
Software Requirements Specification

for

College PathFinder

Version 2.0

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Revisions

Version	Primary Author(s)	Description of Version	Date Completed
1.0	Ayushmaan Jay Singh Kumar Shivam Baviskar Prathmesh Param Soni Manan Kumar Anitej Jain Astitva Roy Mayank Gupta Ayush Meena Ayush Patel	This document pertains to the specified version of the project, outlining its features, functionalities, and relevant information.	26/1/24

1 Introduction

1.1 Product Scope

Description:

The College PathFinder is a comprehensive educational search and recommendation platform designed to assist students in finding suitable college programs based on a wide range of criteria. The product encompasses various features to enhance the user experience and streamline the college selection process. It allows users to set a specific All India Rank (AIR) range, helping them narrow their options based on academic performance. College PathFinder ensures that students are presented with colleges that align with their ranking, optimizing the chances of finding a suitable educational institution.

Objectives and Benefits:

- It will help users choose between their available college options based on their rank.
- It will allow students to compare two programs based on their rankings,
- It will allow users to search for a particular program and see its reviews.
- It will help users by keeping them updated with the latest happenings related to college admissions and entrance exams.
- It will allow users to communicate directly with the students studying on those campuses.

1.2 Intended Audience and Document Overview

Intended Audience

This document can benefit different categories of people, including college-going students and college-searching students, but also cater to a wide range of audiences simultaneously, including developers, content creators, stakeholders, project managers, testers, users, and approvers. The intent and purpose of the app for each stakeholder may vary significantly.

Document Overview

- **Product Overview:**
 - Describes the context and origin of the College PathFinder.
 - Outlines major features and objectives.
 - Provides a brief on the intended audience and stakeholders. Catering to diverse individuals, including developers, content creators, stakeholders, project managers, testers, users, and approvers.
- **Product Perspective:**
 - Illustrates a simple diagram highlighting major components, subsystem interconnections, and external interfaces.
 - Offers a high-level view of how the product interacts with its environment. Providing insights tailored for developers, project managers, and other stakeholders.
- **Product Functionality:**
 - Summarizes the primary functions the product must perform, focusing on user roles and functionalities for both college-seeking students and college-attending/graduated persons. This section is intended to address users'

- specific needs and expectations, making it relevant for college applicants, current students, and alumni.
- **Design and Implementation Constraints:**
 - Describes items and issues limiting development options.
 - Addresses hardware, software, and connectivity constraints.
 - Provides insights into assumed factors and dependencies., ensuring developers, project managers, and stakeholders are aware of the project's constraints.
 - **External Interface Requirements:**
 - Details logical characteristics of user interfaces.
 - Outlines hardware and software interfaces.
 - Describes user login/registration process and other critical interfaces. This section caters to users, emphasizing the user experience and interface aspects crucial for successful interaction.
 - **Use Case Model:**
 - Highlights critical use cases with specifications for sign-up and login, forgotten password, and viewing reviews.
 - Identifies authors, purposes, priorities, preconditions, and actors for each use case. This section is aimed at developers, project managers, and testers, providing detailed specifications for critical user interactions.
 - **Other Non-functional Requirements:**
 - Articulates performance, safety, and security requirements.
 - Explores software quality attributes, including flexibility, portability, maintainability, usability, and reliability. This section is essential for developers, testers, and stakeholders concerned with the overall quality and performance of the product.
 - **Other Requirements (Optional):**
 - Invites the inclusion of any additional requirements not covered elsewhere in the document.
 - **Appendices:**
 - Appendix A includes a Data Dictionary to track variables and functional requirements.
 - Appendix B - Group Log records minutes from group meetings, activities, and relevant information.
 - These appendices are valuable for developers, document writers, project managers, and other stakeholders seeking additional detailed information and records.

1.3 Definitions, Acronyms and Abbreviations

Term	Definition
CSS	Cascading style sheet is a style sheet language used to describe the presentation of a document written in markup language such as HTML.

Database	Collection of all the information monitored by this system.
HTML	The HyperText Markup Language, or HTML, is the standard markup language for documents designed to be displayed in a web browser.
Java	Java is a high-level, class-based, object-oriented programming language designed to have as few implementation dependencies as possible.
JavaScript	JavaScript, often abbreviated JS, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS.

1.4 Document Conventions

Formatting Conventions -

- Arial font size 11 is used throughout the document for text.
- The document maintains a 1" margin and is single-spaced throughout
- Section titles use font size 18; subsection titles use font size 14, and sub-subsection titles use font size 12.
- Comments are italicized, and essential words are made bold.

1.5 References and Acknowledgments

1. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.
2. Explore the UML sequence diagram - IBM

2 Overall Description

2.1 Product Overview

The College Pathfinder is an online platform designed to cater to the needs of college-seeking students and college-attending/graduated individuals. This platform bridges these two user groups, facilitating the exchange of information, reviews, and advice related to college programs.

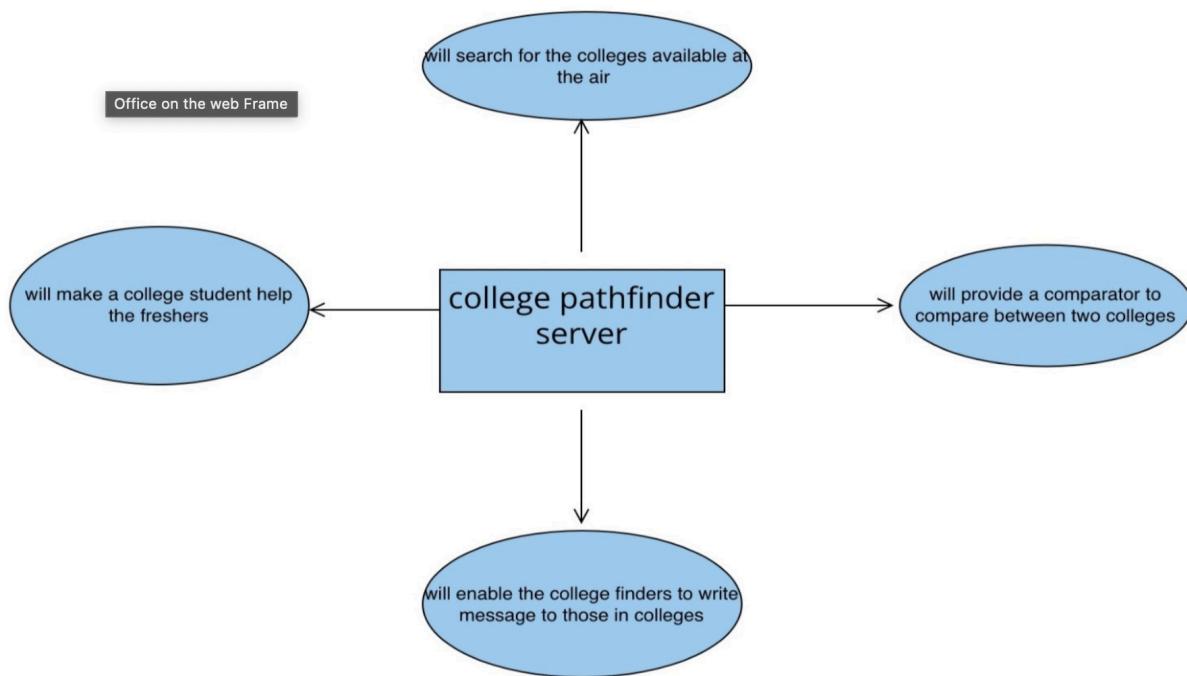
Product Interaction Overview:

The platform comprises three major user categories - college-seeking students, college-attending/graduated persons, and administrators. **College-seeking students can register, search for programs, read reviews, ask questions, and compare programs.**

College-attending/graduated individuals can register, provide reviews, answer forum questions, etc.

