



Mini Project Report On

STUDENT REDRESSAL CELL SYSTEM

*Submitted in partial fulfillment of the requirements for the
award of the degree of*

Bachelor of Technology
in

Computer Science & Engineering

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CERTIFICATE

*This is to certify that the mini project report entitled **Student Welfare Redressal System** is a bonafide record of the work done by **Abhay Adhip (U2103005)**, **Abraham Joseph Joseph (U2103010)**, **Basil Santhosh Vadath (U2103060)**, **Chris John George (U2103068)**, submitted to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology (B. Tech.) in Computer Science and Engineering during the academic year 2023-2024.*

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Abstract

The Student Redressal Cell System is a comprehensive solution designed to help students and enhance their overall experience within the educational institution. This website serves as a platform that provides efficient communication, grievance redressal, and support services for students. The scope of this product is to design, implement, and maintain a user-friendly website for lessening student concerns and complaints within educational institutions. Features such as complaint submission, escalation, real time interaction with authorities, and secure data handling is designed and implemented using Flutter.

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- Architectural Design

- Gantt Chart

Chapter 1

Introduction

1.1 Background

The background of Student Redressal Cell System is that it is a web platform that is used to provide solutions/recommendations to complaints that is given by the users. The solutions are provided by an AI chatbot which is integrated into the website. This is useful to solve students' issues within educational institution.

1.2 Problem Definition

The Student Redressal Cell System addresses the challenge of providing students with an efficient and accessible platform for submitting grievances, escalation, and secure data handling.

1.3 Scope and Motivation

The scope of the project involves the development and implementation of a user-friendly interface that helps students to submit grievances through an interactive chatting system, escalation to authorities, tracking mechanisms and provide feedback within the educational institution.

The motivation behind developing the Student Redressal Cell System is to empower students by providing them with a convenient and efficient platform to voice their grievances and accordingly get appropriate solutions. This helps to create a positive impact on student experience, provides a sense of belonging and support, and contribute to the overall success and well-being of the student community.

1.4 Objectives

- To develop a user friendly interface for the students to access the platform easily.
- To develop an interactive chatting platform between the student and AI bot.
- To collect feedback to continuously improve services and address student needs effectively.

1.5 Challenges

One main challenge that this website faces is that the AI chatbot does not provide a human level interaction. It cannot show any feelings or emotions in order to understand the user very well.

1.6 Societal / Industrial Relevance

The societal and industrial relevance of a Student Redressal Cell System lies in its ability to address the challenges faced by educational institutions and students:

- Enhanced student experience
- Efficient complaint management
- Provides valuable data insights into common issues, and user feedback, enabling informed decision-making.
- Contributes to a positive social impact by empowering students to voice their concerns, and promote a culture of fairness, and support within educational communities.

Chapter 2

Software Requirements Specification

2.1 Introduction

2.1.1 Purpose

To design and develop a website with an integrated AI chat for ‘Student Redressal Cell System’. The features, interfaces and workflow used in this website is explained and demonstrated in this document.

2.1.2 Product Scope

To design, implement, and maintain a user-friendly website for the lessening student concerns and complaints within educational institutions. Features such as complaint submission, escalation, real time interaction with authorities, and secure data handling is designed and implemented using Flutter and Botpress.

2.2 Overall Description

2.2.1 Product Perspective

From a product perspective, developing a website for Student Redressal Cell System involves focusing on creating a user-centered solution that effectively addresses the needs and concerns of students. Here the users can register and login with their accounts and then voice their concerns and complaints regarding any issues related within the educational institution. The AI chat interface would then provide the solutions accordingly to those issues.

2.2.2 Product Functions

- **User-friendly Interface:** The website features a friendly user interface designed to facilitate easy navigation and accessibility for all the students.
- **Interactive system:** An AI chat based system in which the students can interact with the chat bot and voice their concerns or complaints regarding any relevant issues within the educational institutions. The AI chat bot would provide solutions or recommendations to those issues mentioned. It would also ask the user whether they would like to escalate those issues to higher authorities.
- **Grievance Submission:** Students can mention complaints regarding academic, administrative, infrastructure, or any other relevant issues.
- **Escalation and Tracking Mechanism:** In cases where grievances require higher-level intervention, the chatbot helps in the escalation of complaints to relevant authorities. The chat bot has a feature of conversational history which helps the admin to track the status of user complaints. Towards the end of a chat, the bot will ask for feedback from the user.

2.2.3 Operating Environment

As the student redressal cell system is a website with an integrated chatbot, it is developed through Flutter and Google Firebase. Botpress is used to create an AI chatbot that acts as the chatting interface for the users. The website works well on any device as long as there is a stable internet connection.

2.2.4 Design and Implementation Constraints

Designing and implementing a Student Redressal Cell System comes with several constraints that need to be considered to ensure the website's effectiveness and usability. Some of the key constraints include:

- **Technical Constraints:** Bandwidth and connectivity issues, particularly in areas with poor internet infrastructure, may affect the website's performance and accessibility.
- **Institutional Policies:** The website must align with the institution's policies and procedures for handling student grievances.

2.2.5 Assumptions and Dependencies

The assumptions made for the Student Redressal Cell System are:

- Only Authorized users can use the website.
- This system works only when the conversation is in the English language.
- The user interface for the software shall be compatible with any Android device that runs Android 9.0 or above and iOS device that runs iOS 16.0 or above.

2.3 External Interface Requirements

2.3.1 User Interfaces

The user interface for the software shall be compatible with any Android device that runs Android 9.0 or above and iOS device that runs iOS 16.0 or above. The user interface is developed and designed using Flutter which is a Google framework. It helps in developing websites for any device. It makes development easier and faster. The students can address and raise their issues and grievances through this interface. This interface ensures that it is easy to use for new users and is also fast.

2.3.2 Hardware Interfaces

The student redressal cell system is a lightweight website and does not require any high system requirements. Minimum system requirements to run Android Studio and AI chat bot is 64 bit Windows 8 or above, 8GB RAM or more, 8GB of storage space. For the website to run it requires a mobile or laptop device with a good internet connection.

2.3.3 Software Interfaces

The student redressal cell system is mainly developed using Flutter. For the chat services, a chatbot will be used for generating automated replies. The chat interface is developed using Botpress. For storing student data and chat records we will be using Google Firebase as a backend server. It is already a pre-built server which can be used as the backend for the website. It is easy to store and retrieve data from the Google Firebase.

2.3.4 Communications Interfaces

The AI chatting interface is a text based user interface that takes input from the user to provide the appropriate answers. The AI chat is developed using Botpress. It is integrated to the website that is developed using Flutter and Google Firebase.

2.4 System Features

This section describes the features provided by the website and explains how they can be used and its solutions are provided to the user.

2.4.1 User-Friendly Interface

Description and Priority

The website features a user interface designed to facilitate easy navigation and accessibility for all the students. This feature is of high priority as it obtains the necessary details needed for user registration.

Stimulus/Response Sequences

Users can input their login IDs and passwords in order for them to access the system and then they are forwarded to the interactive platform, where they are able to voice their concerns and grievances.

Functional Requirements

For the user to access the website, one must register their account credentials. The login credentials must match with their registered credentials in order to access the website.

- REQ-1: The user credentials must be in the English language.
- REQ-2: The user interface for the software shall be compatible with any Android device that runs Android 9.0 or above and iOS device that runs iOS 16.0 or above.

2.4.2 Interactive System

Description and Priority

The website features a chat based interface designed to generate solutions by AI for the complaints placed by the users. This feature is of high priority as it acts as a communication channel between the user and an AI bot.

Stimulus/Response Sequences

Users of this website are able to voice their concerns and grievances regarding any issues within the educational institution in a chat based communication. The AI bot will provide the necessary solutions about their concerns and complaints. After the chatbot provides the solutions, it would ask the user whether they would like to escalate the issues to the relevant authorities.

Functional Requirements

It has a chat based system that gets a clear cut picture of the students problem if the problem still exists it will provide a grievance submission link.

- REQ-1: The user must communicate with the chatbot in the English language.

2.4.3 Escalation and tracking mechanism

Description and Priority

In cases where grievances require higher-level intervention, the chat system facilitates the escalation of complaints to relevant authorities. It provides the contact information such as mail IDs, mobile number, etc. of the higher college authorities. After this the user can provide the appropriate feedback. This is a high priority system, in case the AI bot is not able to solve the problem, it suggests to the user to escalate it to the higher authorities.
Department

Stimulus/Response Sequences

During the conversation with the AI chatbot, if the user is not satisfied with the solutions provided by the AI bot, it will have an option to raise the concern to the higher

authority through an email. It would also ask the user to share their feedback regarding the experience they faced while using the chat interface.

Functional Requirements

For the user to escalate the issues, they must send an email to the authorities of the corresponding department. The user must communicate to the authorities only if they are not satisfied with the solutions provided by the AI bot.

- REQ-1: The user must send an email to the respective authorities only if they are not satisfied with the solution provided by the AI bot.

2.5 Other Nonfunctional Requirements

2.5.1 Performance Requirements

The website must be highly responsive and the response rate should be high. The chatbot should be able to reply and solve most of the issues raised by the students.

2.5.2 Safety Requirements

Measures should be taken to protect user identification and the issues raised by the students should be private and can only be read by the higher authorities. The student data should be safe and protected on the server.

2.5.3 Security Requirements

The students should have registered login ID and password in the website or create a new user account in the website. All the student data will be stored safely in the Google Firebase server. User privacy will be maintained for every student.

2.5.4 Software Quality Attributes

- **Reliable:** The website is easy to use and can be run on any basic device. It has error handling functions to deal with wrong login info or invalid entries.
- **Scalable:** The website can handle a high number of users and wont crash if high load comes on the server.

- **Portable:** This website can be run on any device so it can be accessed from anywhere through Web Browser with a proper internet connection.

