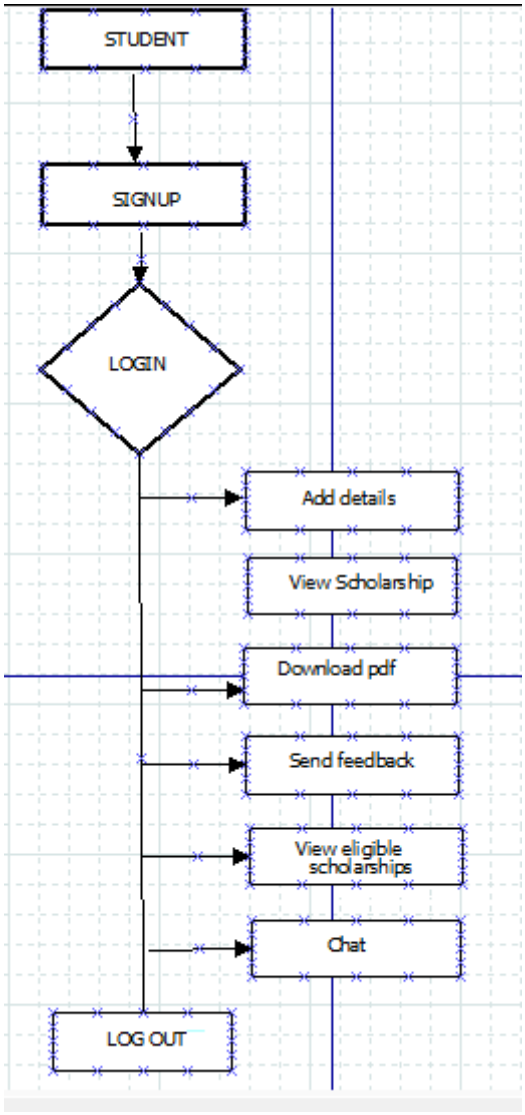

Figure 3.2: student

3.2 Data Flow Diagram

A data-flow diagram is a way of representing a flow of data through a process or a system. The DFD also provides information about the outputs and inputs of each entity and the process itself. A data-flow diagram has no control flow — there are no decision rules and no loops.