Administrators can log in, delete reported posts, view the user distribution, and deregister users.

The platform's functionality involves a dynamic interaction between these user categories, creating a comprehensive ecosystem for information exchange and support. The diagram below illustrates the high-level interaction between the major components of the system:



2.2 Product Functionality

The users can identify either as college-seeking students or college-attending/graduated people.

Functionalities for college-seeking students:

1. Register as a college-seeking student.
2. Search for the programs available at a college or branch with their cutoffs.

3. Search for the reviews of the desired program for academics, non-academics, college life, etc.
4. Ask questions and read the answers on the 'Q&A' forum and like, dislike, or report the answers.
5. Edit their profiles.
6. Compare two programs based on the desired criteria like placements, rankings, etc.
7. View their previous posts and delete them.
8. View the news in the news section.

Functionalities for college attending/graduated persons:

1. Register as a college attending/graduated person.
2. Give reviews about academics, non-academics, college life, etc., of a program.
3. Answer the questions asked on the forum and like/dislike or report.
4. Accept the requests from the college seeking students and schedule on-call sessions.
5. Edit their reviews and delete their posts.

Functionalities for the admins:

1. Login as an administrator
2. Delete the posts reported by the users.
3. Deregister any user.
4. View the user distribution by type.

2.3 Design and Implementation Constraints

Design and Implementation Constraints:

1. Hardware Limitation:

- No specific hardware limitations.

2. Software Specifications:

- Frontend (User Side):
 - Implemented using HTML, CSS, and JS. ReactJs Library and Bootstrap framework were used.
 - Packages like Axios, Redux, and React Router DOM were used.
 - Compatible with any modern browser supporting JavaScript, website loading, and socket communication.
 - Minimal browser requirements: 100MB Hard Disk, 128MB RAM.
- Backend (Admin Side):
 - Developed in JavaScript. NodeJs framework and Express library were used.
 - Packages like bcrypt, JWT, mongoose, CORS, and cookie parser were used.

- Database (Admin Side):
MongoDB

3. Language Requirements:

The project involves HTML, CSS, JavaScript, NodeJs, Express, and ReactJs.

4. Communication Protocol:

- Utilizes HTTP for data transfer and subcomponent interaction.

5. Interface to Third-Party Applications:

- Integration with Email for otp verification.

6. Security Considerations:

- All data is encrypted during communication using secure protocols.
- No local server maintains a copy of the database.

2.4 Assumptions and Dependencies

TO DO: Provide a short list of major assumptions that might significantly affect your design.>
Assumptions and Dependencies:

1. Email Services:

- Assumption: The project relies on email services for user authentication.
- Impact: Efficient working of the system is contingent upon the availability and reliability of email services. Any disruptions in email services may affect user login functionality.

2. Web Browser Compatibility:

- Assumption: The application is designed with modern web browsers in mind.
- Impact: Users utilizing older versions of web browsers may need more efficiency in the interface. The system's efficiency is optimized for compatibility with modern browser technologies.

3. Reliable Internet Connection:

- Assumption: Users are assumed to have a reliable internet connection.
- Impact: The project's efficiency depends on a stable internet connection. Users with unreliable or slow connections may experience delays and performance issues.

4. Website Hosting:

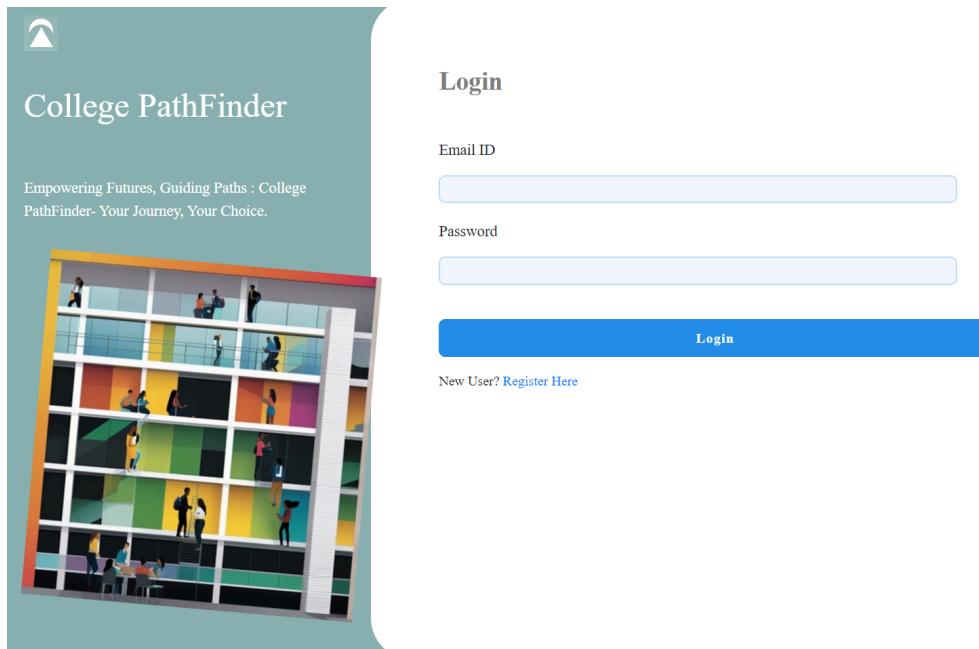
The Website works best when hosted on localhost. When hosted on an external server, it might be slower depending on the server.

3 Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interface

User Login Page:-



The image shows the login page of the College PathFinder application. The header features a teal background with the logo 'P' and the text 'College PathFinder'. Below the header is a sub-header with the tagline 'Empowering Futures, Guiding Paths : College PathFinder- Your Journey, Your Choice.' A large, colorful illustration of a modern building facade with people walking on it occupies the center-left. The main form area has a white background with the word 'Login' at the top. It contains two input fields: 'Email ID' and 'Password', each with a blue placeholder bar. Below these is a blue 'Login' button. At the bottom left of the form, there is a link 'New User? Register Here'.

College PathFinder

Empowering Futures, Guiding Paths : College PathFinder- Your Journey, Your Choice.

Login

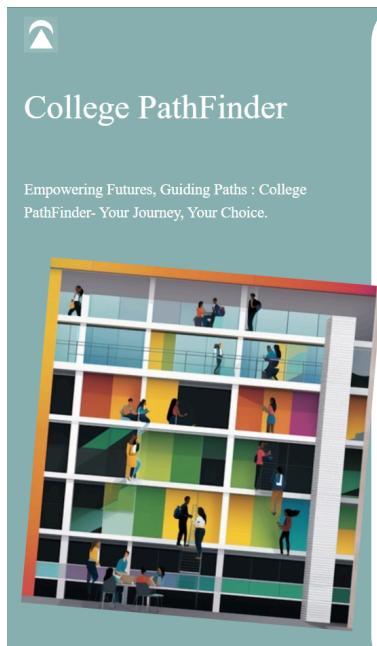
Email ID

Password

Login

New User? [Register Here](#)

CollegeSearching's Registration Page:-



College PathFinder

Empowering Futures, Guiding Paths : College PathFinder- Your Journey, Your Choice.

Register

Name (min. 5 characters)

Username (min. 5 characters)

Email ID (min. 5 characters)

Password (min. 5 characters)

Confirm Password

User Type

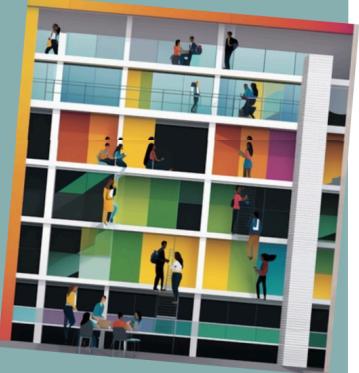
Register

CollegeGoing's Registration Page:-



College PathFinder

Empowering Futures, Guiding Paths : College PathFinder- Your Journey, Your Choice.



Register

Name (min. 5 characters)

Username (min. 5 characters)

Email ID (min. 5 characters)

Password (min. 5 characters)

Confirm Password

User Type

College

Branch

Graduation Year

Enter your Opinion about Academics of your College

Enter your Opinion about Non-Academics of your College

Enter your Opinion about Placements of your College

Enter your Overall Opinion about your College

Register

Home Page:

The home page features a large teal header with the title "College Path Finder" in a large serif font. Below it is a subtext "Connect To Success". A central illustration shows a large, light-colored building with a classical facade and several people walking or sitting in a green, landscaped area. The overall theme is educational and professional.

Empowering Students to Find Their Perfect Path

Latest News

JEE Main 2024 Results: 23 students scored 100 NTA score in session 1

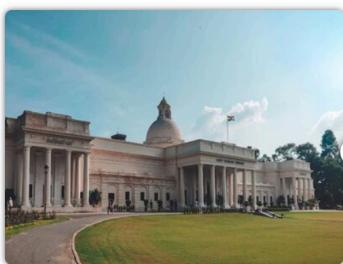
The first exam session was conducted between January 24 and February 1. The second is scheduled between April 4 and April 15.

IIT Delhi Abu Dhabi admission for India students likely through JEE: Director

IIT Delhi Abu Dhabi campus is set to open in 2024. In an interview, director Rangan Banerjee said the JEE Board is yet to approve the proposal.

Delhi's Madhav Bansal achieves 100 percentile in JEE Main, targets IIT Bombay

TOP COLLEGES



IIT Roorkee



IIT Delhi



IIT Bombay

COLLEGE

- IITs
- NITs
- Other Colleges

EXAMS

- JEE Mains
- JEE Advanced
- BITSAT
- Others

TOOLS

- Profile
- College Search
- College Compare
- College Predictor
- Forums

Follow Us



Profile Page for CollegeSearching:-

The screenshot shows the profile page for a user named Neil Armstrong. At the top, there's a navigation bar with links for Home, Forum, Search, Compare, College Predictor, and Profile. On the right, it says "Hi Armstrong" and has a Logout button. Below the navigation is a user icon with a green "Verified" badge. The main content area is divided into sections: "Personal Details" (with fields for Name, Username, and Email), "Tell us about Yourself" (an empty text area with an "Edit" button), and "Your Posts" (which says "No posts to show").

Profile Page for Admin:-

The screenshot shows the profile page for an admin user named admin123. The layout is similar to the previous one, with a navigation bar at the top. The "Personal Details" section shows the admin's name, username, and email. To the right, there's a "User Distribution" chart showing the breakdown of users: 63.4% for "College Searching", 35.5% for "College Going", and 1.1% for "Admins". The "Your Posts" section contains a "Joining Our Community: Important Guidelines to Follow" box with community rules and a "Related Topics: General" link. It also shows 1 Like and 10 Views.

Profile Page for CollegeGoing:-

College Pathfinder Home Forum Search Compare College Predictor Profile Hi Anitej Logout



Verified

Personal Details

Your Name
anitej Edit

Username
Anitej Edit

Email
1none2none3@gmail.com

College
IIT Kanpur Edit

Branch
CSE Edit

Graduation Year
2026 Edit

Opinions

Academic Opinion
GOOD Edit

Non Academic Opinion
GOOD Edit

Placement Opinion
GOOD Edit

Overall Opinion
GOOD Edit

Your Posts

hello hii new
Created by You
new post
Related Topics: IIT Bombay
2 Likes | 48 Views

College Search Page:-

The screenshot shows the 'College Search' page of the College Pathfinder application. At the top, there is a navigation bar with links: 'College Pathfinder', 'Home', 'Forum', 'Search', 'Compare', 'College Predictor', 'Profile', 'Hi Armstrong', and 'Logout'. The main title 'College Search' is displayed prominently. Below the title is a large, stylized illustration of three people interacting with a search interface. A woman sits on top of a laptop, a man stands holding a magnifying glass over a list of search results, and another woman sits in a beanbag chair looking at a phone. The background of the page is teal.

Two dropdown menus are visible below the illustration: 'IIT Roorkee' on the left and 'CSE' on the right. A blue 'Search' button is located between them.

The 'Student Opinions' section is shown below. It features a box for 'Anitej Jain' with details: Email: lallan@gmail.com, College: IIT Roorkee, Branch: CSE. Under 'Opinions:', there is a list of four items: Academic Opinion: Very Good, Non-Academic Opinion: Good Good, Placement Opinion: Okay Okay, and Overall Opinion: Not Good.

College Compare Page:-

College Comparison

	IIT Kanpur	IIT Kanpur
Location	Kanpur	Kanpur
Description	<p>Establishment: IIT Kanpur is a premier institution of technology established in 1959 by the Government of India. Renowned for its rigorous academics and cutting-edge research, IIT Kanpur is a leading force in shaping India's technological landscape.</p> <p>Alumni Network: The alumni actively engage with the institute through various initiatives, mentorship programs, and networking events. IIT Kanpur has produced a long list of distinguished alumni who have made significant contributions in various fields. Here are a few of the most famous ones:</p> <ul style="list-style-type: none"> i) Ashwini Vaishnaw (Minister of Railways, Communications and Electronics & Information Technology): A 1994 alumnus of IIT Kanpur, Ashwini Vaishnaw is a former Indian Administrative Service (IAS) officer who currently holds three cabinet minister positions in the Indian government. ii) Arvind Krishna (CEO of IBM): Graduating in 1985, Arvind Krishna is the current CEO of IBM and Director of IBM Research. He has had a distinguished career leading technological advancements at a global scale. <p>Overall, IIT Kanpur is renowned for its academic excellence, research contributions, and commitment to nurturing future leaders and innovators in the fields of science, engineering, technology, and beyond.</p>	<p>Establishment: IIT Kanpur is a premier institution of technology established in 1959 by the Government of India. Renowned for its rigorous academics and cutting-edge research, IIT Kanpur is a leading force in shaping India's technological landscape.</p> <p>Alumni Network: The alumni actively engage with the institute through various initiatives, mentorship programs, and networking events. IIT Kanpur has produced a long list of distinguished alumni who have made significant contributions in various fields. Here are a few of the most famous ones:</p> <ul style="list-style-type: none"> i) Ashwini Vaishnaw (Minister of Railways, Communications and Electronics & Information Technology): A 1994 alumnus of IIT Kanpur, Ashwini Vaishnaw is a former Indian Administrative Service (IAS) officer who currently holds three cabinet minister positions in the Indian government. ii) Arvind Krishna (CEO of IBM): Graduating in 1985, Arvind Krishna is the current CEO of IBM and Director of IBM Research. He has had a distinguished career leading technological advancements at a global scale. <p>Overall, IIT Kanpur is renowned for its academic excellence, research contributions, and commitment to nurturing future leaders and innovators in the fields of science, engineering, technology, and beyond.</p>
NIRF Ranking	4	4
Average Package	INR 18.14 LPA	INR 18.14 LPA
User Opinions	<p>Academic Opinion If I would say anything, I would be in trouble.</p> <p>Non-Academic Opinion ****</p> <p>Placement Opinion It's better to not speak</p> <p>Overall Opinion I better s*** my mouth.</p>	<p>John Doe</p> <p>Academic Opinion very good</p> <p>Non-Academic Opinion very good</p> <p>Placement Opinion very good</p> <p>Overall Opinion very good</p>

QnA Forum:-

College Pathfinder Home Forum Search Compare College Predictor Profile Hi Armstrong Logout

Forum

Join the Discussion, Share Your Insights, and Connect with the Community!

Showing 8 posts.

New Post

Joining Our Community: Important Guidelines to Follow
Created by Admin
Welcome to our community! To ensure a positive experience for all, kindly adhere to these guidelines: 1. Respect Others: Keep discussions civil, avoiding hate speech or intolerance based on race, gender, religion, etc. 2. Maintain Appropriate Content: Keep it PG! No explicit or inappropriate material, please. 3. Respect Privacy: Protect personal info; no sharing without consent. 4. Be Authentic: Be yourself; no impersonation allowed. 5. Question with Respect: Respectfully challenge ideas without hostility. 6. No Promotions: Keep content non-commercial. Let's foster a welcoming environment together!
Related Topics: [General](#)
1 Likes | 10 Views

IIT D Mechanical Help
Created by Ayushmaan
I am confused about IIT D please help
Related Topics: [IIT Delhi](#)
1 Likes | 6 Views

Related to IIT Kanpur EE
Created by Ayush
Hi I am from IIT Kanpur EE branch. I am here to help. If you have any questions I am happy to help
Related Topics: [IIT Kanpur](#)
0 Likes | 8 Views

hello hii new
Created by anitej
new post
Related Topics: [IIT Bombay](#)

All Posts
[IIT Kanpur](#)
[IIT Bombay](#)
[IIT Delhi](#)
[Academics](#)
[General](#)
[Helpful](#)
[IIT Kharagpur](#)

College Predictor Page:-

College Pathfinder Home Forum Search Compare College Predictor Profile Hi Armstrong Logout

College Predictor

JEE Advanced OPEN 500

Gender-Neutral IIT Kanpur Choose Preferred Branch:

Submit

Available Options

Seat Type: OPEN
Gender : Gender-Neutral
Category Closing Rank : 1143
Mathematics and Scientific Computing (4 Years, Bachelor of Science)

IIT Kanpur
Seat Type: OPEN
Gender : Gender-Neutral
Category Closing Rank : 1368
Electrical Engineering (4 Years, Bachelor of Technology)

IIT Kanpur
Seat Type: OPEN
Gender : Gender-Neutral
Category Closing Rank : 3155
Mechanical Engineering (4 Years, Bachelor of Technology)

IIT Kanpur
Seat Type: OPEN
Gender : Gender-Neutral
Category Closing Rank : 3300

Show More

Showing 10 out of 13 options Possible Based on Your Search

3.1.2 Hardware Interfaces

- **Supported Device Types:**
 - Desktops, laptops, tablets, and smartphones.
- **Browsers:**
 - Compatibility with major web browsers.
- **Connectivity Hardware:**
 - Modem: Facilitates the connection between the local network and the internet.
 - Network Card: Enables communication between the device and the local network.

3.1.3 Software Interfaces

In system development, we must design static and dynamic website interfaces, create website functions, and establish a database system.

This necessitates a specific set of software requirements, including:

- **Web Browser (Google Chrome is used):**
 - Utilized during the development phase for debugging and mainly testing.
- **JavaScript:**
 - Selected as the server-side programming language for the backend development of the progressive web application.
- **HTML, CSS, JS:**
 - HTML for content structure, CSS for styling, and JavaScript for backend functionality in web development.
 - Employed as foundational elements for constructing the responsive web components, forming the front end.
- **ReactJS and NodeJS:**
 - Implemented to enhance the visual appeal of the frontend interface for users.
 - ReactJS is used to build dynamic user interfaces, and NodeJS is used for server-side JavaScript execution in web development.
- **MongoDB:**
 - Communication with the server database, managing data storage and retrieval.
- **Visual Studio Code:**
 - Integrated Development Tool for various coding operations during the development process.

3.2 Functional Requirements

Login/Register:

- **New Users:**
 - Users navigate to our homepage's "Sign Up" or "Register" option.
 - Complete the registration form by providing the required information.
 - Now, users can set up a secure password for their account.
- **Registered Users:**
 - Existing Users should click the "Login" or "Sign In" button on the homepage.
 - They can enter their registered email address and password in the space provided.
 - Now, on clicking "Login," one can access their personalized profile.

- **Administrators:**

- Administrators should be able to log in to the system using unique credentials securely.
- Authentication mechanisms should be in place to ensure the confidentiality of administrator accounts.

OBJ:

User Registration:

- **CollegeSearching**

- **Functionality:** The system must allow college-seeking students to register by providing necessary information, including their name and Email ID.
- **Interfaces:** Registration form with fields for personal information and password. It should include a user-friendly interface for data entry and validation.

- **CollegeGoing**

- **Functionality:** The system must allow college-attending/graduated persons to register by providing necessary information, including their name, phone number, Email ID, educational background, an account password, and reviews.
- **Interfaces:** Web-based registration form with fields for personal information, educational background, password, etc. It should include a user-friendly interface for data entry and validation.

User Login:

- Registered users must be able to log in using a unique username or email and a secure password.
- The system must authenticate user credentials and provide appropriate error messages for invalid inputs.

User Profile:

- Both user categories could customize their password and modify personal information.

College Search:

- **Functionality:** Users should be able to search for academic programs available at the preferred colleges or branches. The system must display program details, including cutoffs, eligibility criteria, location, how to reach, rankings, etc.
- **Interfaces:** A search bar on the platform's interface with filters for program type, colleges, and branches. Program details should be displayed in a structured format on the interface.

College Compare

- **Functionality:** CollegeSearching students should be able to compare two academic programs based on desired criteria such as placements, rankings, etc.
- **Interfaces:** A side-by-side program comparison interface for selected criteria. Clear visual representation for easy comparison.

College Predictor:

- **Functionality:** Users should be able to get a prediction of programs available to them based on inputs like category, gender, AIR, preferred branch, etc.
- **Interfaces:** A section for all the possible programs that the user can enroll in based on the inputs. It should provide the basic information like college, branch, cutoff, etc.

- **Q&A Forum:**

- **CollegeSearching students:**

- **Functionality:** college-seeking students should be able to ask questions on the platform. The system must allow users to read and upvote answers.
 - **Interfaces:** A Q&A forum interface with options to ask, answer, upvote/downvote questions and report answers.

- **CollegeGoing students:**

- **Functionality:** College-attending/graduated persons should be able to answer questions read other answers to questions posted on the Q&A forum and also report them.
 - **Interfaces:** Similar to the general Q&A forum, with additional features for registered college-attending/graduated persons to answer and without the option of upvoting/downvoting their answers.

- **Administrators** have the authority to perform the following tasks:

- Manage Posts:**

- They should be able to review reported posts, assess their content, and take appropriate actions based on predefined policies (e.g., delete, warn, or escalate).

- Deregister Users:**

- Administrators should have the authority to deactivate or deregister user accounts that violate platform policies or exhibit inappropriate behavior.
 - The system should provide a mechanism for administrators to review user accounts, track user activity, and make informed decisions about deregistration.

3.3 Use Case Model

Use Case #1: Sign Up and Login

Author – Team College PathFinder

Purpose - This use case covers login and signup for admins and students, whether currently attending college, have already graduated, or are currently enrolled.

Requirements Traceability – Profile page

Priority - High

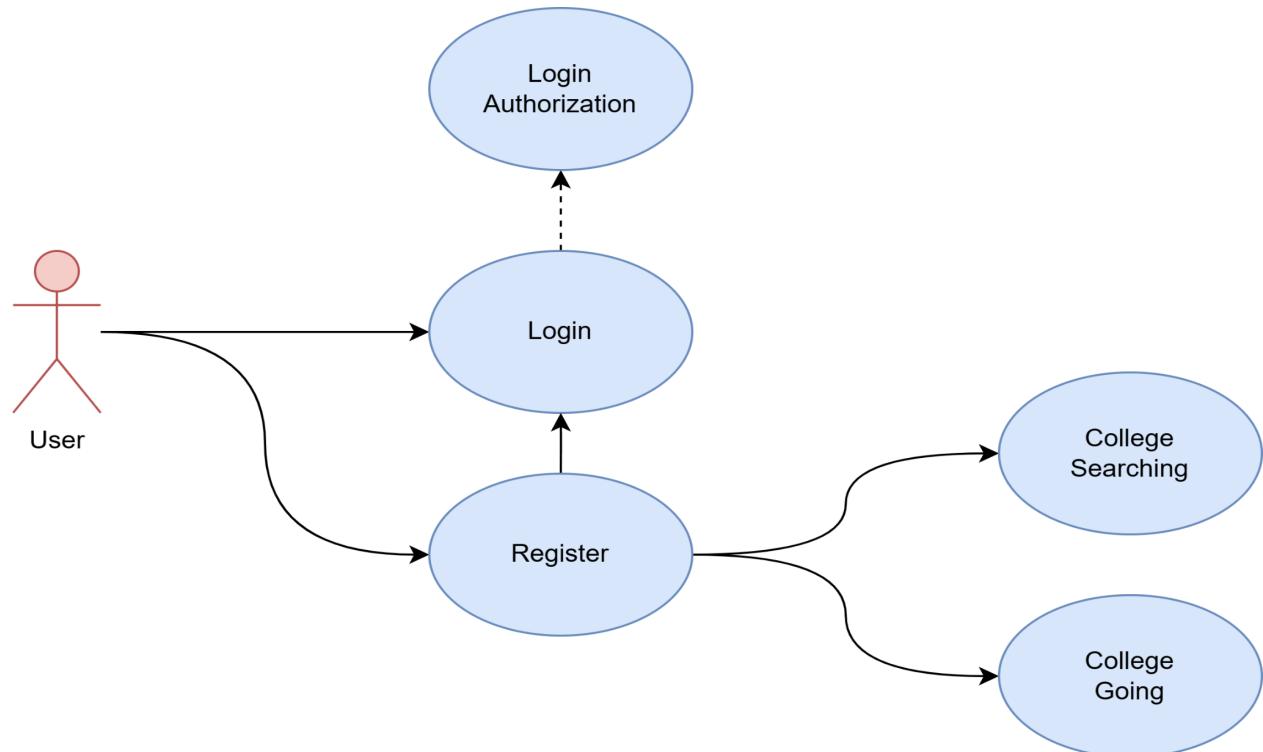
Preconditions – None

Post conditions – User is logged in

Actors – Users of the website including the managing team

Exceptions – User may forget password and go to forget password option

Notes/Issues - Users will have to enter some necessary details (name, email) during sign in.

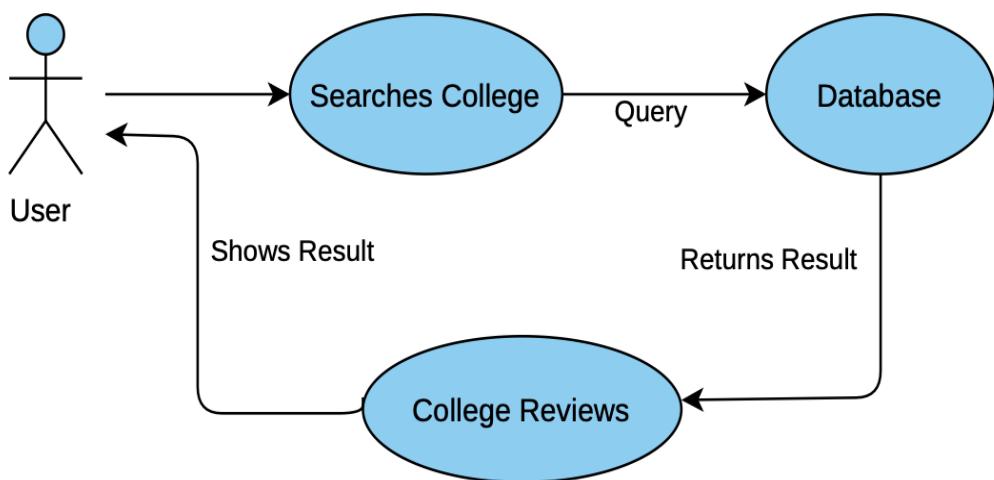


Actors – Users of the website, including the managing team

Use Case #2 Viewing Reviews

Author – Team College PathFinder

Purpose - This use case covers viewing reviews that give potential students insights about academic offerings, professors, and campus culture. It enables people to make knowledgeable selections and makes selecting a college that fits their preferences and aspirations easier.



Requirements Traceability – Reviews section

Priority – High

Preconditions – The user must be logged on to the website

Post conditions – a person will be able to get a list of the reviews

Actors – Users of the website, including the managing team

Use Case #3 College Compare

Author – Team College PathFinder

Purpose – This use case assists prospective college students in comparing two colleges directly, considering key factors to resolve various dilemmas and make more informed decisions

Requirements Traceability – College Compare section

Priority – Medium

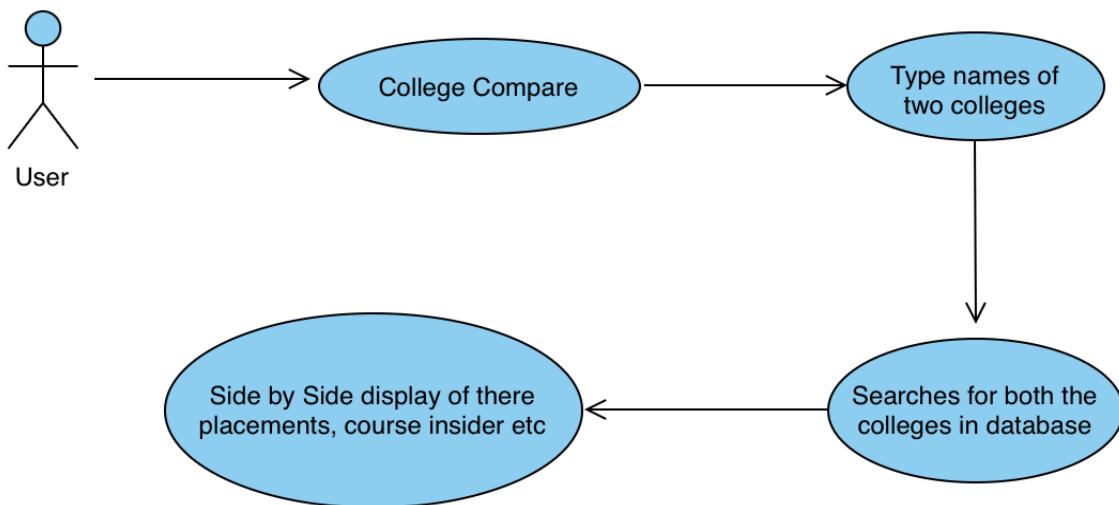
Preconditions - The user must be logged on to the website

Post conditions - will get the list side by side about the college

Actors – Users of the website, including the managing team

Exceptions – Data from all the colleges might not be available

Notes/Issues - College names must be different



Use Case #4 Posting Question on Forum

Author – Team College PathFinder

Purpose - This use case covers seeking help and sharing experiences

by posting questions on a forum, creating a collaborative space for diverse perspectives and valuable insights. Any user can like, dislike, or even report questions.

Requirements Traceability – Forums section

Priority – Medium

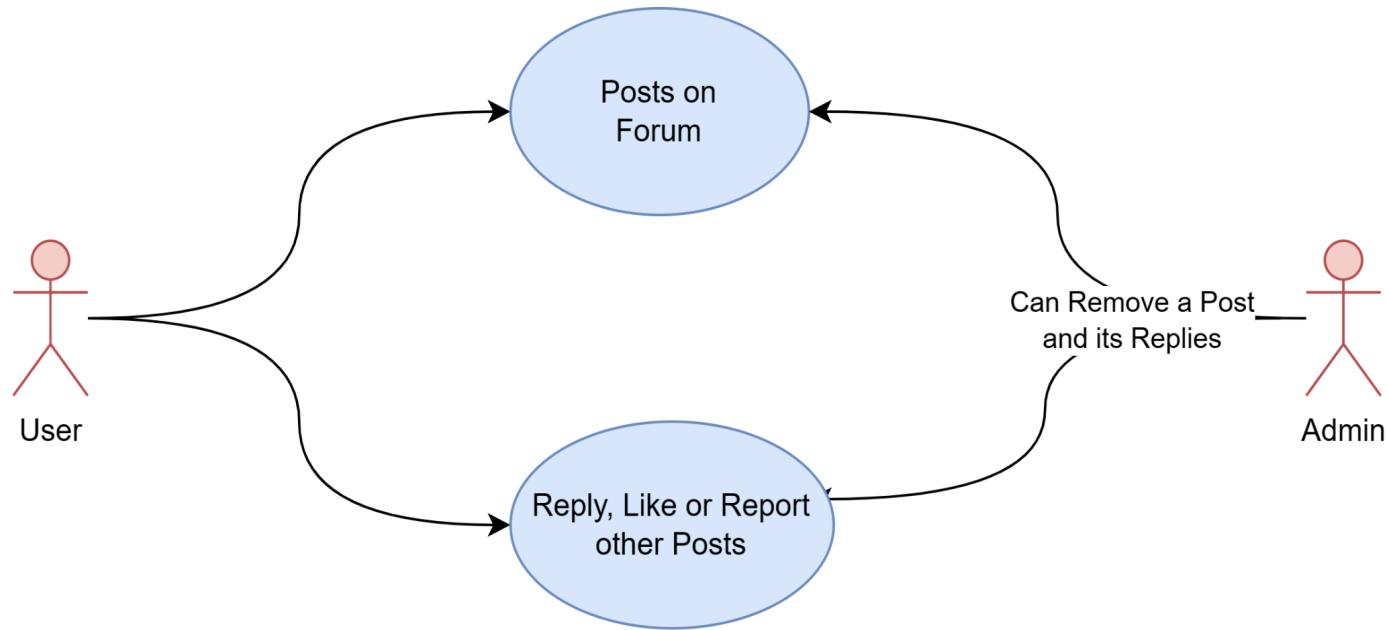
Preconditions – The user must be logged on to the website

Post conditions – A new question is added

Actors – Users of the website, including the managing team

Exceptions - not as such

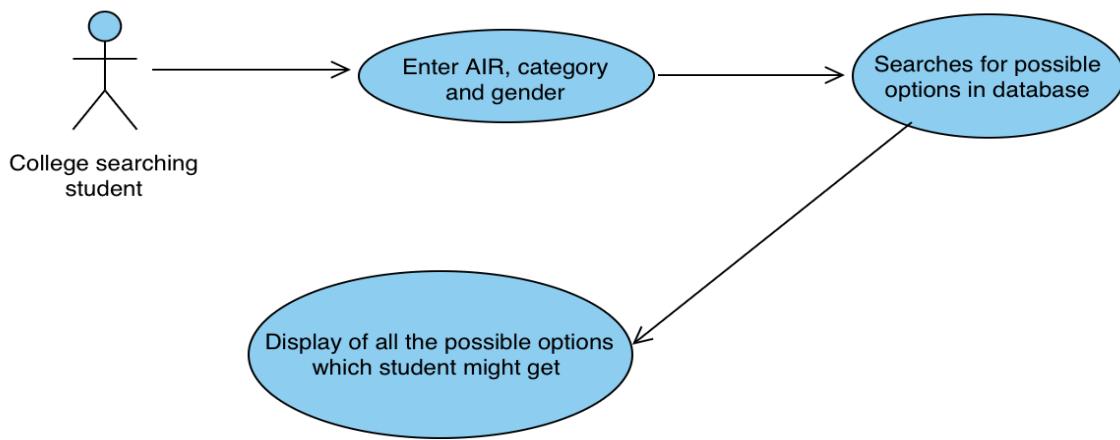
Notes/Issues - If a post gathers significant reports, the admins can delete that post.



Use Case #5 Options Filter

Author – Team College PathFinder

Purpose – This use case provides the user with possible college options based on AIR, category, and gender-based on previous occurrences.



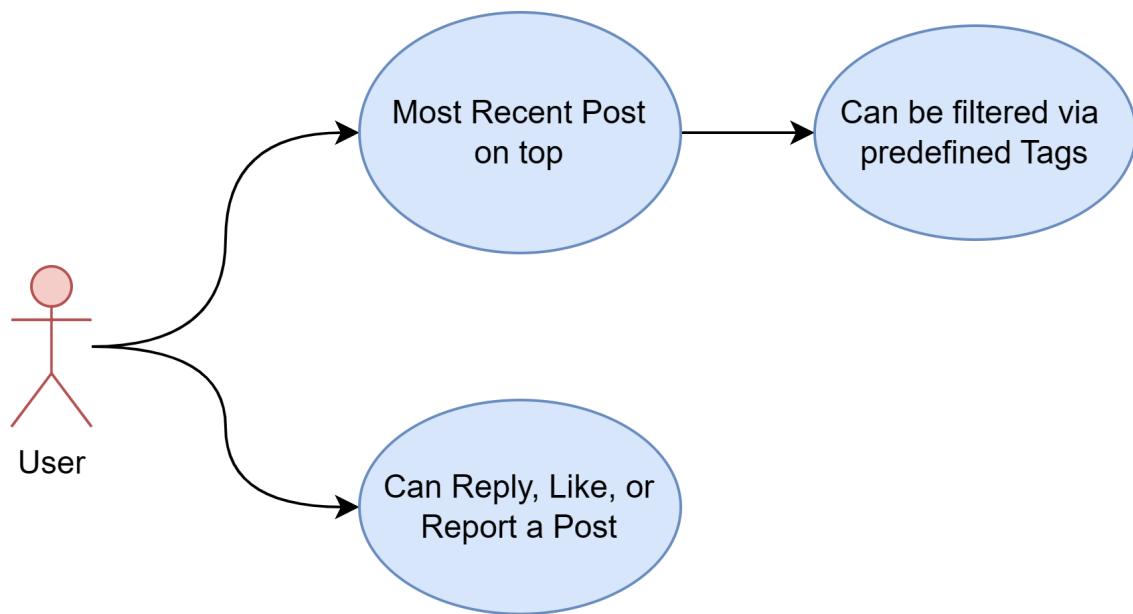
Requirements Traceability – Filters

Priority – Medium

Preconditions – The user must be logged on to the website

Postconditions –

Actors – Users of the website, including the managing team.

Use case #6 Replying to the messages

Author – Any user of the College Pathfinder

Purpose – To reply to the message issued

Requirements Traceability – profile page

Priority – high

Preconditions – the person who is replying to the message should be logged in

Postconditions – The person's reply to the message will be saved and tagged with proper tags

Actors – The user who has logged in

Exceptions – if the person is reported and expelled by the admin, he may not be able to reply

Notes/Issues - Any relevant notes or issues that need to be resolved

3.3.9 Use case #7 Updating profile

Author – college-going students

Purpose – the college students can write about the college they are going

Requirements Traceability – profile page

Priority – High

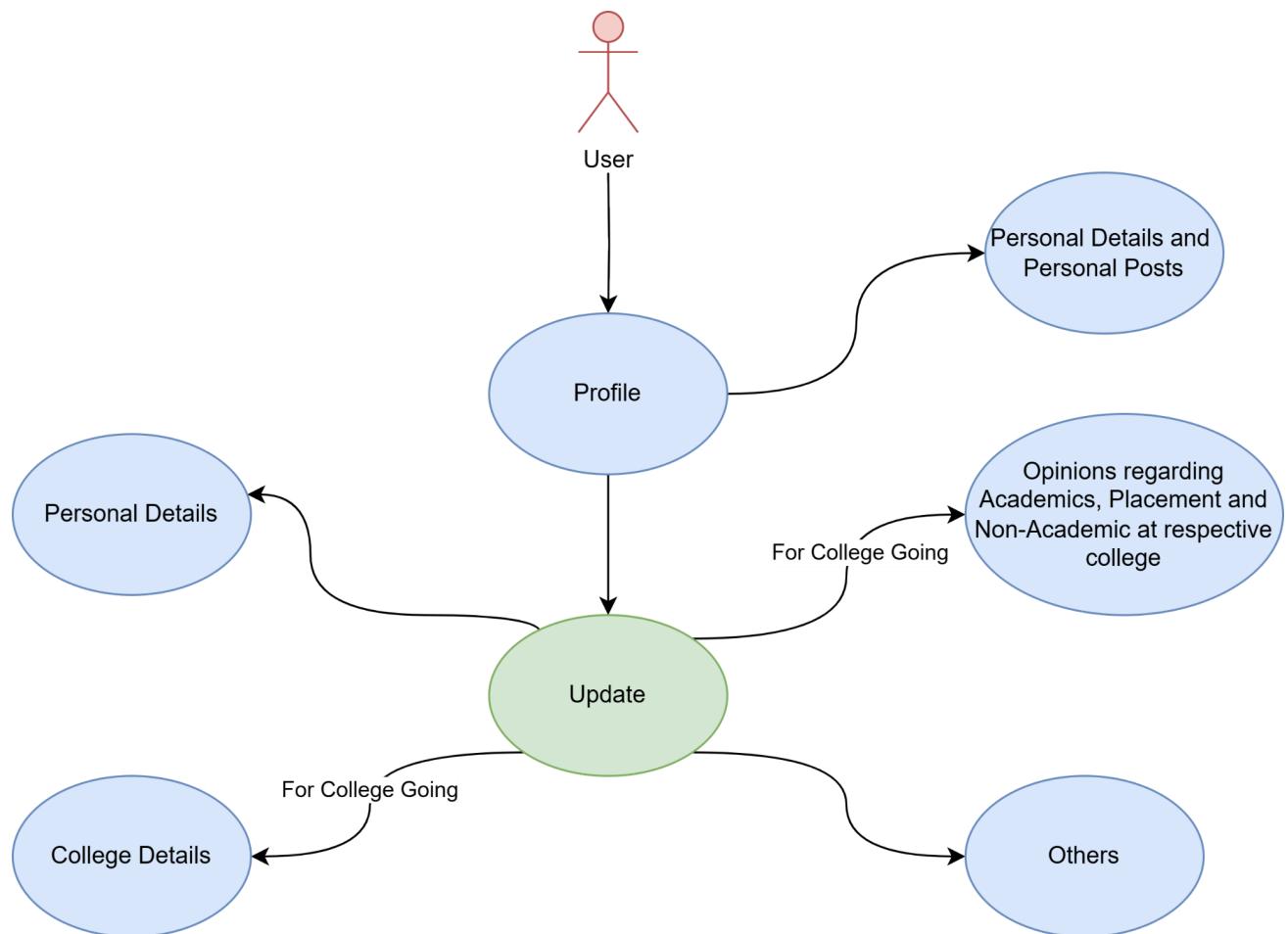
Preconditions – Those who are adding the reviews should be logged in as college-going students

Post conditions – Every piece of information the person gives will be completed with a tag.

Actors – The user who has logged in

Exceptions – if the person is reported and expelled by the admin, he may not be able to reply

Notes/Issues - Any relevant notes or issues that need to be resolved



4 Other Non-functional Requirements

4.1 Performance Requirements

- **Responsiveness:**
The system should exhibit unparalleled responsiveness, ensuring swift handling of user requests, with a target response time of 2 seconds for standard operations.
- **Data Upgrades:**
Rapid data upgrades are a priority, with the system facilitating real-time updates to ensure seamless integration with evolving client requirements.
- **Stability and Maintainability:**
The product should prioritize stability and maintainability, committed to eliminating bugs and performance issues to ensure uninterrupted and continuous functionality.
- **Scalability:**
The infrastructure, both hardware and software, should effortlessly accommodate a higher volume of clients than the anticipated average, reflecting the scalable nature of the product platform.
- **Accessibility:**
The product should be accessible across multiple platforms, with adaptive capabilities to dynamically conform to clients' specific hardware and software configurations, ensuring compatibility and responsiveness even on low-spec hardware.
- **Dynamism:**
The system should embody dynamism, seamlessly incorporating updates and changes without causing significant system downtime.
- **Agility:**
The product's agility should extend to scalability, poised to cater to the ever-expanding community of clients actively.
- **Continuous Improvement:**
The product should demonstrate a commitment to continuous improvement, adaptability, and uninterrupted service for a growing and diverse user base.

4.2 Safety and Security Requirements

1. Passwords will be saved encrypted in the database to ensure the user's privacy.
2. The system will be protected against vulnerabilities such as SQL injection attacks.
3. All users must create an account to access their profile and forum. This ensures the authenticity of users.

4.3 Software Quality Attributes

4.3.1 Flexibility

The application will be crafted with a focus on flexibility, enabling the seamless integration of new requirements across any system module. Embracing a modular format, the design will facilitate not only the incorporation of fresh elements but also the ease of making changes, additions, or deletions within the system without imposing a substantial impact on existing functionality. This modularity ensures that the system remains adaptable and scalable, accommodating the evolving needs of users and allowing for efficient enhancements and modifications in response to dynamic requirements.

4.3.2 Portability

The application will be easily portable on any Windows-based system. The website frontend uses React JS, ensuring a responsive and progressive web app that seamlessly runs on various platforms.

4.3.3 Maintainability

Efforts will be made to ensure that the architecture, design, implementation, and documentation of the product are structured to minimize maintenance costs.

Specifically:

- **Security Defect Resolution:** Any security defects discovered should be addressed promptly, with the maximum person-time required for resolution (including regression testing and documentation update) capped at two persons per day. If this limit is exceeded, appropriate action such as taking the software system offline or disabling the offending feature will be taken, prioritizing emergencies.
- **Enhancement Implementation:** Minor enhancements to the software system, including testing and documentation updates, should be completed within an average person-time of one person per week. This ensures that routine improvements can be efficiently integrated into the system without significantly disrupting operations.

4.3.4 Usability

The front end of the software application is meticulously crafted to ensure user-friendliness, enabling users to utilize the system effectively.

4.3.5 Security

The application prioritizes security measures to safeguard user data and system integrity. Key aspects include:

- **Access Control:** Only privileged users have permissions for system modifications, such as upgrades and deletions.
- **Authentication:** Users can log in using their email and a custom password (created by them). Passwords are stored in encrypted format in the database to enhance security.
- **Verification:** During registration, users will get an OTP in their provided mail. This ensures proper verification of the user.

4.3.6 Reliability and Availability

The system prioritizes reliability and availability through the following measures:

- **Database Backup:** Regular backups of user data, including passwords, recently uploaded posts, achievements, and user activities, will be performed to ensure data integrity and facilitate recovery in case of unforeseen events.
- **Continuous Operation:** The system is designed to be continuously operational and ready to perform its functions whenever users require access. This ensures users can rely on the system's availability to carry out their tasks without disruption.

5 Other Requirements

- **Internationalization:**
 - Support multiple languages and adaptable date, time, and currency formats.
- **Legal Compliance:**
 - Adhere to data protection and privacy of the user by encrypting passwords and providing verified data
- **Reuse Objectives:**
 - Implement modular code practices for ease of reuse and future integration.

Appendix A – Data Dictionary

A.1 User Class

Element Name	Description	Operations	Requirements
User ID	The system defines a unique ID for each user	Identifies unique user	Unique string
Password	It takes the password as an argument, then checks the condition of login and returns a unique ID	Secure user login	String
User Profile Data	Maintain the data of each user	Store user info	Strings and integers
Email Address	It takes an Email address as an argument and associates it with a unique user ID	Profile Verification and completion	Any valid email address
Q&A Queries	Users post their queries under the Q&A Section	Displays posts to other users	Abstract
Reviews	Insights and opinions are shared by users about colleges, academics, or experiences.	The review gets posted under the review section	Abstract

A.2 User Interface Class

Element Name	Description	Operations	Requirements
Registration	It takes the name, username, password, and email as arguments, then checks the registration condition and returns the registration status.	First-time registration and data input	string, int
Login/Logout	It takes the user ID, username, and password as arguments, then checks the login condition and returns the login status.	Enables login/logout functionality for the user	User ID/ Username, password
Follow	It takes the User ID as an argument and returns the status of following the user.	Adds the user to the following list	User ID

React	It takes user ID and a like,report (reaction for a post)	like,report along with user ID, gets associated with the post	React
Your Posts	It takes in a post's URL and copies it to the user profile	User can view its posts	Posts
Reply	It takes in the user ID and the user's comment and adds it to the comments section of a post.	Comment along with user ID gets associated with the post	Text

A.3 User Admin Interface Class

Element Name	Description	Operations	Requirements
Profile information	It takes the user ID and its data as arguments and returns profile information for public users.	Provides Admin contact info	User ID, user data
Delete Post	It takes in the post ID and delete the post	Post no longer exists	Post ID
Add College Item	It takes in the admin's credentials and new college data.	Adds college item in the database	Abstract
Update College Item	It takes in the admin's credentials and changes in existing college data.	College data gets updated	Abstract

Appendix B - Group Log

SL. no.	Date	Timings	Venue	Description
1	7/01/2024	10 pm - 11:30 pm	Zoom	Brainstormed various possible prospective ideas for the project.
2	11/01/2024	10 pm - 11:30 pm	Zoom	Finalized the idea for the project and discussed various aspects of it.
3	13/01/2024	5:30 pm - 6:30 pm	Zoom	Studied the SRS template given and distributed the work amongst the team members.
5	16/01/2024	12:40 pm - 1:20 pm	Meet	Redistributed the pending work after having clarified the doubts with the TA.
6	18/01/2024	9 pm - 12 am	RM building	Explored some more functionalities for the product and progressed with the SRS document.
7	20/01/2024	5 pm - 8 pm	RM building	Explored various implementation tools and software for the project.
8	24/01/2024	5 pm - 8 pm	RM building	Progressed with SRS documentation work.
9	25/01/2024	5 pm - 8 pm	RM building	Progressed with SRS documentation work.