BANNARI AMMAN INSTITUTE OF TECHNOLOGY
An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade
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Stay Ahead

BIT PRODUCTS

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Project ID	15
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Problem Statement	Product Review & Tracking System

1. PURPOSE :

This document's goal is to provide a thorough overview of the Product review and tracking portal. It will cover the system's functions, features, interfaces, what it will do, the boundaries that it must operate under, and how it will react according to external events.

2. PROBLEM STATEMENT :

Product Review & Tracking System

3. PROBLEM DESCRIPTION :

Create a portal that incorporates essential phases such as problem statement approval, Bill of Materials (BoM) submission, reviews, student member assignment, uniqueness checking, documentation, and reward points in order to take care of the lack of a standardized process for student-led product development.

In an effort to assist with the numerous needs of the development process, the portal should have forms, workflows, task management tools, plagiarism detectors, and document management. The users can able to access the specific pages of the portal based on their user-type. Based on the user-type various privileges should be given to the users in order to access the pages particular to theit type.

4. TECHNOLOGY STACK USED :

Front – End	React JS, