

**SUBJECT TITLE: MINI PROJECT**

**SUBJECT CODE: IT8611**

**STUDENT QUERY SOLVING SYSTEM  
(SQSS)**

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# CHAPTER 1

## INTRODUCTION

In general, higher education institutions lack a specific student query system. Even though they have a distinct committee for student inquiries, getting in touch with them is difficult. We've put this process online to make it as simple as possible. Solving queries from leads and applicants can be a nightmare if you are not equipped to centralise them for multi-channel support. A manual data entry or a siloed departmental process makes it worse. NoPaperForms' Centralised Query Solving System offers a lightning fast way to reach out to your prospects. Especially to guide fresher's, we going to develop a web application called Student Query Solving System (SQSS). Student query solving system is a web application which also includes **chatbot** that tracks all of a student's troubles from day one to the completion of his/her course and may be used for all reporting purposes. The main algorithm that's used for making chatbots is the "Multinomial Naive Bayes" algorithm. It is used for text classification and natural language processing (NLP). The user will receive an automatic no-reply email as a response. In order to assist the anti-raging committee, we also categorize raging issues. The queries we receive in categories will be forwarded to the concern committee/authority as a notification mail for further action. The feeedback included to get valuable feedback from students. The candidates can rate the support received with a positive or a negative feedback and you can always reach out to them to understand their concerns better. This also helps you keep a track of how well you understand the type of student queries

### KEYWORDS:

- Chatbot
- Machine Learning
- Natural Language processing
- Multinomial Naive Bayes algorithm
- Query
- Query solving

## CHAPTER 2

### LITERATURE SURVEY

1. Tolga Yilmaz, Rifat Ozcan, Ismail Sengor Altingovde, Özgür Ulusoy. **“Improving educational web search for question-like queries through subject classification”**  
Author proposed to first implement a classifier for educational questions. This classifier is built by an [ensemble method](#) that employs several regular learning algorithms and retrieval based approaches that utilize external resources and also build a query expander to facilitate [classification](#).
2. Waldon Hendricks , W Hendricks **“The use of an Online Student Query System using an ITIL approach at CPUT, Department of Information Technology”**  
Author proposed as Student’s queries play a significant role in improving the service delivery for IT students at CPUT Department of Information Technology. It is imperative to know how to handle student requests efficiently. Currently student’s lodge their complaints, selecting from a list of topics their query gets captured, the student query might not get addressed on time or in a certain time frame to support ITIL-based continual service improvement.
3. Deepswariya Babu, Ayush Poddar, Neeraj Yadav **“Computer System, Data Management with Query Manager: Case Study for Query of the Students and Universities”** Author proposed as Student query System provides an interface for smooth response and maintenance of student query. University can use this for maintaining the data of the students in an easy manner. The conduction of accurate and updated data to a student’s query is critical and equally important in the educational institution towards academics, examination, and even general information.
4. Jagendra Singh, Aditi Sharan, Sifatullah Siddiqi **“A Literature Survey on Automatic Query Expansion for Effective Retrieval Task”**. This paper presents a survey of important work done on automatic query expansion. Automatic query expansion is the process of automatically supplementing additional terms or phrases to the original

query and is considered an extremely promising technique to improve the retrieval effectiveness

5. Alireza Faed. “**Handling e-complaints in customer complaint management system using FMEA as a qualitative system**”. Author proposed as Negative customer perception often manifest as formal companies; while unknown percentages do not become so visible. Within a customer complaint management system, it is possible through careful analysis to identify the flaws in the service standards, in the complaint handling procedure itself, and the finer points which help to formulate resolution methods.
6. Yooncheong Cho, Il Im, R. Hiltz, Jerry Fjermestad. “**An analysis of online customer complaints: implications for Web complaint management**”. Author proposed to Provide an excellent online customer services because customer service is the most important factor in online customer satisfaction. respond to customers' requests/complaints quickly because the response speed is more important in online customer satisfaction than offline. and employ strategies that are appropriate for the product category in question.

## **CHAPTER 3**

### **PROPOSED MODEL**

The Query Solving Services is to replace the existing manual system with a software solution(Web application). Solving queries from leads and applicants can be a nightmare if you are not equipped to centralise them for multi-channel support. A manual data entry or a siloed departmental process makes it worse. NoPaperForms' Centralised Query Management System offers a lightning fast way to reach out to your prospects When the student post a question or share about the issues, they have faced that can be solved by using past data's or valuable solution by some other authorities by indicating them by Notification . We also include chat bot to assist the FAQ questions.

#### **Advantages:**

- Faster processing when compared to existing one.
- Maintaining frequently asked questions.
- Modifications of answers can be carried out immediately.
- DBMS can handle more number of students.

#### **TECHNOLOGY USED:**

- HTML,CSS
- PHP
- MYSQL
- MACHINE LEARIN

#### **SOFTWARE REQUIREMENTS:**

- Windows 11
- Visual Studio Code
- MySQL database
- Apache Server (XAMPP)

## **CHAPTER 3.1**

### **3.1. SYSTEM DESIGN**

Project design is a major step towards a successful project. A project design is a strategic organization of ideas, materials and processes for the purpose of achieving a goal. Project managers rely on a good design to avoid pitfalls and provide parameters to maintain crucial aspects of the project. Project design is an early phase of the project where a project's key features, structure, criteria for success, and major deliverables are all planned out. The point is to develop one or more designs which can be used to achieve the desired project goals. Stakeholders can then choose the best design to use for the actual execution of the project. The project design phase might generate a variety of different outputs, including sketches, flowcharts, HTML screen designs, and more.

So, the design can be implemented using Unified Modeling Language. diagrams such as class diagram, use case diagram, sequence diagram, activity diagrams. UML offers a way to visualize a system's architectural blueprints in a diagram, including elements such as :

- Any activities
- Individual components of the system
- How the system will run
- How entities interact with others
- External user interface

UML is a common language for business analysts, software architects and developers used to describe, specify, design, and document existing or new business processes, structure and behaviour of artifacts of software systems. The key to making a UML diagram is connecting shapes that represent an object or class with other shapes to illustrate relationships and the flow of information and data.

#### **3.1.1 UML DIAGRAMS :**

A UML diagram is a diagram based on the UML (Unified Modeling Language) with the purpose of visually representing a system along with its main actors, roles, actions, artifacts or classes, in order to better understand, alter, maintain, or document information about the system.

### 3.1.2 USECASE DIAGRAM:

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses

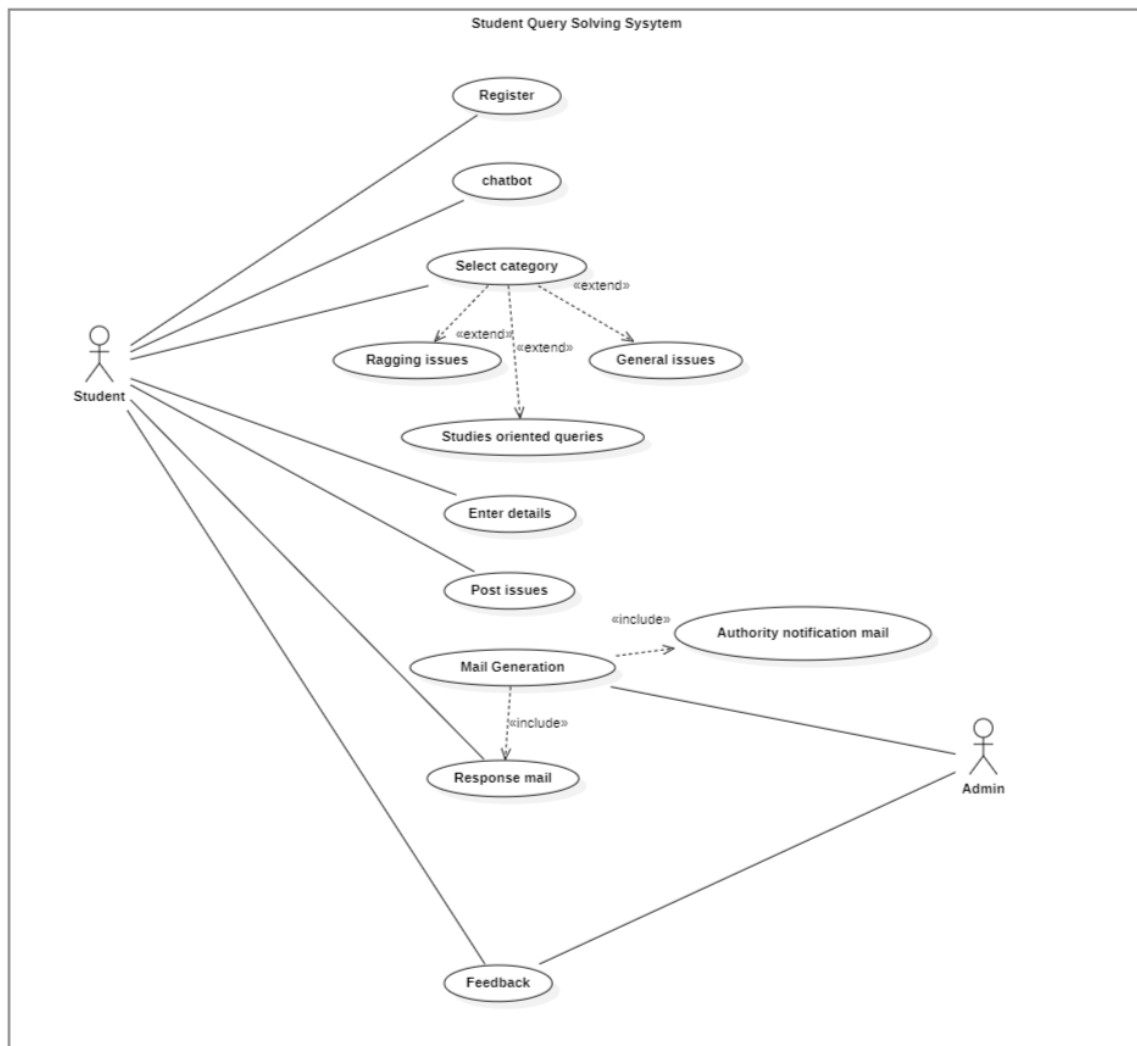
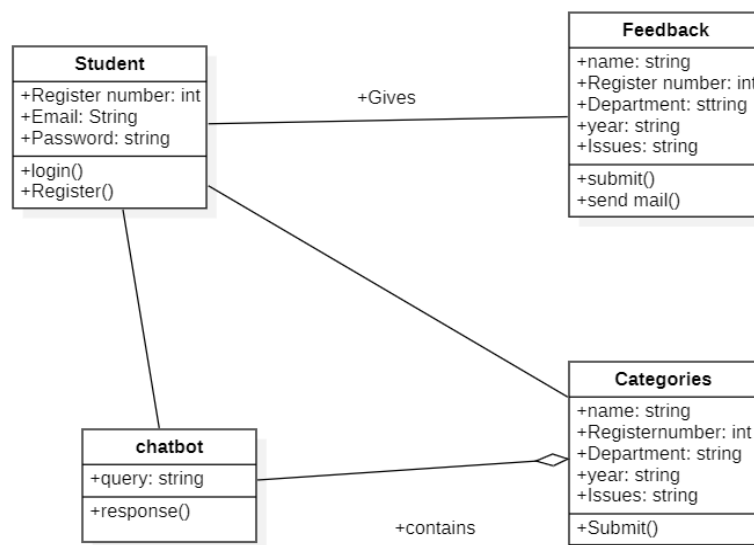


Figure 3.1.2.1

### 3.1.3 CLASS DIAGRAM:

Class diagram in the Unified Modelling Language is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects. Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application. Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modelling of object-oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.



**Figure 3.1.3.1**



### 3.1.4 ACTIVITY DIAGRAM:

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams are intended to model both computational and organizational processes (i.e., workflows) as well as the data flows intersecting with the related activities. Although activity diagrams primarily show the overall flow of control, they can also include elements showing the flow of data between activities through one or more data stores.

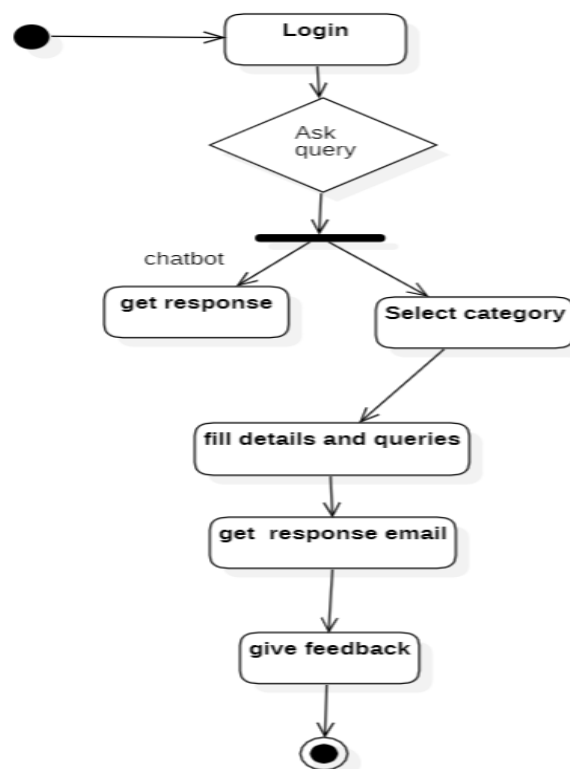
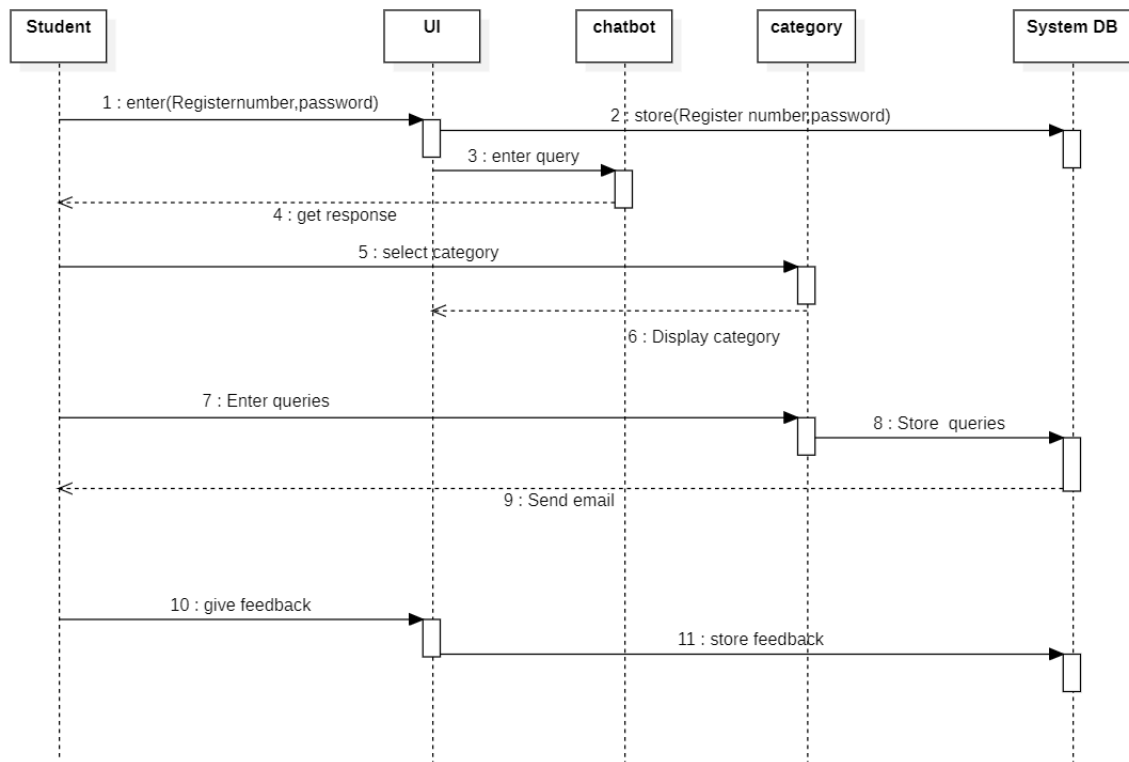


Figure 3.1.4.1

### 3.1.5 SEQUENCE DIAGRAM:

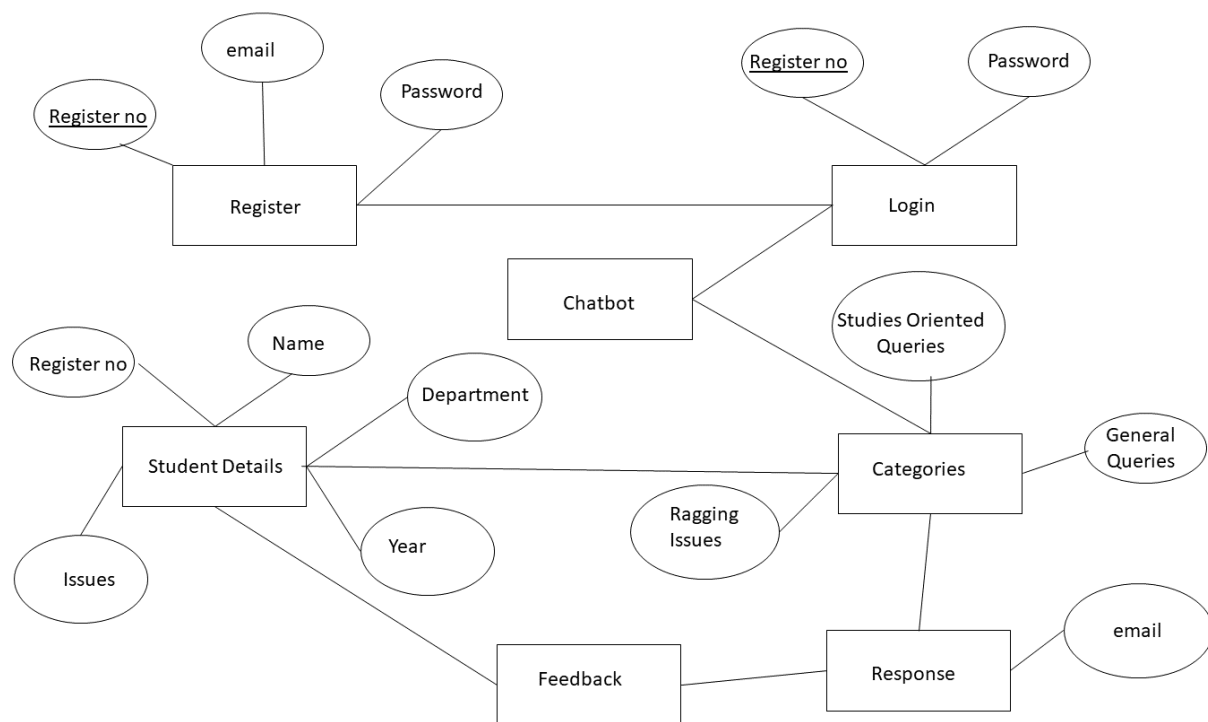
A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called event diagrams or event scenarios. A sequence diagram shows, as parallel vertical lines, different processes or objects that live simultaneously and as horizontal arrows, the messages exchanged between them, in the order in which they occur. This allows the specification of simple runtime scenarios in a graphical manner



**Figure 3.1.5.1**

### 3.1.6 ER DIAGRAM:

An entity relationship diagram (ERD) shows the relationships of entity sets stored in a database. An entity in this context is an object, a component of data. An entity set is a collection of similar entities. These entities can have attributes that define its properties. By defining the entities, their attributes, and showing the relationships between them, an ER diagram illustrates the logical structure of databases



**Figure 3.1.6.1**

### 3.1.7 DATA FLOW DIAGRAM:

A Data Flow Diagram is the sequence of path data takes at it is generated on the system. It shows how data is processed if such data is valid and also specifies what happens when such data is invalid.

#### 0<sup>TH</sup> LEVEL:

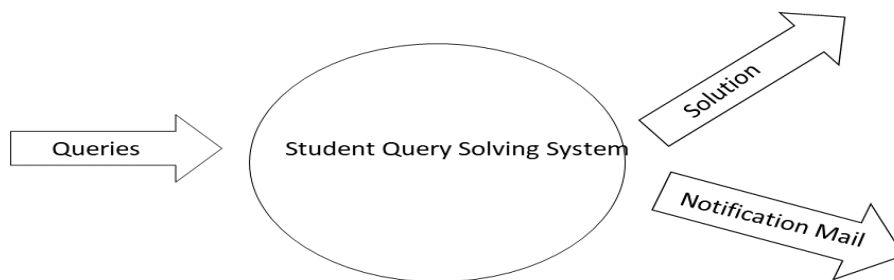


Figure 3.1.7.1

#### 1<sup>ST</sup> LEVEL:

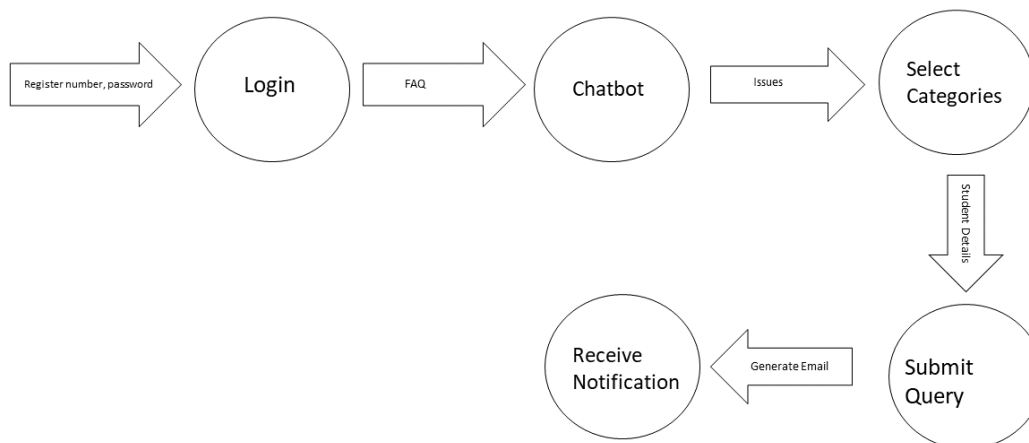
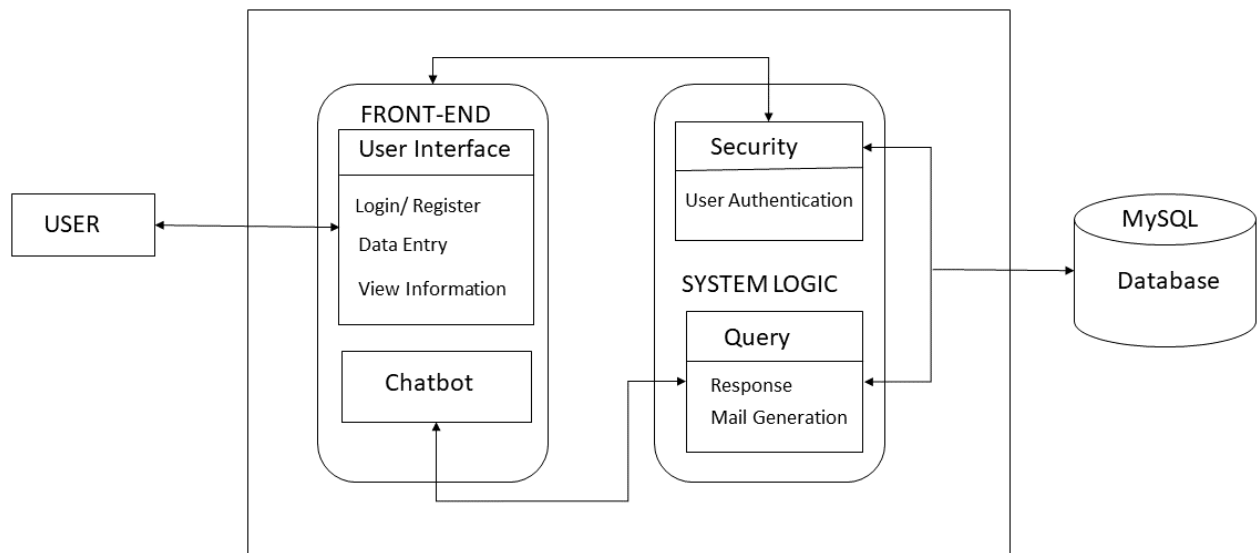


Figure 3.1.7.2

## CHAPTER 3.2

### SYSTEM ARCHITECTURE DIAGRAM

System Architecture Design sometimes simply known as System Design is a conceptual representation of the components and subcomponents that reflects the behaviour of a system



**Figure 3.2.1**

## **CHAPTER 3.3**

### **MODULE IDENTIFICATION**

#### **Registration & Login Module**

This provides an interface that restrict an unauthorized user from accessing the application, its objective is to validate and authenticate a user before granting access to him/her based on his/her access level (i.e. Student/Administrator) so as to access different aspect of the application, depending on their privileges defined by the application. It also allows new students that have being created by the administrator to register and use the application.

Input: Register Number, Email, Password

Output: Success or Failure

#### **Chatbot**

Designed to convincingly simulate the way a human would behave as a conversational partner. A chatbot is a type of software that can help customers by automating conversations and interact with them through messaging platforms.

Input: Frequently Asked Questions

Output: Relevant Answers

#### **Categories**

Categories group individual Web pages together based on a similar subject or theme.

It organize the content in a way that should make it easy for the user to find what he or she is looking for, and category pages serve as an index of all the pages and posts that belong to that particular subject.. in student query solving system we have 3 categories they are Ragging issues , general issues, studies oriented issues.

Input: Student Details, Issues

Output: Notification Mail

## **Feedback**

The candidates can rate the support received with a positive or a negative feedback and you can always reach out to them to understand their concerns better. This also helps you keep a track of how well you understand the type of student queries.

Input: Student Details, Feedback

Output: No-reply Response mail

## **Contact**

The Contact module allows site visitors to send emails to other authenticated users and to the site administrator.

Input: Student details

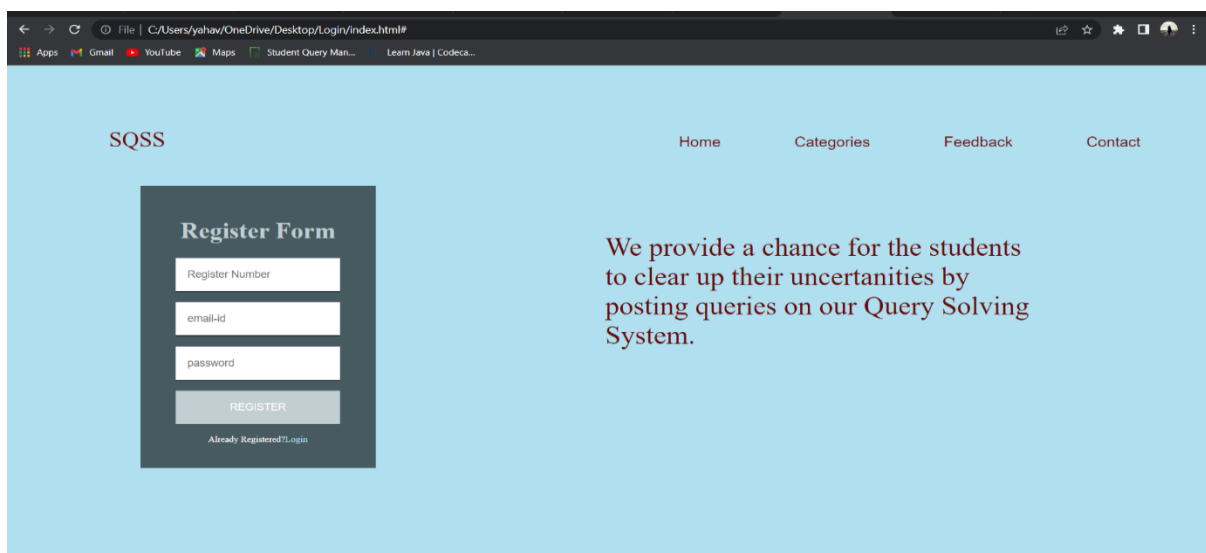
Output: concern Faculty Details

## CHAPTER 4

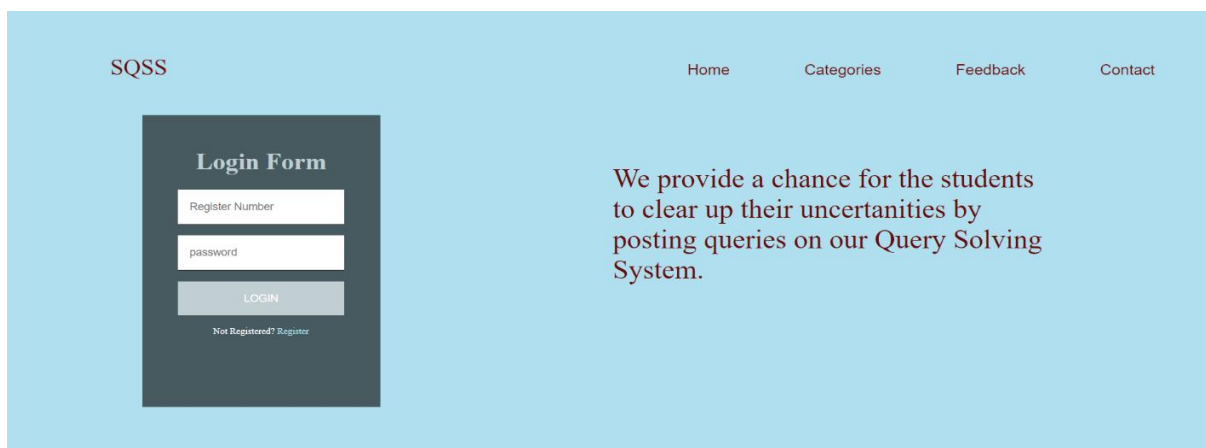
### RESULT AND DISCUSSION

#### Login/Register:

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The screenshot shows a web browser window displaying the SQSS Register Form. The browser's address bar shows the file path: C:/Users/yahav/OneDrive/Desktop/Login/index.html#. The page has a light blue background. At the top left is the logo 'SQSS'. At the top right are navigation links: Home, Categories, Feedback, and Contact. The main content area features a dark gray register form on the left and a text block on the right. The form has fields for 'Register Number', 'email-id', and 'password', followed by a 'REGISTER' button. Below the button is a link: 'Already Registered? Login'. The text block on the right says: 'We provide a chance for the students to clear up their uncertainties by posting queries on our Query Solving System.'



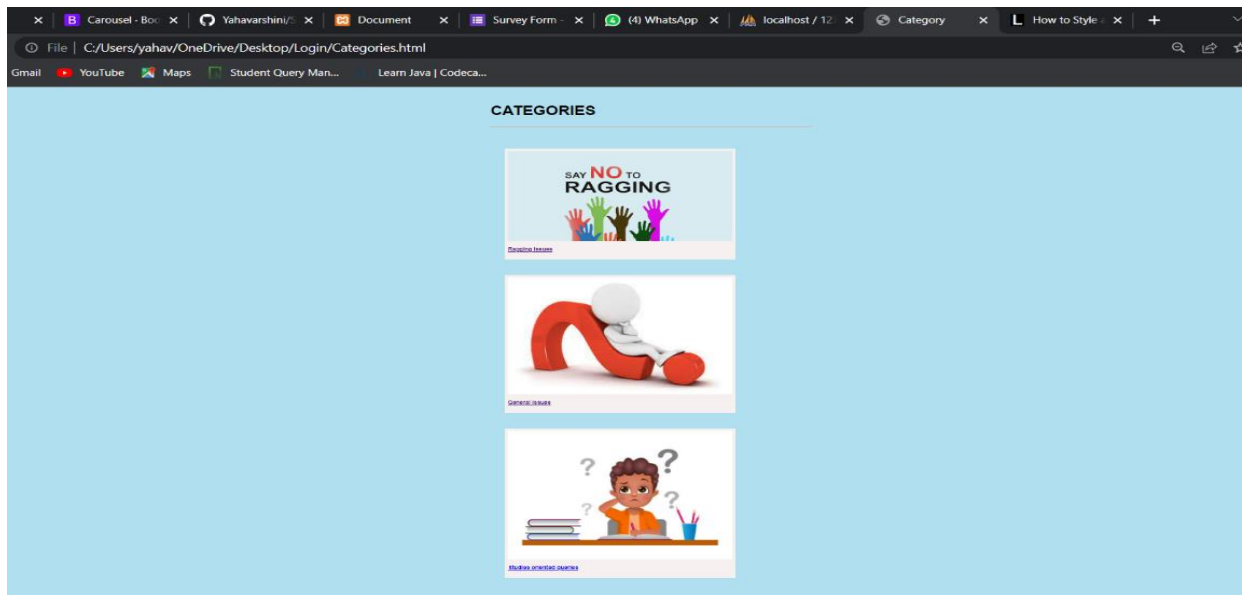
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## CATEGORIES:

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## Studies Issues

Name

Register Number

Department

Year

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4

Issues:

Submit

## Anti-Ragging Comittee

Name

Register Number

Department

Year

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4

Issues:

Submit

General Issues

Name

xxxxxxxx

Register Number

81001920000

Department

Information Technology

Year

☐ 1
☐ 2
☒ 3
☐ 4

Issues:

water insufficient in C blk

Submit

## FEEDBACK:

The candidates can rate the support received with a positive or a negative feedback and you can always reach out to them to understand their concerns better. This also helps you keep a track of how well you understand the type of student queries.

File | C:/Users/yahav/OneDrive/Desktop/Login/feedback.html

Apps

Gmail

YouTube

Maps

Student Query Man...

Learn Java | Codeca...

Student Feedback Form

Thank you for taking the time to help us improve!

Name

Enter your name

Email

Enter your Email

Register Number

Register Number

Department

Select

Year

☐ 1
☐ 2
☐ 3
☐ 4

Category

Select an option

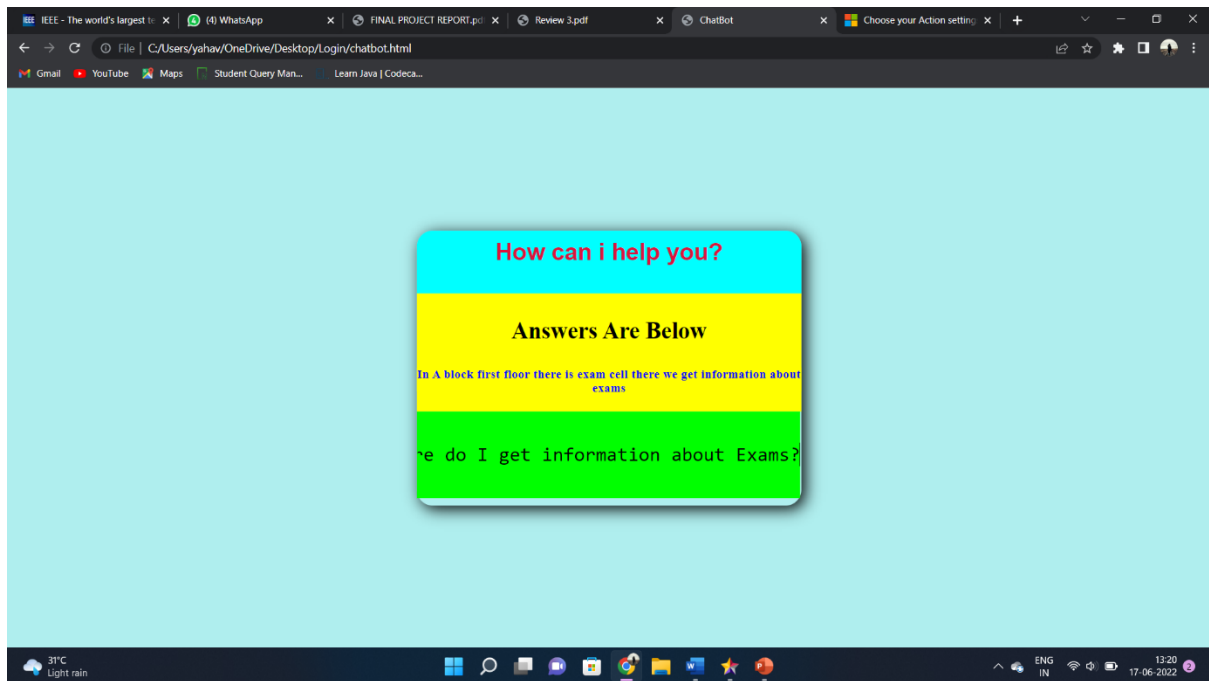
Issues:

Enter your comment here...

Submit

## Chatbot :

Designed to convincingly simulate the way a human would behave as a conversational partner. A chatbot is a type of software that can help customers by automating conversations and interact with them through messaging platforms.



## **CHAPTER 5**

### **CONCLUSION & FUTURE WORK**

#### **Conclusion :**

Advancement in technology is making automation of mechanical activities become a very important aspect of our daily lives. Since the use of computers is now widespread, the adoption of this system will make life become easier for us all. Student Query Solving System designed for Students that they can ask any difficulties or queries at any time to system and can get the reply from chatbot / concerned authorities as soon as possible .

#### **Future Work :**

- Multilingual & voice Bot.
- Improved UI.
- Improved Security.

## **CHAPTER 6**

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1.

2.

**Signature of the Students**

**Signature of the Guide**