3.2.1 Level0

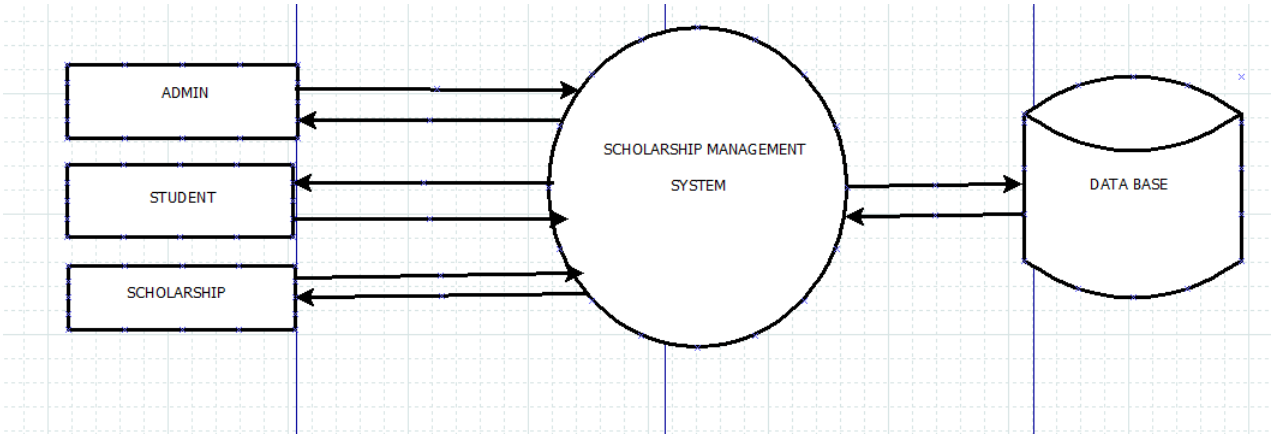

Figure 3.3: Level0 DFD

3.2.2 Level1

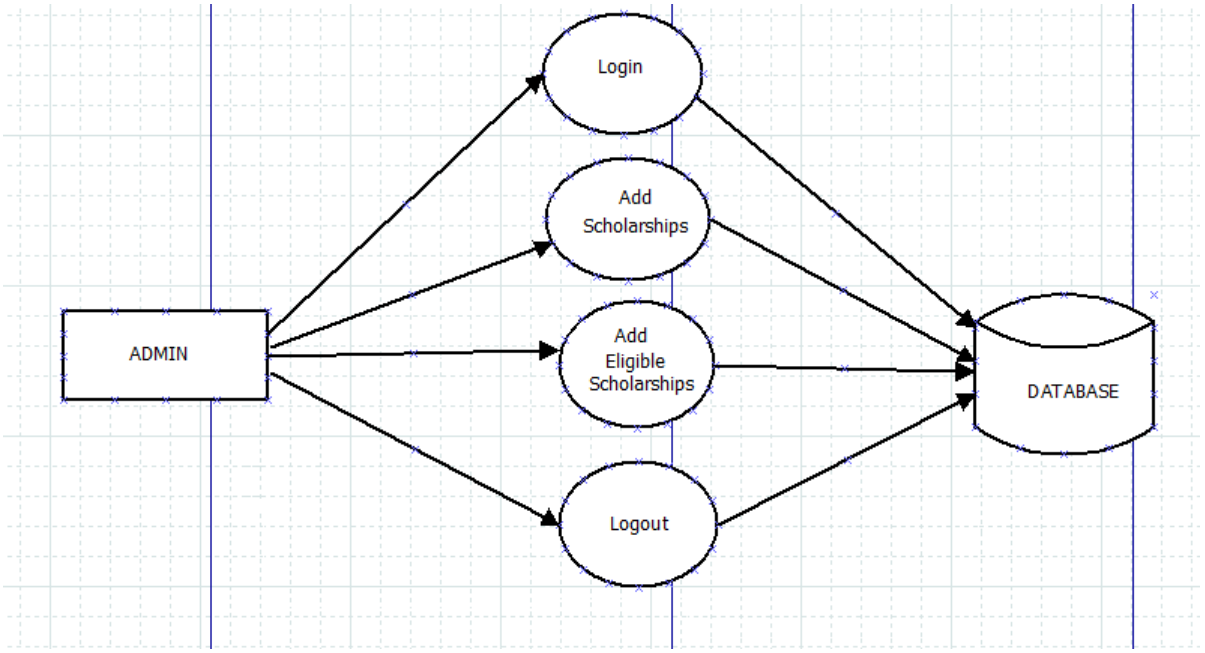

Figure 3.4: Level1 DFD

3.2.3 Level2

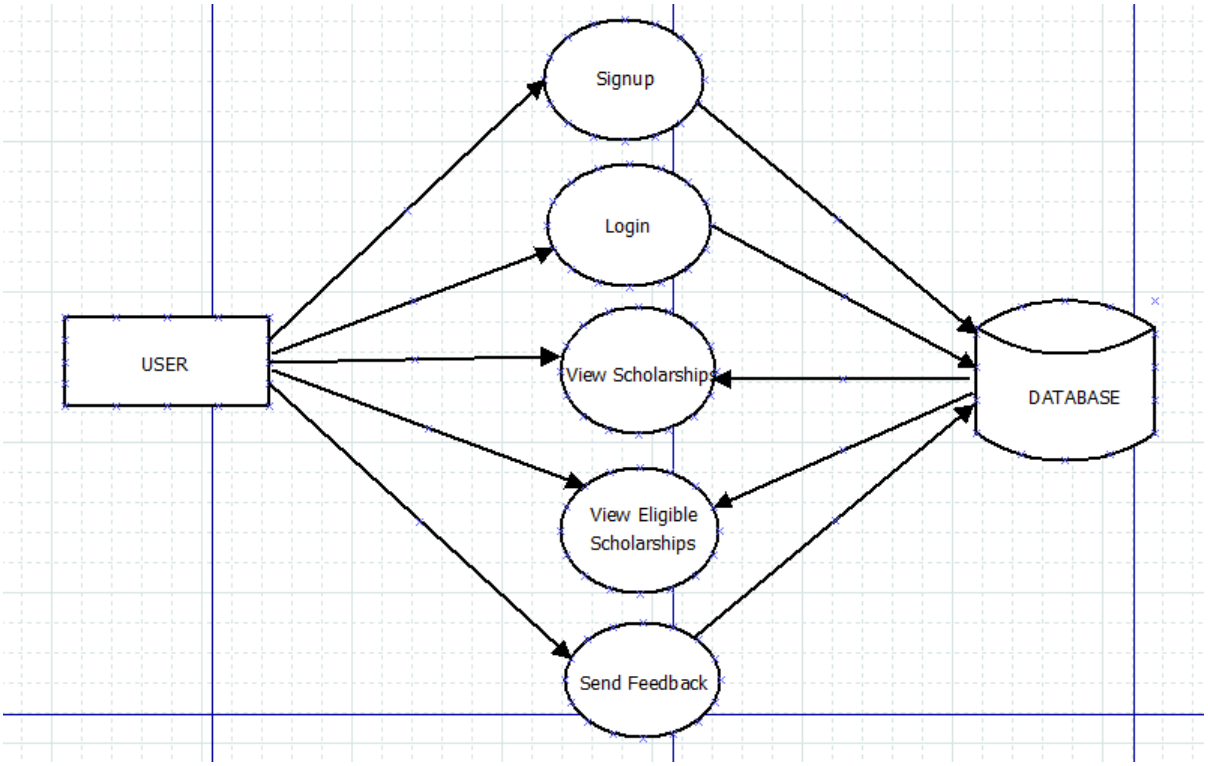

Figure 3.5: Level2 DFD

3.3 User Interface Design

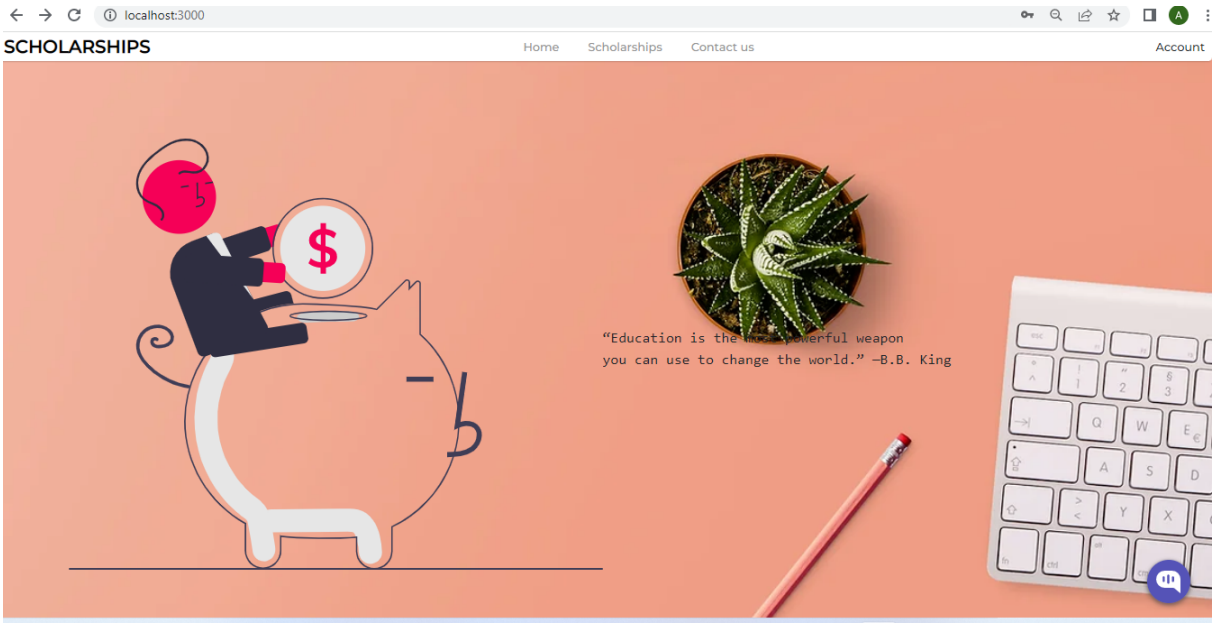

Figure 3.6: Home page

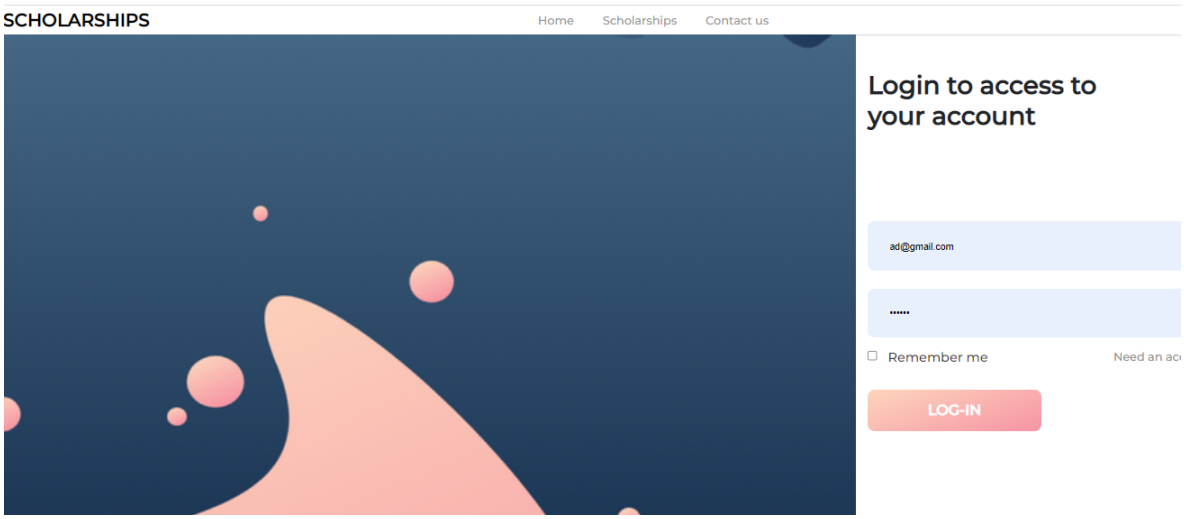

Figure 3.7: Login

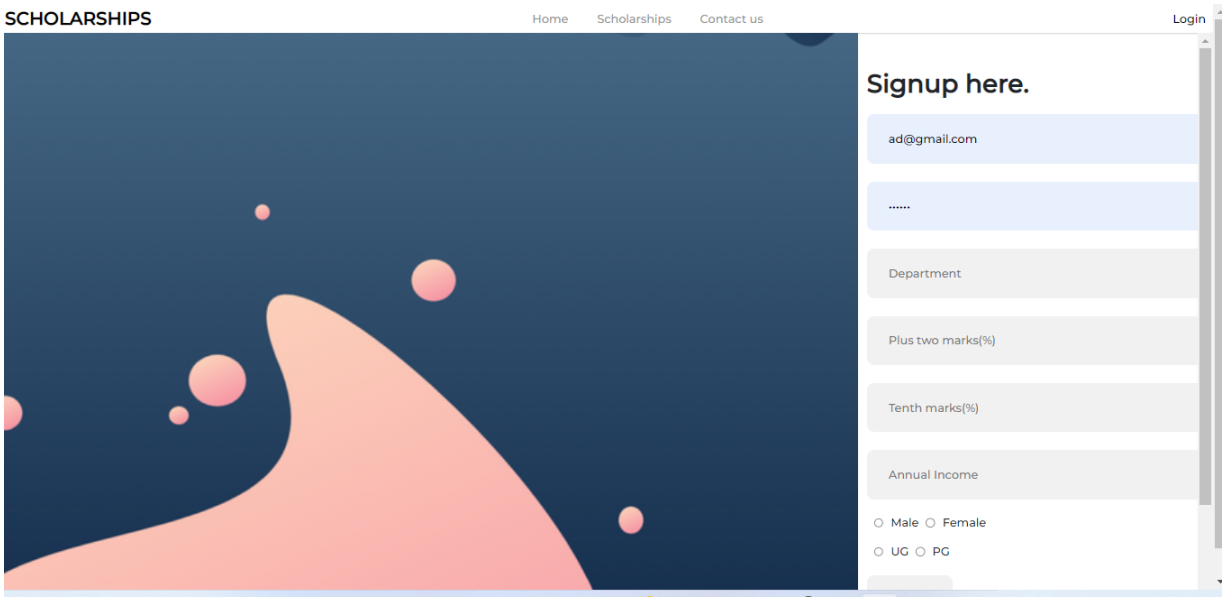

Figure 3.8: Signup

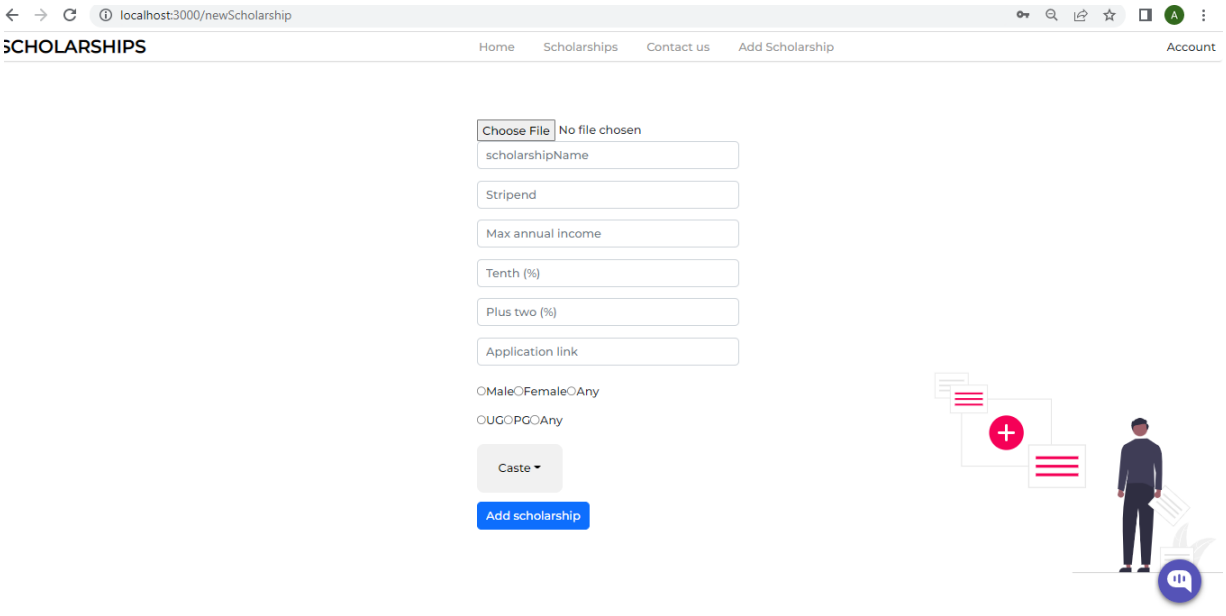

Figure 3.9: Add scholarships

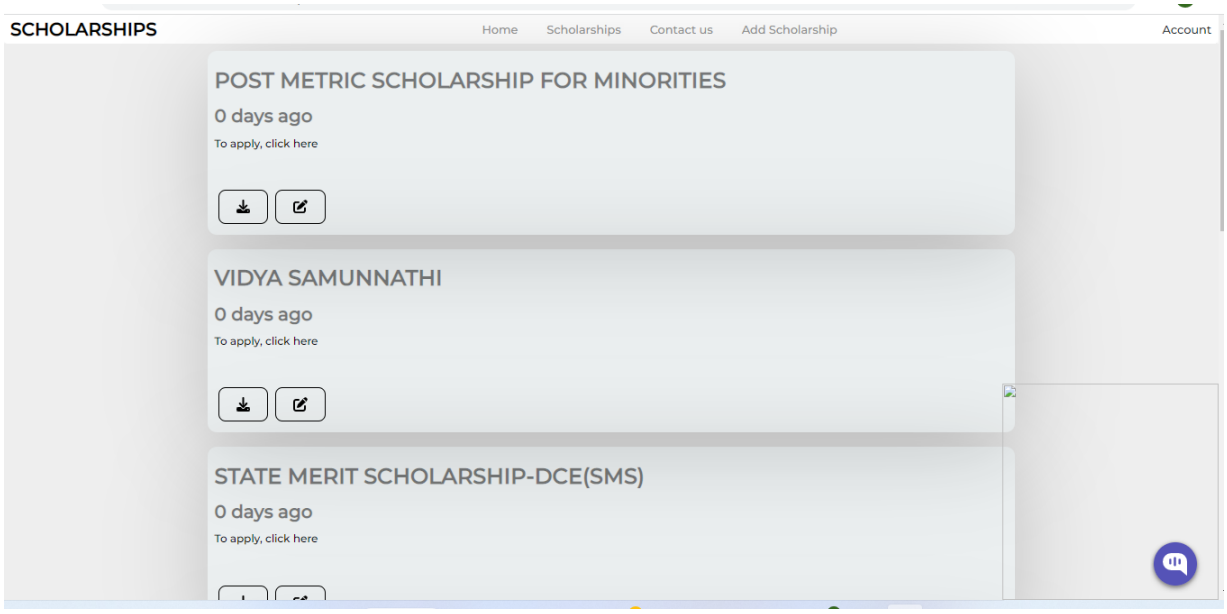

Figure 3.10: Scholarships

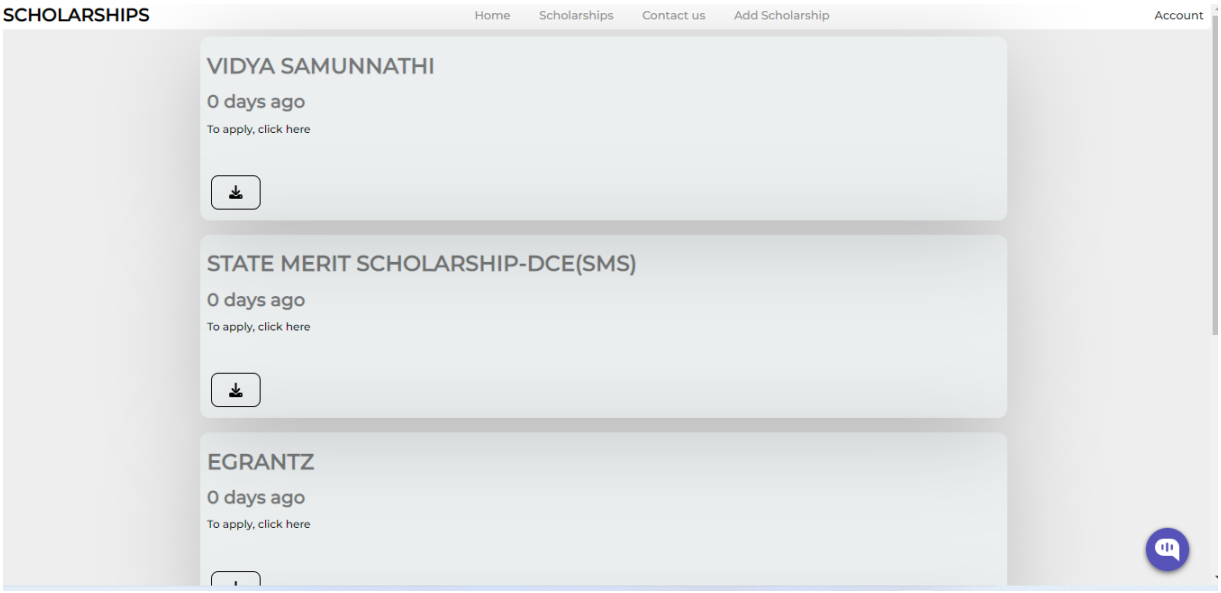

Figure 3.11: Eligible scholarships

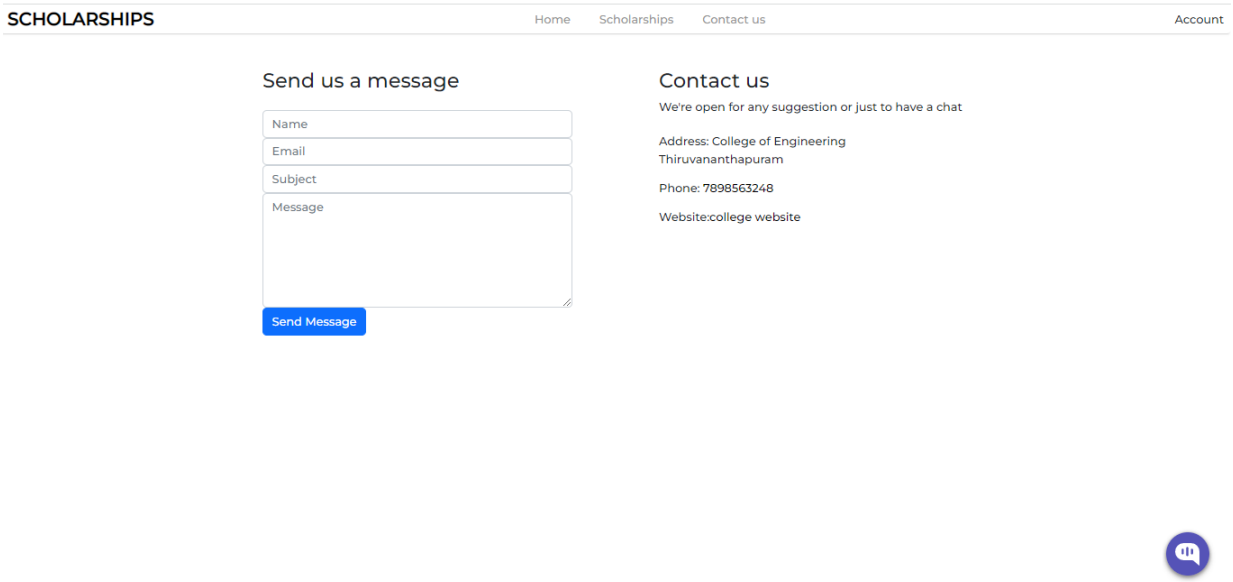

Figure 3.12: Feedback

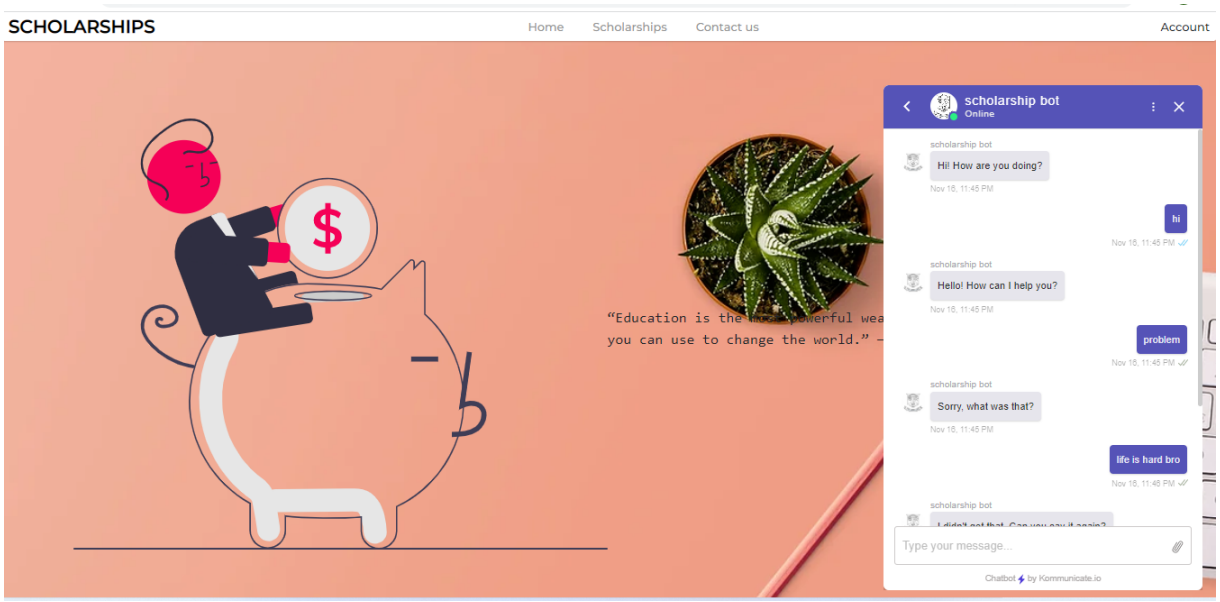

Figure 3.13: Chatbot

Chapter 4

Coding

Implementation is the stage of the project when the theoretical design is turned into a working system. The implementation stage is a system project in its own right. It includes careful planning, investigation of current system and its constraints on implementation, design of methods to achieve the changeover, training of the staff in the changeover procedure and evaluation of the changeover method.

Algorithm 1 User Registration :

1. Enter name, email, password and other details.
2. Check if valid.
3. Check if all fields are entered.
4. Register by clicking create signup button.

Algorithm 2 Login to the system :

1. Enter email and password.
2. Check if valid.
3. Check if all fields are entered.
4. Login by clicking create login button.

Algorithm 3 View scholarships :

1. Click on scholarship provide the list of all scholarships.
2. Click on eligible scholarship user can only see the eligible scholarships.

Algorithm 4 Add scholarships :

1. Admin can add the scholarships.
2.Eligibility criteria for the scholarship is also added .
3.Application link is provided.
4.User can download the document uploaded by the admin.

Algorithm 5 Feedback :

1. User send the feedback.
2. Usercan interact with admin through chatbot.

Chapter 5

Testing and Implementation

5.1 Testing Methods

Software testing is a critical element of software quality assurance and represents the ultimate review of specifications design and coding. Testing presents an interesting anomaly for the software. Testing is a quality measure process, which reveals the errors in the program. During testing, the program is executed with a set of test cases and the output of the program for the test cases is evaluated to determine if the program is performing as it is expected. Testing plays a very critical role in determining the reliability and efficiency of the software and it is a very important stage in software development.

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

5.1.1 Unit Testing

Sl No	Procedures	Expected result	Actual Result	Result
1	User Registration	User is registered	Same as expected	pass
2	Login	Invalid login is blocked	Same as expected	pass
3	Upload Sholarship	Scholarships uploaded	Same as expected	pass
4	View details of scholarship	Details page is shown	Same as expected	pass
5	View eligible scholarship	Details page is shown	Same as expected	pass

5.1.2 Integration Testing

Sl No	Procedures	Expected result	Actual Result	Result
1	View scholarships	Scholarships are displayed in home-page	Same as expected	pass
2	View eligible scholarships	User is able to check eligible list	Same as expected	pass

5.1.3 System Testing

The system testing is conducted on a complete, integrated system to evaluate the system's compliance with its specified requirement. It falls within scope of black box testing so no knowledge of inner design or logic is needed. As a rule, system testing takes, as its input, all of the integrated software components that have passed integration testing and also the software system itself integrated with any applicable hardware system. The purpose of the integration testing is to detect any inconsistencies between software units. System testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently before live operation commence. The logical design and the physical design should be thoroughly and continually examined on paper ensure that they will work when implemented.

5.2 Advantages and Limitations

The proposed method has more benefit than the current system. the proposed system save a huge amount of time. like every other system this system also have its on disadvantages. but they are negligible while comparing with the advantages and they can be overcame in future.

5.2.1 Advantages

- Reduce lack of awareness
- Quick access and processing.
- The system will reduce the amount of paper work require.

5.2.2 Limitations

- Awarded students list is not shown

5.3 Future Extensions if possible

This project has some future scope which will make it a lot more effective.We can update this project in future by adding more functionalities and modules. Make it as more interactive to the users and can also be done as a mobile application. One among them is that we can add more scholarships and publish the eligibe students . In future we can also develop this as a mobile application so that the users can use this in their own comfort.Scholarships offered by small organisations upto international level scholarships can be make as a part of this project.

Chapter 6

Conclusion

This it is better understood how the proposed system is better than the existing system. This system will help students to find out the scholarships and apply for them.Students can also identify the scholarships which they can apply for. This work is an initial step towards designing a better system for scholarship management in our college.

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Bibilography

6.1 Websites

- https://reactjs.org/
- https://www.w3schools.com/
- https://firebase.google.com/
- https://dashboard.kommunicate.io/conversations
- https://dialogflow.cloud.google.com/