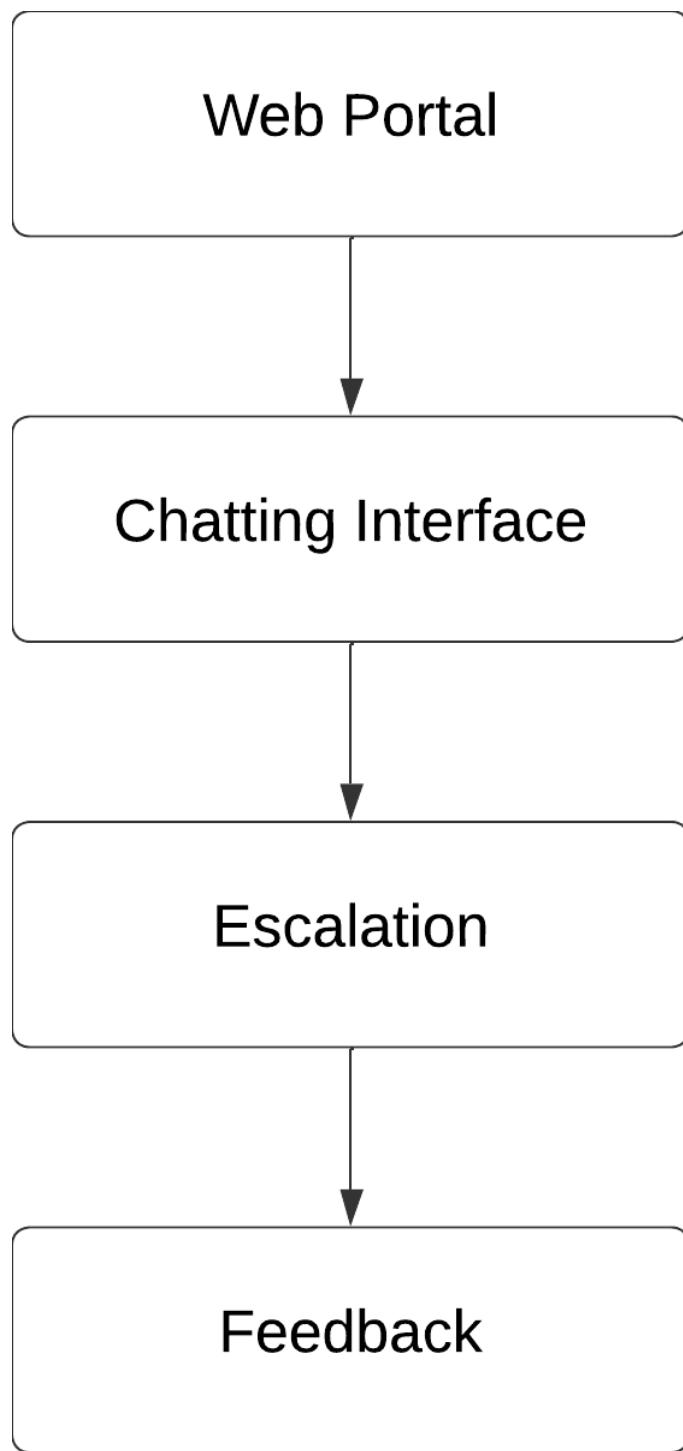
Chapter 3

System Architecture and Design

3.1 System Overview

- The Student Redressal Cell System helps in solving the students concerns by providing an interface where they can specify their concern and get it resolved accordingly.
- The features of this website are user-friendly interface, grievance submission and escalation and tracking mechanism.
- Design Walkthrough:
 - Web Portal: The input is given by the user to access the website and use it. It includes the login page where the user is supposed to enter their ID and password to access the website. The user also provides input on the problems that they face via AI chat bot.
 - Chatting Interface: Here, the user is first given a set of options from which they can choose under which area the problem lies. After the choosing the option the user and the AI chat bot can have a conversation regarding their problem and the chat bot will find a solution for it.
 - Escalation: In cases where grievances require higher-level intervention, the website facilitates the escalation of complaints to relevant authorities. The website tracks the status of the complaint and updates the user accordingly. If the problem is resolved the user can provide the appropriate feedback.
 - Feedback: After the users issues is solved, the user will get a feedback form to check whether their issue is solved. Implementing an effective feedback mechanism in a Student Redressal Cell System is crucial for gathering reviews, improving user experience, and enhancing the website's overall effectiveness.

3.2 Architectural Design



3.3 Module Division

- Web Portal: In this module, the input is given by the user to access the website. The input includes the login credentials such as login IDs and passwords. In this

interface, after logging into the website, the user is shown a small icon that is located on the bottom right corner of the web page. Upon clicking the icon, a chat interface is opened up. The user can now chat with the AI chatbot. Assigned to: Abhay Adhip and Basil Santhosh.

- Chatting Interface: This module focuses on designing and developing the AI chatting interface. The AI chat interface is developed using Botpress. Here the user is provided a set of options to choose from. The user can choose the category in which their complaint lies in. The chatbot will then ask whether the issues they facing is a personal problem or a group problem. The chatbot will then provide a solution accordingly. If it is a group problem, chatbot will provide procedural steps for the user to follow. These steps help the user to properly voice their issues while abiding by college rules and guidelines. The chatbot will also ask the user whether they like to escalate their issues or not. Assigned to: Basil Santhosh and Chris John
- Escalation: In this module the chatbot will ask the user that whether they like to escalate their issues or not. If the user chooses to escalate, they are provided the contact details of the relevant authorities such as mobile numbers, email IDs, etc. Assigned to: Basil Santhosh and Chris John
- Feedback: Towards the end of the chat, the chatbot will ask the user to rate the experience they had chatting with the chatbot. Implementing a feedback mechanism helps to gather reviews, improve user experience and enhance the website's overall effectiveness. Assigned to: Abraham Joseph and Abhay Adhip
- Database Management: This module involves the development of the database infrastructure of the website. The database consists of user's login credentials and chat history between the user and the AI chatbot. Assigned to Abraham Joseph and Abhay Adhip

3.4 Work Schedule - Gantt Chart



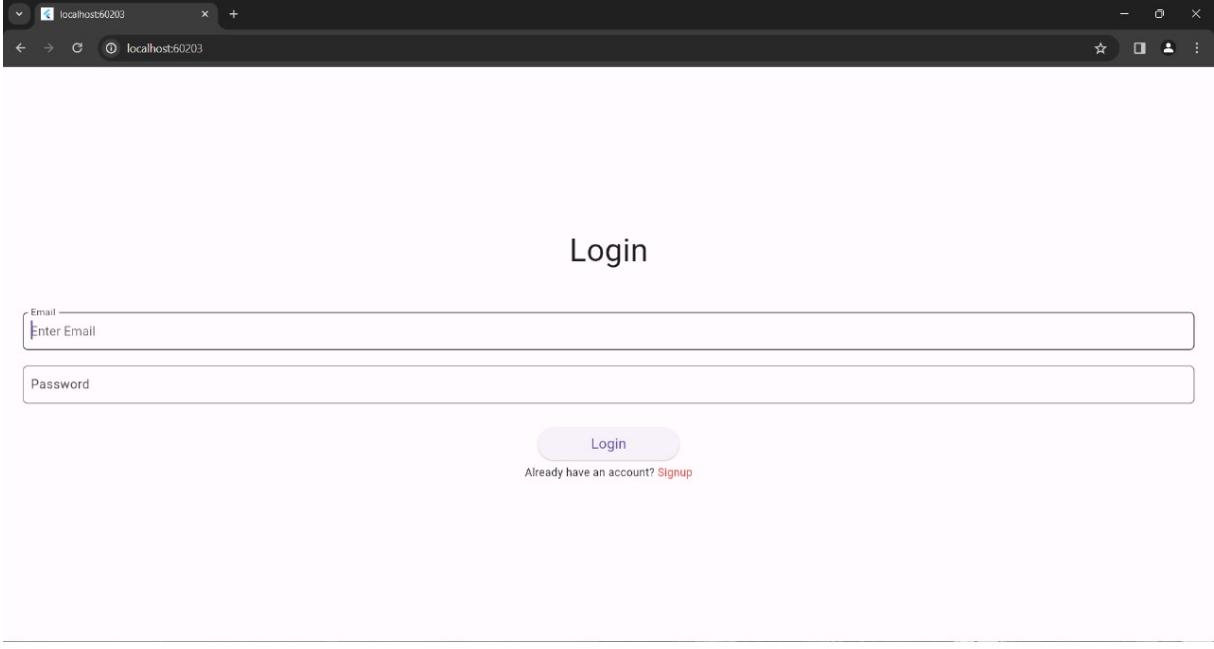
Chapter 4

Results and Discussions

4.1 Overview

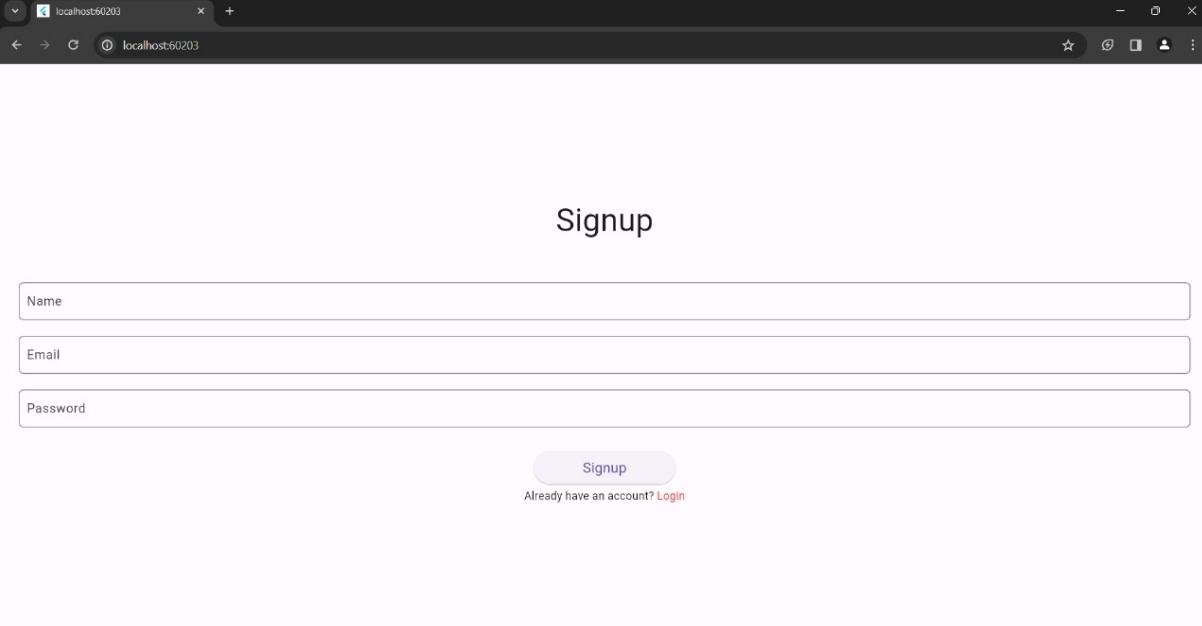
The Student Redressal Cell System is a website where students can access and place their complaints/ grievances. The solutions to these issues are provided by an AI chatbot. The students can also choose whether they would like to escalate the issues to the relevant authorities if they are not satisfied by those AI generated solutions. In this way the student redressal cell system helps to create a interactive experience between students and the institutional authorities.

4.2 Testing



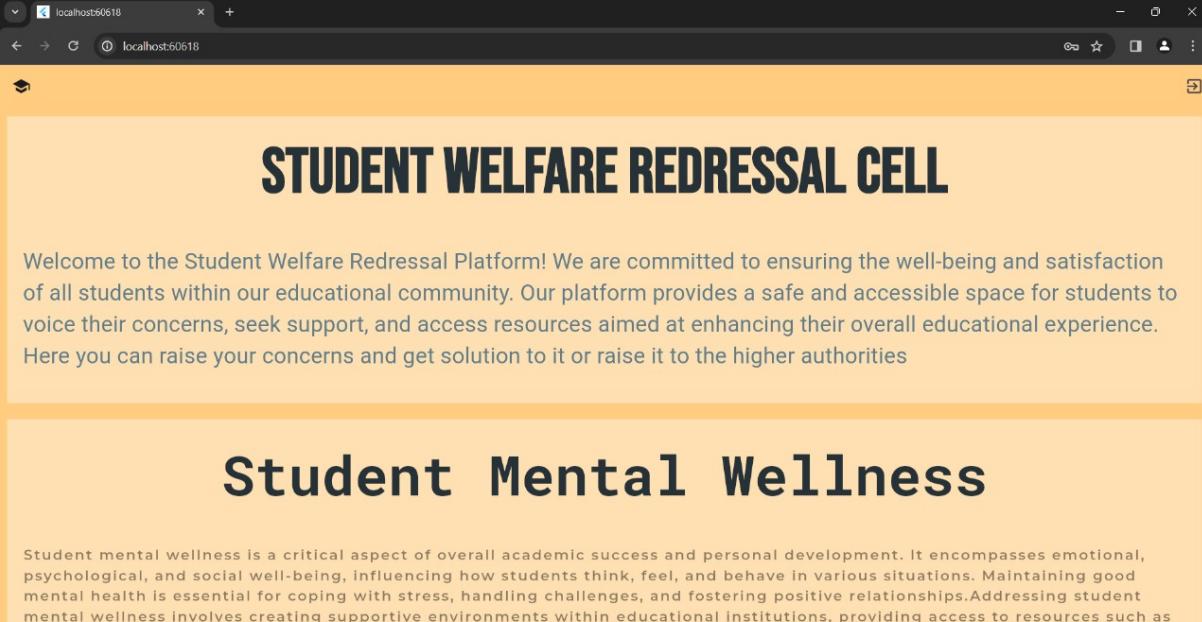
A screenshot of a web browser window titled "localhost:60203". The main content area displays a "Login" form. At the top center is the word "Login". Below it is a horizontal input field labeled "Email" with the placeholder "Enter Email". Underneath is another horizontal input field labeled "Password". At the bottom center is a blue "Login" button. Below the button, a small link says "Already have an account? [Signup](#)".

Figure 4.1: Result 1



A screenshot of a web browser window showing a "Signup" form. The URL in the address bar is "localhost:60203". The form consists of three input fields: "Name", "Email", and "Password", each with a placeholder text inside. Below the fields is a blue "Signup" button. Underneath the button, a small note says "Already have an account? [Login](#)".

Figure 4.2: Result 2



A screenshot of a web browser window showing the homepage of the "STUDENT WELFARE REDRESSAL CELL". The URL in the address bar is "localhost:60618". The page has a yellow header with the title "STUDENT WELFARE REDRESSAL CELL" in large, bold, black letters. Below the header is a yellow section containing a welcome message: "Welcome to the Student Welfare Redressal Platform! We are committed to ensuring the well-being and satisfaction of all students within our educational community. Our platform provides a safe and accessible space for students to voice their concerns, seek support, and access resources aimed at enhancing their overall educational experience. Here you can raise your concerns and get solution to it or raise it to the higher authorities". Below this is another yellow section with the title "Student Mental Wellness" in large, bold, black letters. A detailed description follows: "Student mental wellness is a critical aspect of overall academic success and personal development. It encompasses emotional, psychological, and social well-being, influencing how students think, feel, and behave in various situations. Maintaining good mental health is essential for coping with stress, handling challenges, and fostering positive relationships. Addressing student mental wellness involves creating supportive environments within educational institutions, providing access to resources such as counseling services and mental health education, and promoting strategies for stress management and self-care. It's crucial to".

Figure 4.3: Result 3

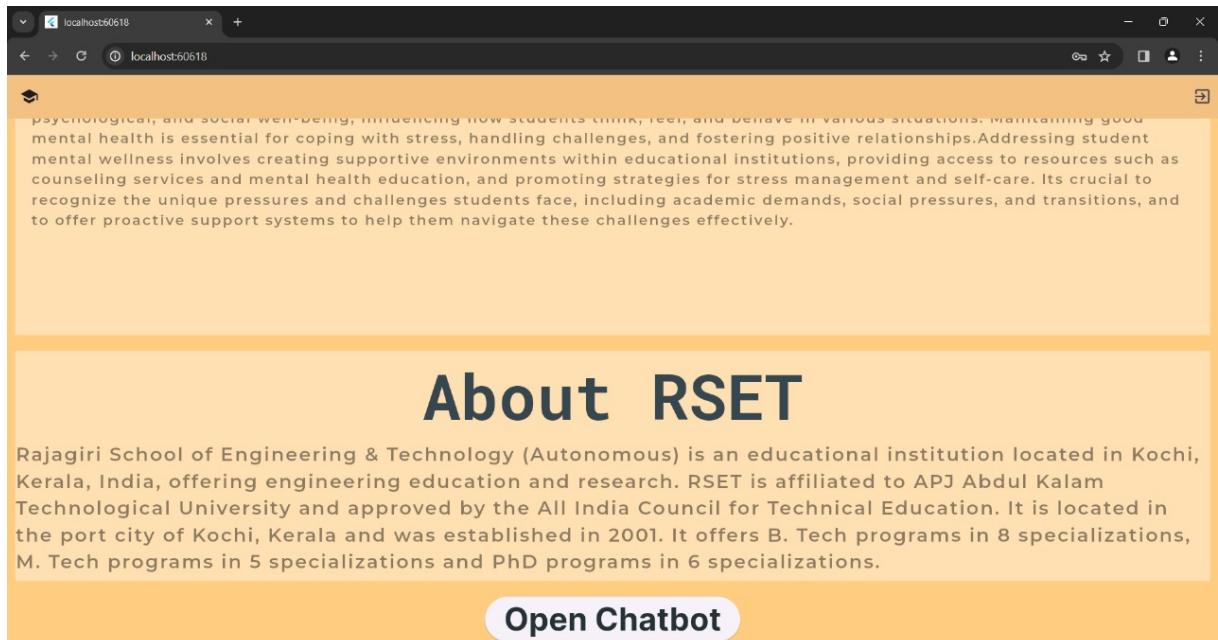


Figure 4.4: Result 4

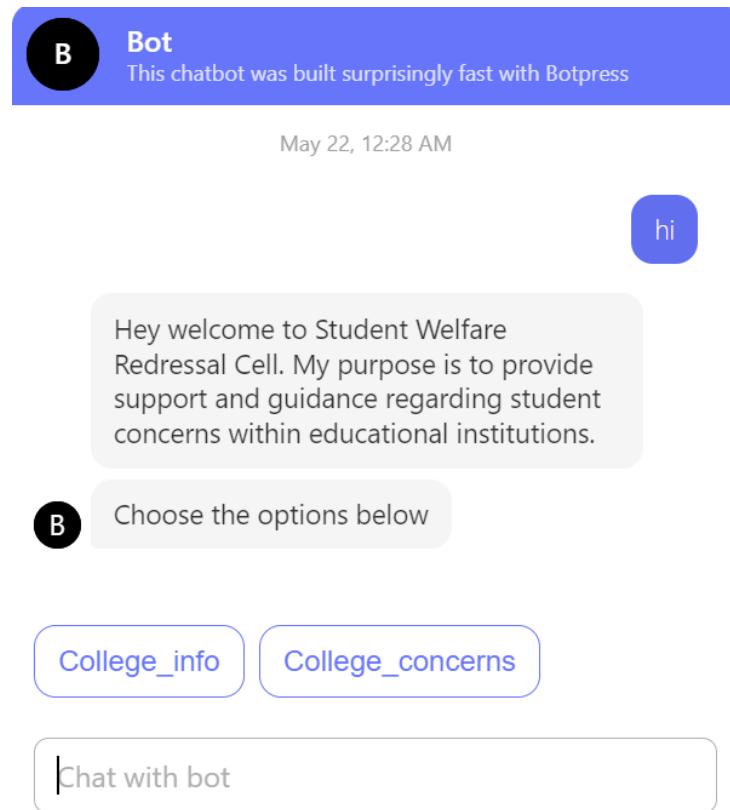


Figure 4.5: Result 5

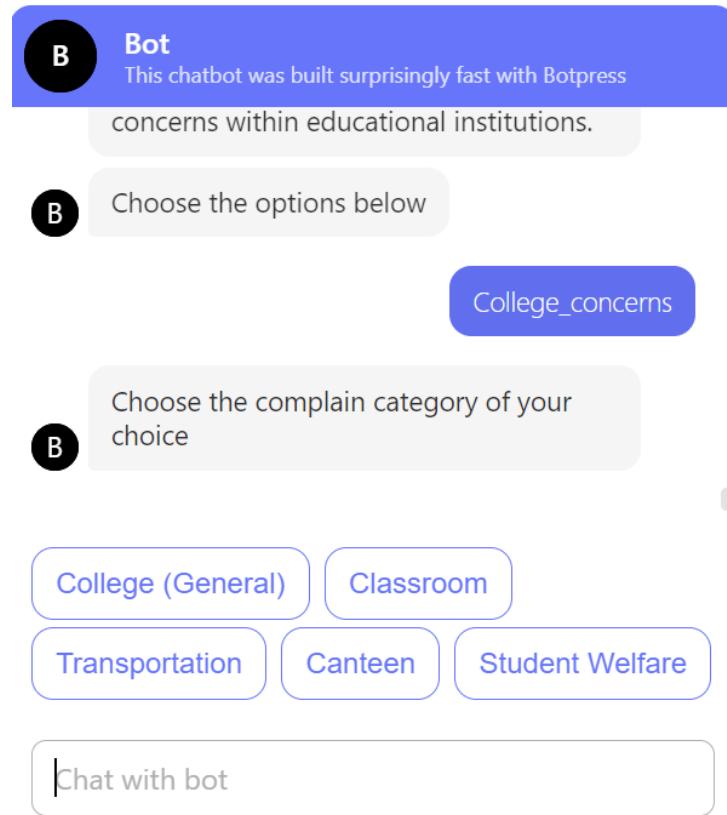


Figure 4.6: Result 6

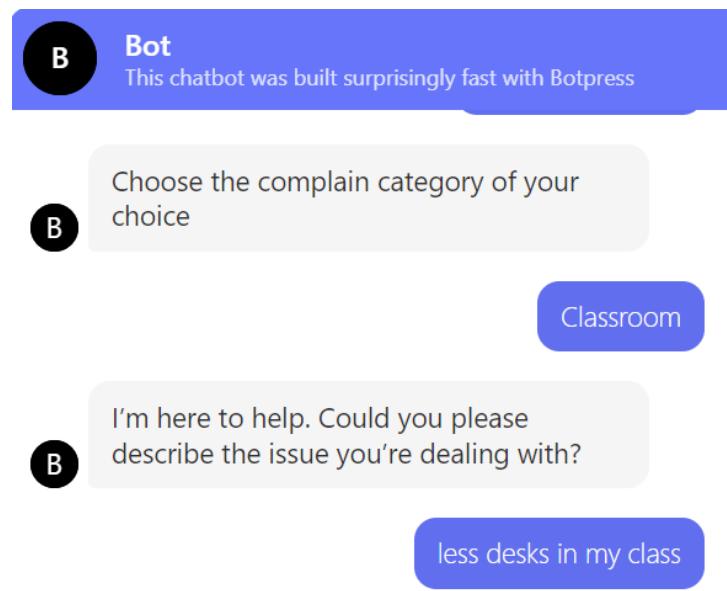


Figure 4.7: Result 7

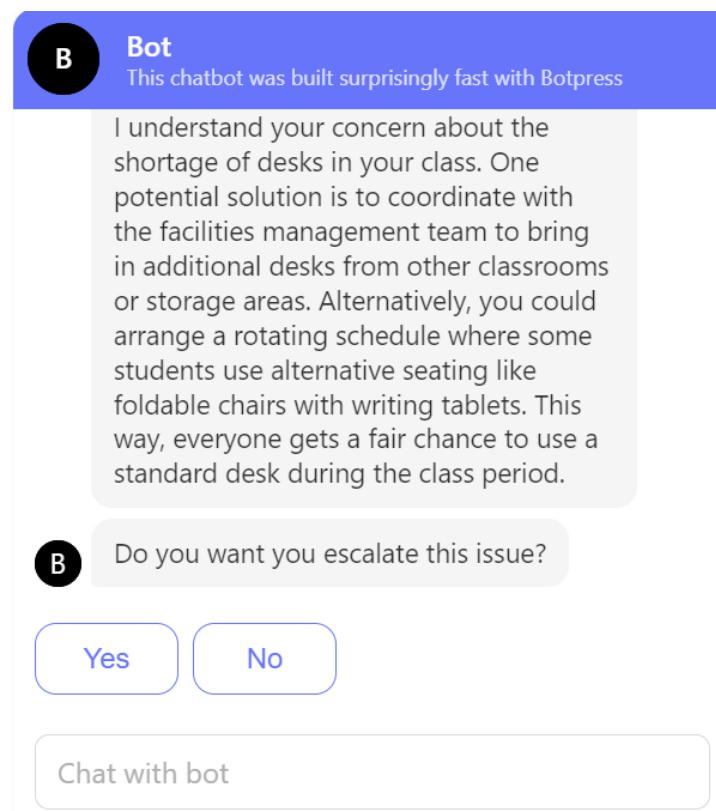


Figure 4.8: Result 8

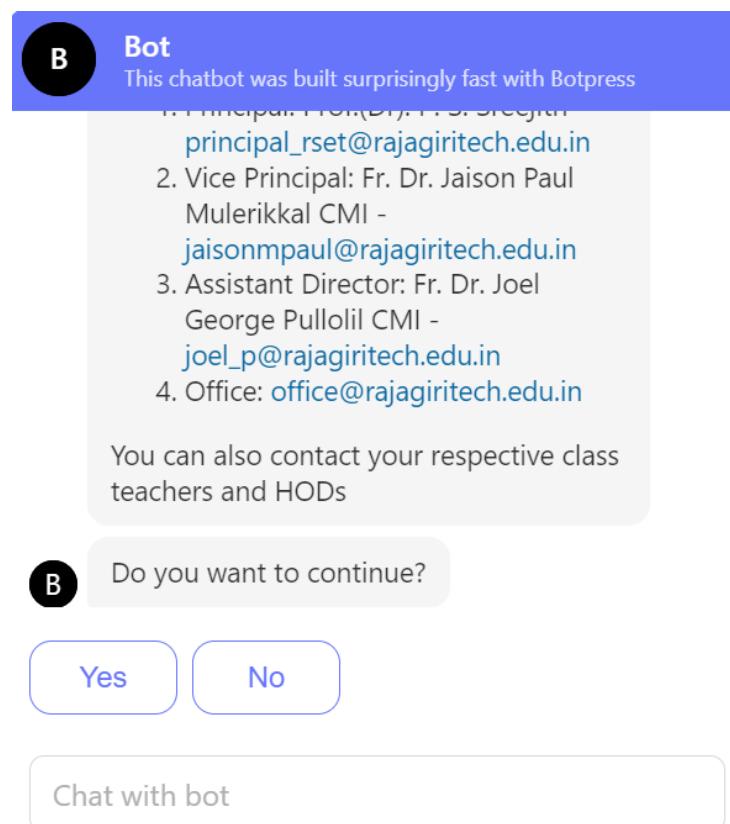


Figure 4.9: Result 9

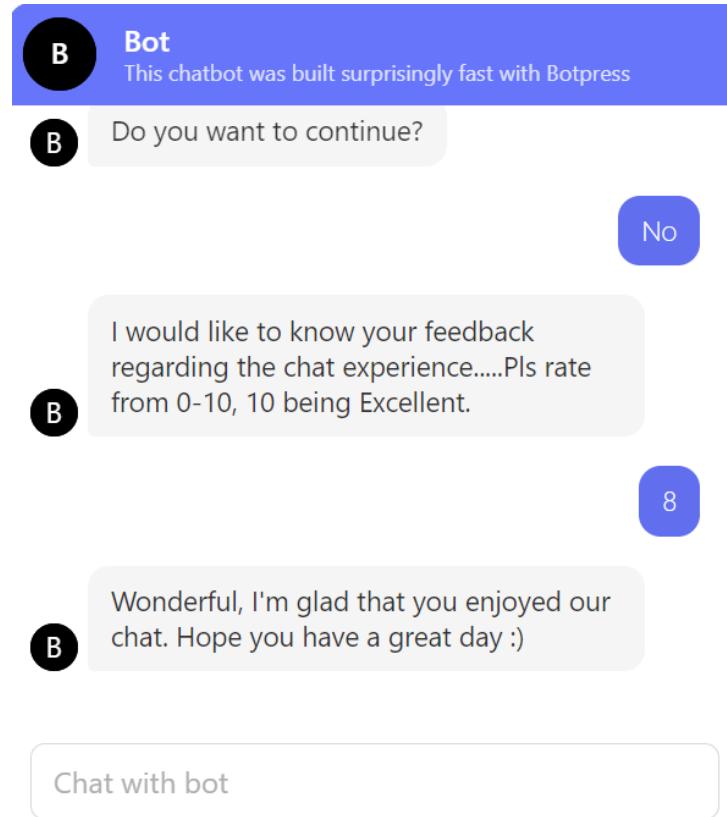


Figure 4.10: Result 10

This screenshot shows a web-based student welfare system. On the left, there's a summary of a recent conversation: "Webchat" 1 minute ago, "Details" tab selected, "JSON" tab available. The "Summary" section contains a welcome message from the bot. The "Conversation ID" is "conv_01HY085XJF5T2BG1DGY3Y3ZNNY". The "Channel" is "channel", "Updated At" is "Tue, 21 May 2024 19:02:49 GMT", "Participants" are "U user_01HYDBSX...", and "Tags" are "webchat:b3737be4-095d-42e2-a2ab-80ae0fb...". On the right, a user message "I'm here to help. Could you please describe the issue you're dealing with?" is responded to by the bot: "less desks in my class". The bot provides a solution: "I understand your concern about the shortage of desks in your class. One potential solution is to coordinate with the facilities management team to bring in additional desks from other classrooms or storage areas. Alternatively, you could arrange a rotating schedule where some students use alternative seating like foldable chairs with writing tablets. This way, everyone gets a fair chance to use a standard desk during the class period." Two buttons, "Yes" and "No", are shown below. The user replies "Yes". The bot then provides contact information: "Please mail your issues to these mail ids below- 1. Principal: Prof.(Dr). P. S. Sreejith - principal_rset@ajagitech.edu.in 2. Vice Principal: Fr. Dr. Jaison Paul Mulerikkal".

Figure 4.11: Result 11

Chapter 5

Conclusion

5.1 Conclusion

The Student Redressal Cell System will significantly improve how student grievances are managed by offering an efficient, and user-friendly platform. This innovative solution will ensure that students can easily submit their complaints, get AI generated solutions or escalate the issues to the authorities. The secure handling of student data will protect privacy and comply with data protection regulations, helping to build a trust among the students.

In summary, the Student Redressal Cell System is a transformative initiative that will enhance student welfare by improving the transparency, and effectiveness of grievance handling. By using this technology to address these challenges, the institution can create a more supportive and responsive environment that prioritizes student well-being.

5.2 Future Scope

- Making use of NLP techniques in order for the AI to classify the complaints of students to various categories.
- To upgrade this website to an application with more innovative features such as improved AI generated conversations.

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Appendix A: Presentation



STUDENT REDRESSAL CELL SYSTEM

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Associate Professor

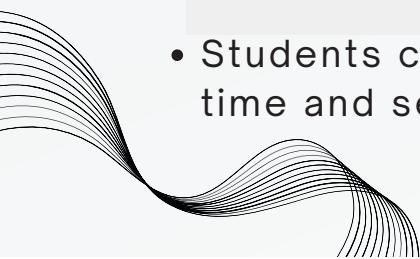
Abhay Adhip
Abraham Joseph Joseph
Basil Santhosh Vadath
Chris John George

CONTENT

- 01** INTRODUCTION
- 02** PROBLEM DEFINITION
- 03** OBJECTIVES
- 04** SCOPE AND RELEVANCE
- 05** SYSTEM DESIGN
- 06** WORK DIVISION – GANTT CHART
- 07** SOFTWARE REQUIREMENTS
- 08** RESULTS
- 09** CONCLUSION
- 10** REFERENCES

INTRODUCTION

- The student redressal cell system is a website which helps students raise their complaints and issues faced by them.
- It also includes AI chatbot to solve their issue. They can also connect with the student welfare officer to discuss their issues.
- Students can track the status of their complaints in real time and see what actions are taken in response to it.



PROBLEM DEFINITION

- To implement accessibility and efficiency to easily submit student concerns and complaints in the platform.
- To implement escalation and data security.

OBJECTIVES

Objective 1

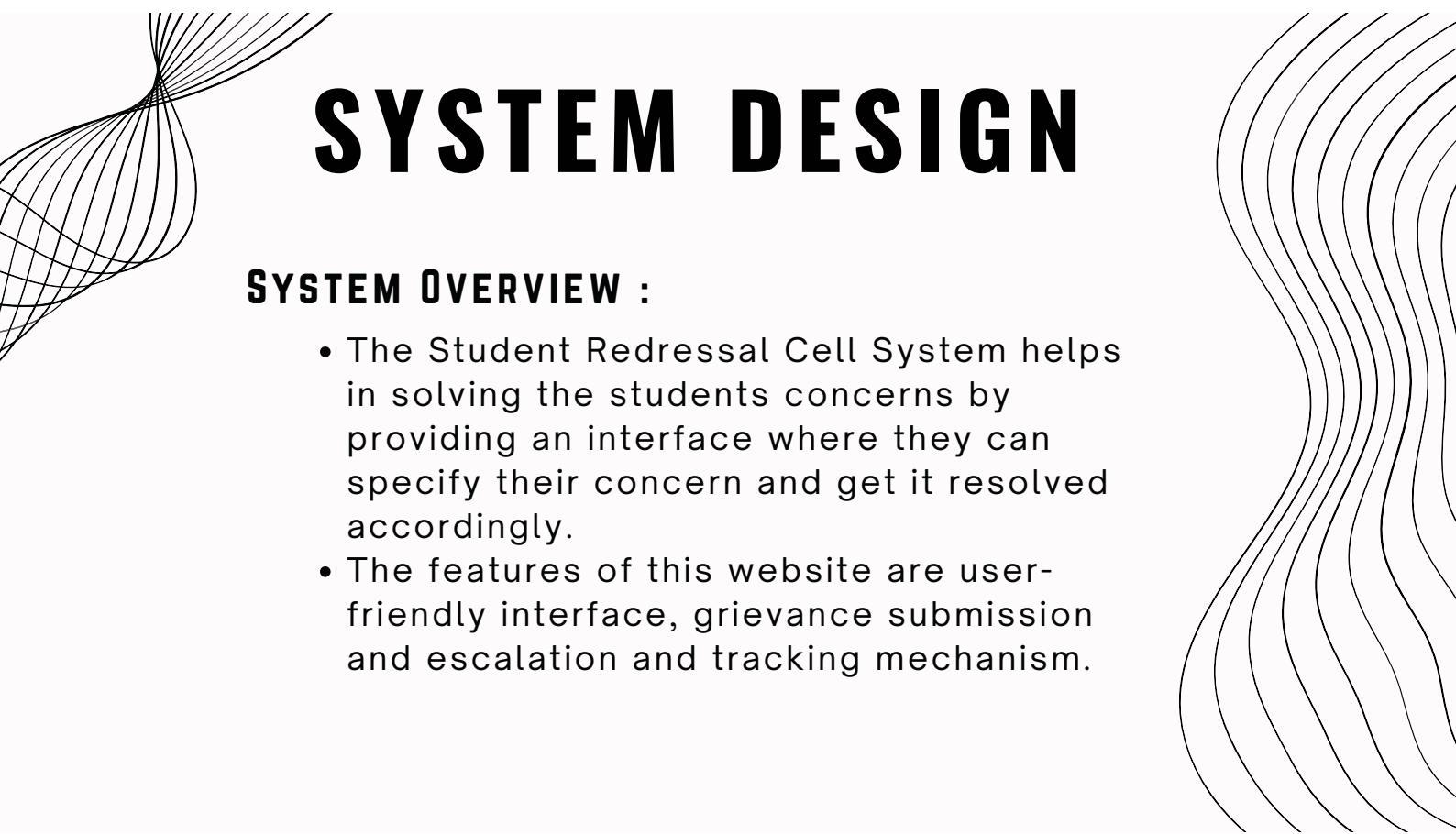
Solve the issues faced by the students and give them a safe and healthy learning environment.

Objective 2

This website provides a very user friendly interface which is very easy to navigate. Students can easily register, log in, submit their grievances without facing any usability issues.

Objective 3

This website serves as channel between the student and grievance redressal authorities.



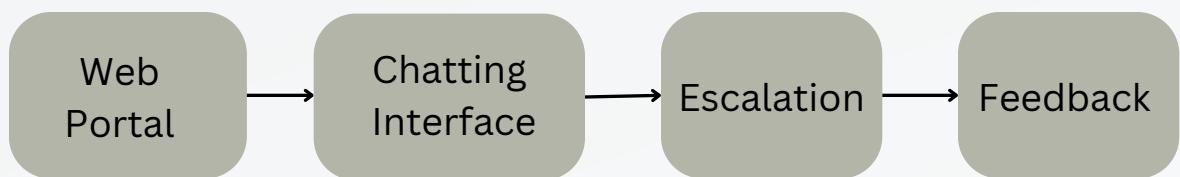
SYSTEM DESIGN

SYSTEM OVERVIEW :

- The Student Redressal Cell System helps in solving the students concerns by providing an interface where they can specify their concern and get it resolved accordingly.
- The features of this website are user-friendly interface, grievance submission and escalation and tracking mechanism.

ARCHITECTURAL DESIGN :

01 03





Module Wise Explanation

WEB PORTAL

- The input is given by the user to access the website and use it.
- It includes the login page where the user is supposed to enter their User ID and password to access the website.
- The user also provides input on the problems that they face via AI chat bot.

CHATTING INTERFACE

- In this interface the user chats with the AI bot.
- The chat will show a list of complaint categories that the problems lie in.
- After the user mentions the problem, the AI bot will accordingly provide a solution or any other alternatives.
- It would then ask the user whether if the user wants to escalate the issue.

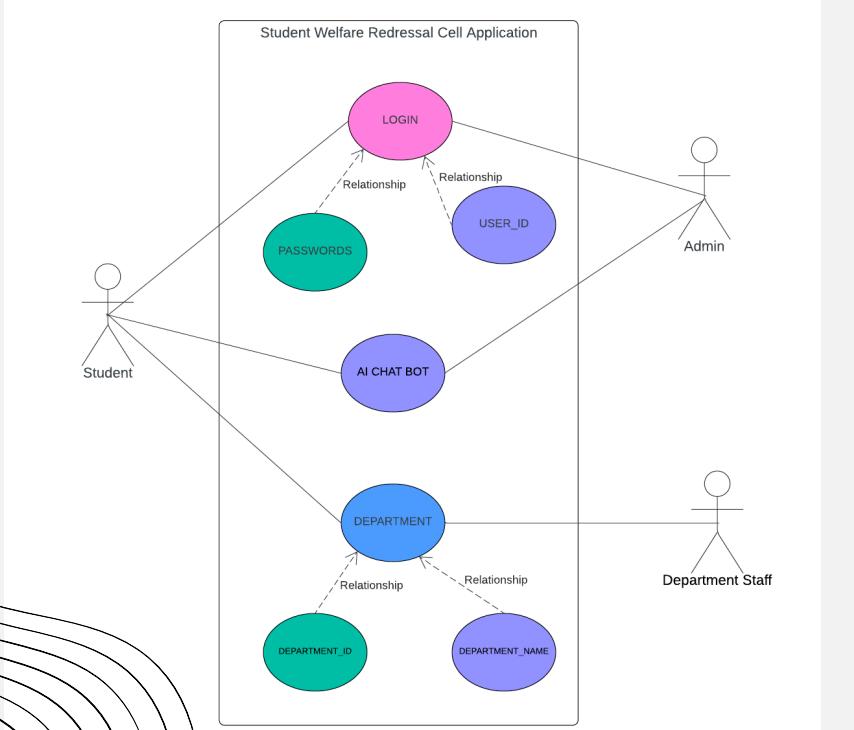
ESCALATION

- In cases where grievances require higher-level intervention, the bot facilitates the escalation of complaints to relevant authorities.
- We can track the status of the complaint and update the user accordingly.
- If the problem is resolved the user can provide the appropriate feedback.

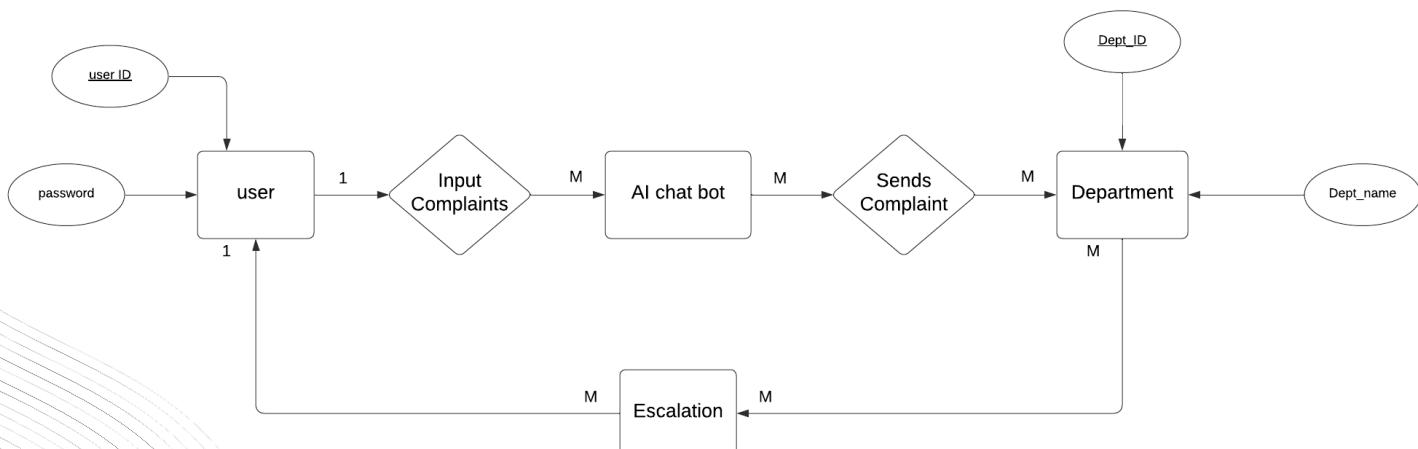
FEEDBACK

- After the users are provided with the necessary solutions, the bot will ask the users to rate their experience with the chat bot.
- Implementing an effective feedback mechanism in a Student Welfare Redressal Cell is crucial for gathering reviews, improving user experience, and enhancing the website's overall effectiveness.

USE CASE DIAGRAM:



ER DIAGRAM:



WORK DIVISION

	Feb 15-21	Feb 22-29	March 1-17	March 8-14	March 15-22	March 23-31	April 1-7	April 8-14	April 15-22	April 23-30	May 1-7	May 8-14	May 15-22
Abstract													
Abstract presentation													
SRS document													
Design Document													
Design presentation													
Code Development													
Code Evaluation And Testing													
Final Project report													

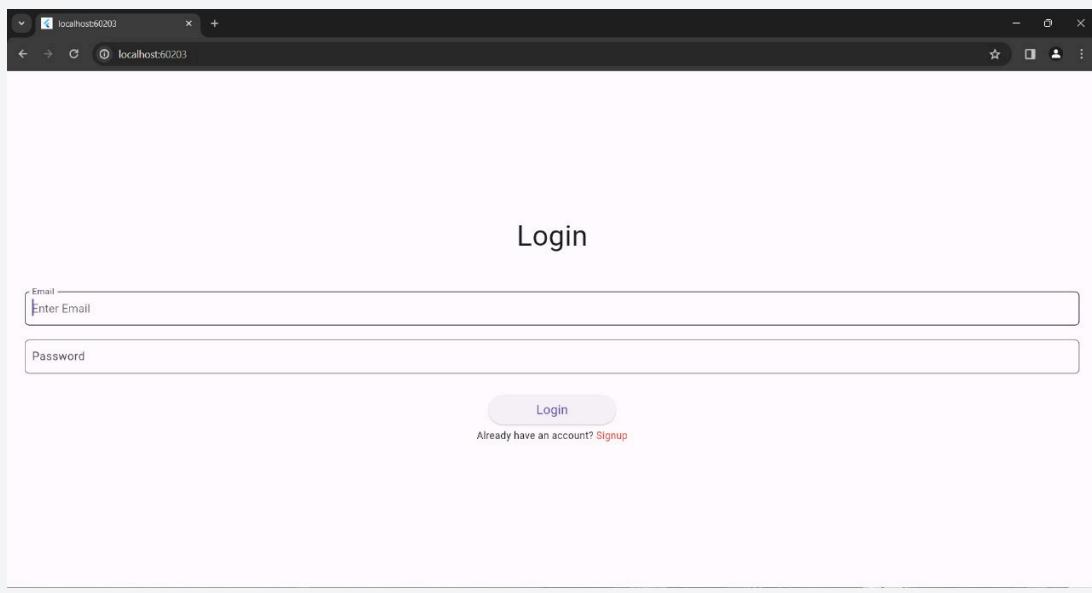
Everest
Cantu

SOFTWARE REQUIREMENTS

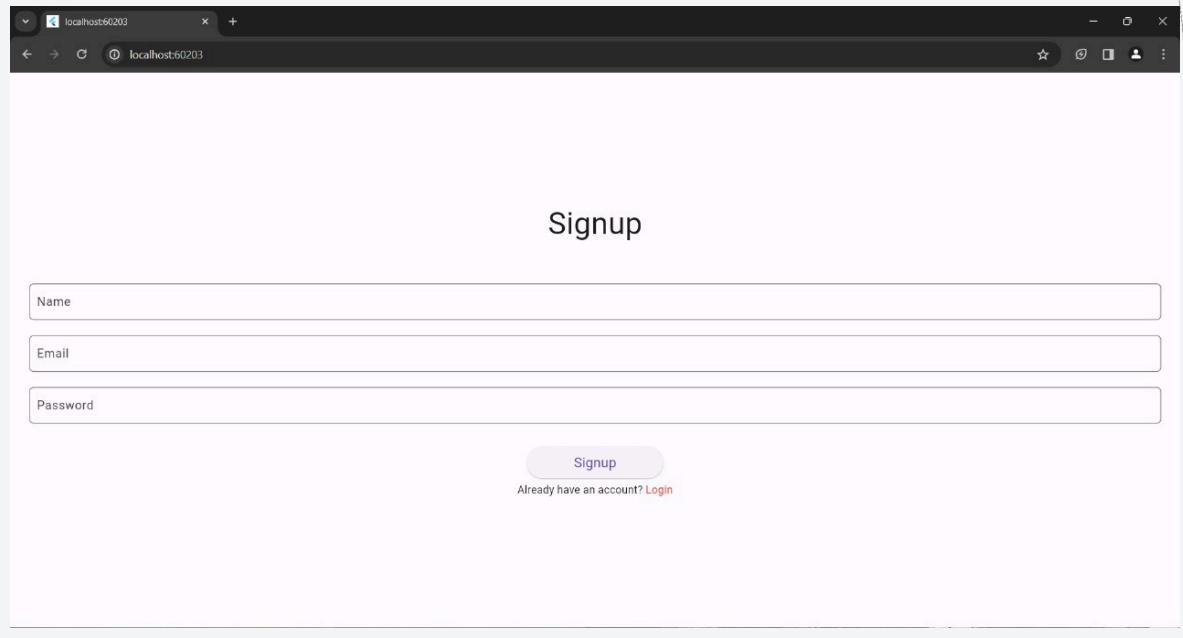
- The softwares used for developing this website is Android Studio Code . It is developed using Google Flutter and HTML. For storing students data Google Firebase is used as the database.

UI DESIGN

LOGIN PAGE



SIGNUP PAGE



DATABASE

The screenshot shows the Firebase Authentication console interface. The top navigation bar includes tabs for 'Users', 'Sign-in method', 'Templates', 'Usage', 'Settings', and 'Extensions'. A search bar at the top allows filtering by email address, phone number, or user UID. Below the search bar is a table displaying three user entries:

Identifier	Providers	Created	Signed In	User UID
abhay@gmail.com	✉️	May 21, 2024		xqV98RJMxrSqqAuN2aFZJMu...
abraham@gmail.com	✉️	May 21, 2024	May 21, 2024	954aSY0eMFMcMoC3lABokrK...
chris@gmail.com	✉️	May 21, 2024	May 21, 2024	PwxNZuCSDzPAxwxmlAdJAa...

At the bottom of the table, there are pagination controls for 'Rows per page' (set to 50), '1 - 3 of 3', and navigation arrows. The left sidebar contains icons for Home, Analytics, Firestore, Functions, Storage, and Realtime Database.

HOME PAGE

The screenshot shows a web browser window with the URL "localhost:60618" in the address bar. The page has a light orange header and a white main content area. The title "STUDENT WELFARE REDRESSAL CELL" is displayed prominently in large, bold, dark letters. Below the title, a welcome message in blue text reads: "Welcome to the Student Welfare Redressal Platform! We are committed to ensuring the well-being and satisfaction of all students within our educational community. Our platform provides a safe and accessible space for students to voice their concerns, seek support, and access resources aimed at enhancing their overall educational experience. Here you can raise your concerns and get solution to it or raise it to the higher authorities". A section titled "Student Mental Wellness" in large, bold, dark letters follows, with a detailed description of its importance in the white content area.

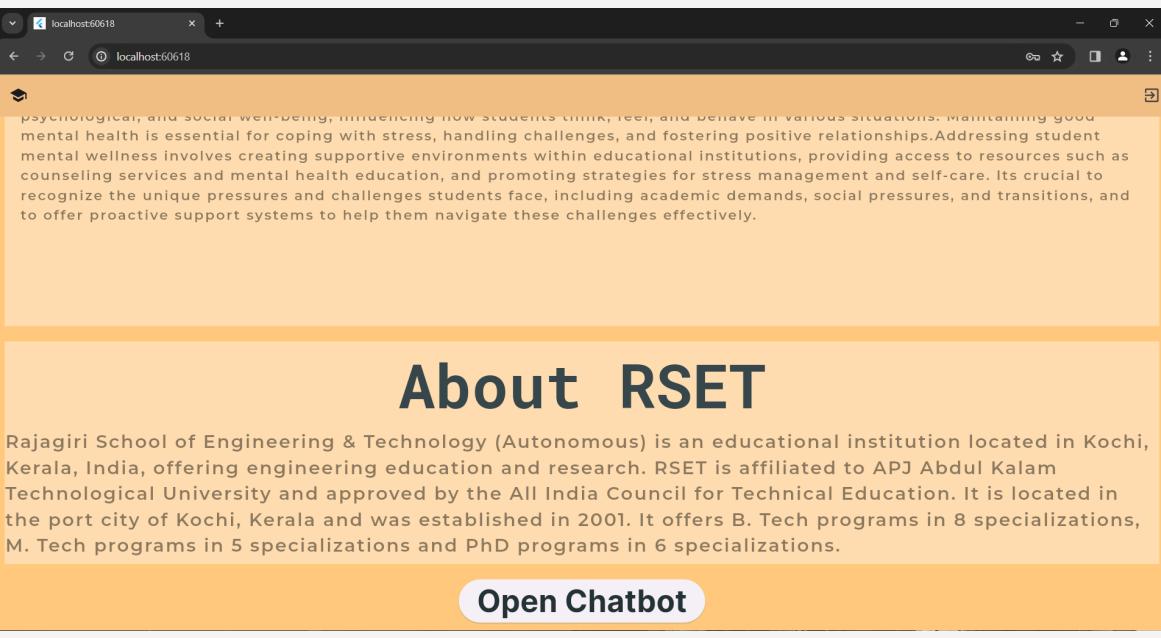
STUDENT WELFARE REDRESSAL CELL

Welcome to the Student Welfare Redressal Platform! We are committed to ensuring the well-being and satisfaction of all students within our educational community. Our platform provides a safe and accessible space for students to voice their concerns, seek support, and access resources aimed at enhancing their overall educational experience. Here you can raise your concerns and get solution to it or raise it to the higher authorities

Student Mental Wellness

Student mental wellness is a critical aspect of overall academic success and personal development. It encompasses emotional, psychological, and social well-being, influencing how students think, feel, and behave in various situations. Maintaining good mental health is essential for coping with stress, handling challenges, and fostering positive relationships. Addressing student mental wellness involves creating supportive environments within educational institutions, providing access to resources such as counseling services and mental health education, and promoting strategies for stress management and self-care. It's crucial to

HOME PAGE



A screenshot of a web browser window titled "localhost:60618". The page content is displayed in a large orange box. At the top left of this box is a graduation cap icon. The text discusses student mental health, emphasizing its importance for coping with stress and maintaining positive relationships. It highlights the need for supportive environments, counseling services, and stress management strategies. The text also mentions the pressures students face, such as academic demands and social transitions.

About RSET

Rajagiri School of Engineering & Technology (Autonomous) is an educational institution located in Kochi, Kerala, India, offering engineering education and research. RSET is affiliated to APJ Abdul Kalam Technological University and approved by the All India Council for Technical Education. It is located in the port city of Kochi, Kerala and was established in 2001. It offers B. Tech programs in 8 specializations, M. Tech programs in 5 specializations and PhD programs in 6 specializations.

Open Chatbot

BOTPRESS

Bot This chatbot was built surprisingly fast with Botpress

May 22, 12:28 AM

hi

Hey welcome to Student Welfare Redress Cell. My purpose is to provide support and guidance regarding student concerns within educational institutions.

B Choose the options below

College_info **College_concerns**

Chat with bot

Bot This chatbot was built surprisingly fast with Botpress

concerns within educational institutions.

B Choose the options below

College_concerns

B Choose the complain category of your choice

College (General) **Classroom**
Transportation **Canteen** **Student Welfare**

Chat with bot

Bot This chatbot was built surprisingly fast with Botpress

Choose the complain category of your choice

Classroom

B I'm here to help. Could you please describe the issue you're dealing with?

less desks in my class

Chat with bot

B **Bot**
This chatbot was built surprisingly fast with Botpress

I understand your concern about the shortage of desks in your class. One potential solution is to coordinate with the facilities management team to bring in additional desks from other classrooms or storage areas. Alternatively, you could arrange a rotating schedule where some students use alternative seating like foldable chairs with writing tablets. This way, everyone gets a fair chance to use a standard desk during the class period.

B Do you want you escalate this issue?

Yes **No**

Chat with bot

B **Bot**
This chatbot was built surprisingly fast with Botpress

1. Principal: Fr. Dr. M. S. Sreejith
principal_rset@rajagiritech.edu.in
2. Vice Principal: Fr. Dr. Jaison Paul
Mulerikkal CMI -
jaisonmpaul@rajagiritech.edu.in
3. Assistant Director: Fr. Dr. Joel
George Pullolil CMI -
joel_p@rajagiritech.edu.in
4. Office: office@rajagiritech.edu.in

You can also contact your respective class teachers and HODs

B Do you want to continue?

Yes **No**

Chat with bot

B **Bot**
This chatbot was built surprisingly fast with Botpress

B Do you want to continue?

No

B I would like to know your feedback regarding the chat experience.....Pls rate from 0-10, 10 being Excellent.

8

B Wonderful, I'm glad that you enjoyed our chat. Hope you have a great day :)

Chat with bot

 Webchat 1 minute ago

[Details](#) [JSON](#)

Summary	Welcome to the Student Welfare Redressal Cell. We provide support and guidance for student concerns in educational institutions. You can choose from options like College_info, College_concerns, and more. The user's latest concern is related to the Classroom. The bot suggests coordinating with the facilities...
Conversation ID	conv_01HYDBSX1F5T2BG1DGV3Y3ZNNY
Channel	channel
Updated At	Tue, 21 May 2024 19:02:49 GMT
Participants	 user_01HYDBSX...
Tags	webchat:id b3737be4-095d-42e2-a2ab-80ae0fb...

I'm here to help. Could you please describe the issue you're dealing with?

 less desks in my class

I understand your concern about the shortage of desks in your class. One potential solution is to coordinate with the facilities management team to bring in additional desks from other classrooms or storage areas. Alternatively, you could arrange a rotating schedule where some students use alternative seating like foldable chairs with writing tablets. This way, everyone gets a fair chance to use a standard desk during the class period.

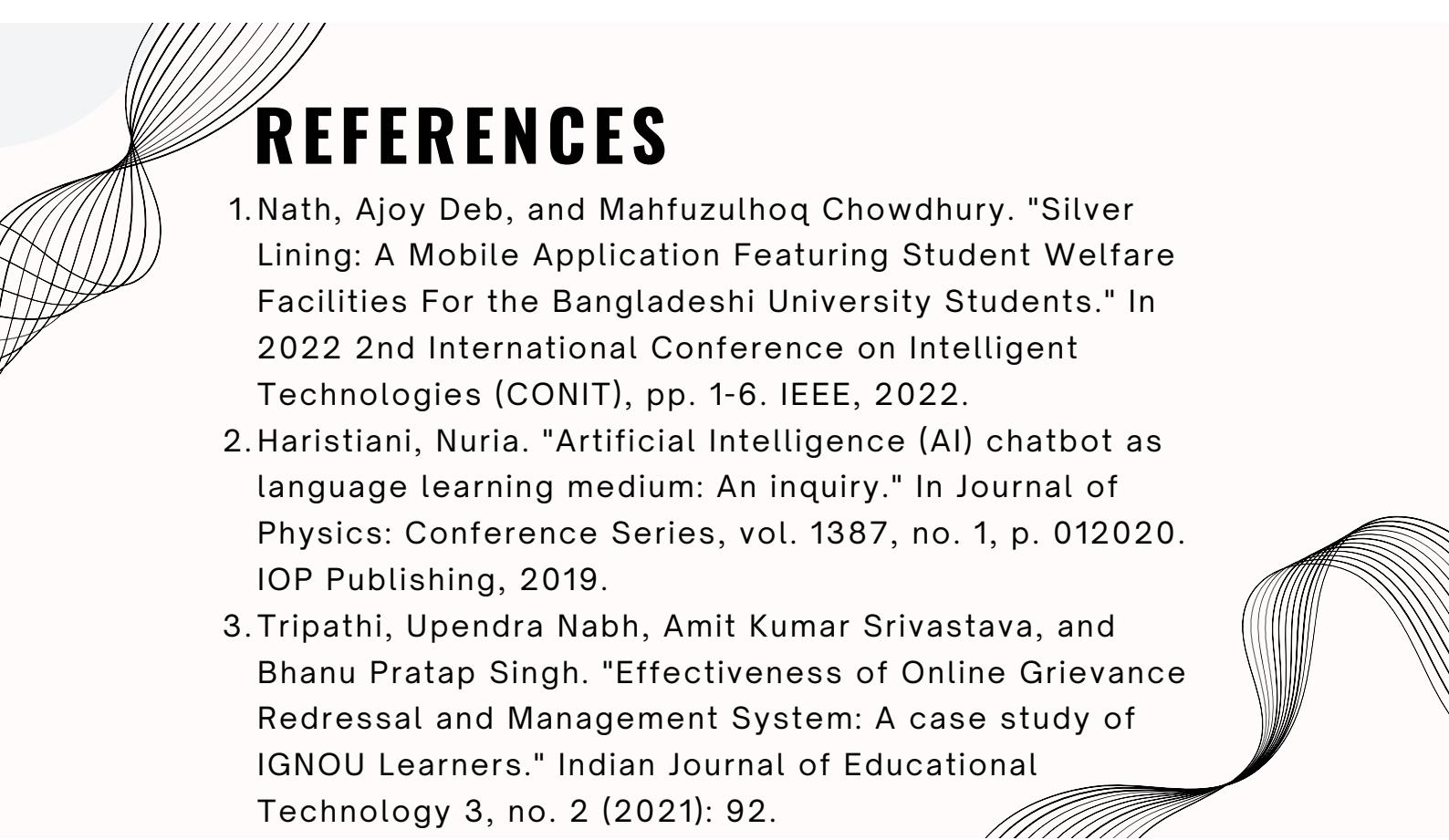
 Yes 

 Yes

Please mail your issues to these mail ids below-
1. Principal: Prof.(Dr). P. S. Sreejith - principal_rset@rajagiritech.edu.in
2. Vice Principal: Fr. Dr. Jaison Paul Mulerikkal vp_rset@rajagiritech.edu.in

CONCLUSION

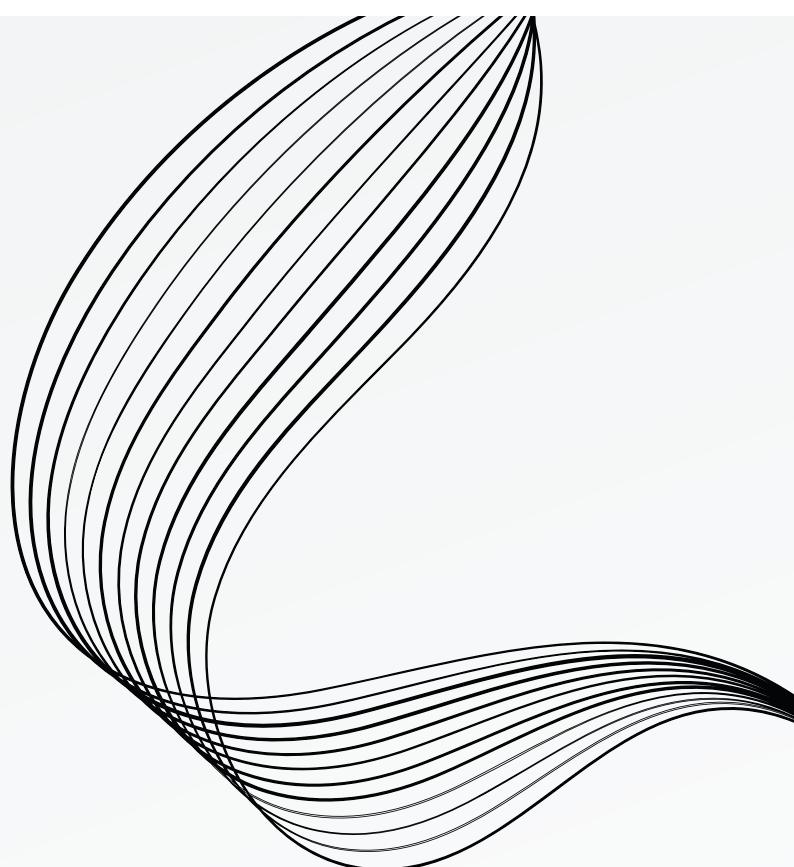
- In conclusion, the Student Welfare Redressal Cell helps the users feel supported and also allows them to voice their concerns if necessary.
- It is a user friendly interface that helps users to access it easily in order for them to voice their concerns and grievances.
- This platform allows users to communicate with AI chatbots about their concerns and get the appropriate solutions. They can escalate it if needed.
- Students can submit their feedback if they are satisfied with the solutions provide by the AI chatbots.



REFERENCES

1. Nath, Ajoy Deb, and Mahfuzulhoq Chowdhury. "Silver Lining: A Mobile Application Featuring Student Welfare Facilities For the Bangladeshi University Students." In 2022 2nd International Conference on Intelligent Technologies (CONIT), pp. 1-6. IEEE, 2022.
2. Haristiani, Nuria. "Artificial Intelligence (AI) chatbot as language learning medium: An inquiry." In Journal of Physics: Conference Series, vol. 1387, no. 1, p. 012020. IOP Publishing, 2019.
3. Tripathi, Upendra Nabh, Amit Kumar Srivastava, and Bhanu Pratap Singh. "Effectiveness of Online Grievance Redressal and Management System: A case study of IGNOU Learners." Indian Journal of Educational Technology 3, no. 2 (2021): 92.

THANK YOU



Appendix B: Vision, Mission, Programme Outcomes and Course Outcomes

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
RAJAGIRI SCHOOL OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)
RAJAGIRI VALLEY, KAKKANAD, KOCHI, 682039
(Affiliated to APJ Abdul Kalam Technological University)



RSET
RAJAGIRI SCHOOL OF
ENGINEERING & TECHNOLOGY
(AUTONOMOUS)



RSET
RAJAGIRI SCHOOL OF
ENGINEERING & TECHNOLOGY
(AUTONOMOUS)

Vision, Mission, Programme Outcomes and Course Outcomes

Institute Vision

To evolve into a premier technological institution, moulding eminent professionals with creative minds, innovative ideas and sound practical skill, and to shape a future where technology works for the enrichment of mankind.

Institute Mission

To impart state-of-the-art knowledge to individuals in various technological disciplines and to inculcate in them a high degree of social consciousness and human values, thereby enabling them to face the challenges of life with courage and conviction.

Department Vision

To become a centre of excellence in Computer Science and Engineering, moulding professionals catering to the research and professional needs of national and international organizations.

Department Mission

To inspire and nurture students, with up-to-date knowledge in Computer Science and Engineering, ethics, team spirit, leadership abilities, innovation and creativity to come out with solutions meeting societal needs.

Programme Outcomes (PO)

Engineering Graduates will be able to:

- 1. Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society:** Apply reasoning informed by the contextual knowledge

to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and Team work: Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.

10. Communication: Communicate effectively with the engineering community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Programme Specific Outcomes (PSO)

A graduate of the Computer Science and Engineering Program will demonstrate:

PSO1: Computer Science Specific Skills

The ability to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas by understanding the core principles and concepts of computer science and thereby engage in national grand challenges.

PSO2: Programming and Software Development Skills

The ability to acquire programming efficiency by designing algorithms and applying standard practices in software project development to deliver quality software products meeting the demands of the industry.

PSO3: Professional Skills

The ability to apply the fundamentals of computer science in competitive research and to develop innovative products to meet the societal needs thereby evolving as an eminent researcher and entrepreneur.

Course Outcomes

After the completion of the course the student will be able to:

CO1:

Identify technically and economically feasible problems (Cognitive Knowledge Level: Apply)

CO2:

Identify and survey the relevant literature for getting exposed to related solutions and get familiarized with software development processes (Cognitive Knowledge Level: Apply)

CO3:

Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions of minimal complexity by using modern tools & advanced programming techniques (Cognitive Knowledge Level: Apply)

CO4:

Prepare technical report and deliver presentation (Cognitive Knowledge Level: Apply)

CO5:

Apply engineering and management principles to achieve the goal of the project (Cognitive Knowledge Level: Apply)

Appendix C: CO-PO-PSO Mapping

COURSE OUTCOMES:

After completion of the course the student will be able to

SL. NO	DESCRIPTION	Blooms' Taxonomy Level
CO1	Identify technically and economically feasible problems (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO2	Identify and survey the relevant literature for getting exposed to related solutions and get familiarized with software development processes (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO3	Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions of minimal complexity by using modern tools & advanced programming techniques (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO4	Prepare technical report and deliver presentation (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO5	Apply engineering and management principles to achieve the goal of the project (Cognitive Knowledge Level: Apply)	Level 3: Apply

CO-PO AND CO-PSO MAPPING

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PS O3
C O1	3	3	3	3		2	2	3	2	2	2	3	2	2	2
C O2	3	3	3	3	3	2		3	2	3	2	3	2	2	2
C O3	3	3	3	3	3	2	2	3	2	2	2	3			2
C O4	2	3	2	2	2			3	3	3	2	3	2	2	2
C O5	3	3	3	2	2	2	2	3	2		2	3	2	2	2

3/2/1: high/medium/low

JUSTIFICATIONS FOR CO-PO MAPPING

MAPPING	LOW/ MEDIUM/ HIGH	JUSTIFICATION
101003/CS6 22T.1-PO1	HIGH	Identify technically and economically feasible problems by applying the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
101003/CS6 22T.1-PO2	HIGH	Identify technically and economically feasible problems by analysing complex engineering problems reaching substantiated conclusions using first principles of mathematics.
101003/CS6 22T.1-PO3	HIGH	Design solutions for complex engineering problems by identifying technically and economically feasible problems.
101003/CS6 22T.1-PO4	HIGH	Identify technically and economically feasible problems by analysis and interpretation of data.
101003/CS6 22T.1-PO6	MEDIUM	Responsibilities relevant to the professional engineering practice by identifying the problem.
101003/CS6 22T.1-PO7	MEDIUM	Identify technically and economically feasible problems by understanding the impact of the professional engineering solutions.
101003/CS6 22T.1-PO8	HIGH	Apply ethical principles and commit to professional ethics to identify technically and economically feasible problems.
101003/CS6 22T.1-PO9	MEDIUM	Identify technically and economically feasible problems by working as a team.
101003/CS6 22T.1-PO10	MEDIUM	Communicate effectively with the engineering community by identifying technically and economically feasible problems.
101003/CS6 22T.1-P011	MEDIUM	Demonstrate knowledge and understanding of engineering and management principles by selecting the technically and economically feasible problems.
101003/CS6 22T.1-PO12	HIGH	Identify technically and economically feasible problems for long term learning.
101003/CS6 22T.1-PSO1	MEDIUM	Ability to identify, analyze and design solutions to identify technically and economically feasible problems.
101003/CS6 22T.1-PSO2	MEDIUM	By designing algorithms and applying standard practices in software project development and Identifying technically and economically feasible problems.
101003/CS6 22T.1-PSO3	MEDIUM	Fundamentals of computer science in competitive research can be applied to Identify technically and economically feasible problems.
101003/CS6 22T.2-PO1	HIGH	Identify and survey the relevant by applying the knowledge of mathematics, science, engineering fundamentals.

101003/CS6 22T.2-PO2	HIGH	Identify, formulate, review research literature, and analyze complex engineering problems get familiarized with software development processes.
101003/CS6 22T.2-PO3	HIGH	Design solutions for complex engineering problems and design based on the relevant literature.
101003/CS6 22T.2-PO4	HIGH	Use research-based knowledge including design of experiments based on relevant literature.
101003/CS6 22T.2-PO5	HIGH	Identify and survey the relevant literature for getting exposed to related solutions and get familiarized with software development processes by using modern tools.
101003/CS6 22T.2-PO6	MEDIUM	Create, select, and apply appropriate techniques, resources, by identifying and surveying the relevant literature.
101003/CS6 22T.2-PO8	HIGH	Apply ethical principles and commit to professional ethics based on the relevant literature.
101003/CS6 22T.2-PO9	MEDIUM	Identify and survey the relevant literature as a team.
101003/CS6 22T.2-PO10	HIGH	Identify and survey the relevant literature for a good communication to the engineering fraternity.
101003/CS6 22T.2-PO11	MEDIUM	Identify and survey the relevant literature to demonstrate knowledge and understanding of engineering and management principles.
101003/CS6 22T.2-PO12	HIGH	Identify and survey the relevant literature for independent and lifelong learning.
101003/CS6 22T.2-PSO1	MEDIUM	Design solutions for complex engineering problems by Identifying and survey the relevant literature.
101003/CS6 22T.2-PSO2	MEDIUM	Identify and survey the relevant literature for acquiring programming efficiency by designing algorithms and applying standard practices.
101003/CS6 22T.2-PSO3	MEDIUM	Identify and survey the relevant literature to apply the fundamentals of computer science in competitive research.
101003/CS6 22T.3-PO1	HIGH	Perform requirement analysis, identify design methodologies by using modern tools & advanced programming techniques and by applying the knowledge of mathematics, science, engineering fundamentals.
101003/CS6 22T.3-PO2	HIGH	Identify, formulate, review research literature for requirement analysis, identify design methodologies and develop adaptable & reusable solutions.

101003/CS6 22T.3-PO3	HIGH	Design solutions for complex engineering problems and perform requirement analysis, identify design methodologies.
101003/CS6 22T.3-PO4	HIGH	Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
101003/CS6 22T.3-PO5	HIGH	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools.
101003/CS6 22T.3-PO6	MEDIUM	Perform requirement analysis, identify design methodologies and assess societal, health, safety, legal, and cultural issues.
101003/CS6 22T.3-PO7	MEDIUM	Understand the impact of the professional engineering solutions in societal and environmental contexts and Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions.
101003/CS6 22T.3-PO8	HIGH	Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions by applying ethical principles and commit to professional ethics.
101003/CS6 22T.3-PO9	MEDIUM	Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.
101003/CS6 22T.3-PO10	MEDIUM	Communicate effectively with the engineering community and with society at large to perform requirement analysis, identify design methodologies.
101003/CS6 22T.3-PO11	MEDIUM	Demonstrate knowledge and understanding of engineering requirement analysis by identifying design methodologies.
101003/CS6 22T.3-PO12	HIGH	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change by analysis, identify design methodologies and develop adaptable & reusable solutions.
101003/CS6 22T.3-PSO3	MEDIUM	The ability to apply the fundamentals of computer science in competitive research and prior to that perform requirement analysis, identify design methodologies.
101003/CS6 22T.4-PO1	MEDIUM	Prepare technical report and deliver presentation by applying the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
101003/CS6 22T.4-PO2	HIGH	Identify, formulate, review research literature, and analyze complex engineering problems by preparing technical report and deliver presentation.

101003/CS6 22T.4-PO3	MEDIUM	Prepare Design solutions for complex engineering problems and create technical report and deliver presentation.
101003/CS6 22T.4-PO4	MEDIUM	Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions and prepare technical report and deliver presentation.
101003/CS6 22T.4-PO5	MEDIUM	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools and Prepare technical report and deliver presentation.
101003/CS6 22T.4-PO8	HIGH	Prepare technical report and deliver presentation by applying ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
101003/CS6 22T.4-PO9	HIGH	Prepare technical report and deliver presentation effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.
101003/CS6 22T.4-PO10	HIGH	Communicate effectively with the engineering community and with society at large by prepare technical report and deliver presentation.
101003/CS6 22T.4-PO11	MEDIUM	Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work by prepare technical report and deliver presentation.
101003/CS6 22T.4-PO12	HIGH	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change by prepare technical report and deliver presentation.
101003/CS6 22T.4-PSO1	MEDIUM	Prepare a technical report and deliver presentation to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas.
101003/CS6 22T.4-PSO2	MEDIUM	To acquire programming efficiency by designing algorithms and applying standard practices in software project development and to prepare technical report and deliver presentation.
101003/CS6 22T.4-PSO3	MEDIUM	To apply the fundamentals of computer science in competitive research and to develop innovative products to meet the societal needs by preparing technical report and deliver presentation.
101003/CS6 22T.5-PO1	HIGH	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
101003/CS6 22T.5-PO2	HIGH	Identify, formulate, review research literature, and analyze complex engineering problems by applying engineering and management principles to achieve the goal of the project.

101003/CS6 22T.5-PO3	HIGH	Apply engineering and management principles to achieve the goal of the project and to design solutions for complex engineering problems and design system components or processes that meet the specified needs.
101003/CS6 22T.5-PO4	MEDIUM	Apply engineering and management principles to achieve the goal of the project and use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
101003/CS6 22T.5-PO5	MEDIUM	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO6	MEDIUM	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities by applying engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO7	MEDIUM	Understand the impact of the professional engineering solutions in societal and environmental contexts, and apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO8	HIGH	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice and to use the engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO9	MEDIUM	Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO11	MEDIUM	Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO12	HIGH	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PSO1	MEDIUM	The ability to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas. Apply engineering and management principles to achieve the goal of the project.

101003/CS6 22T.5-PSO2	MEDIUM	The ability to acquire programming efficiency by designing algorithms and applying standard practices in software project development to deliver quality software products meeting the demands of the industry and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PSO3	MEDIUM	The ability to apply the fundamentals of computer science in competitive research and to develop innovative products to meet the societal needs thereby evolving as an eminent researcher and entrepreneur and apply engineering and management principles to achieve the goal of the project.

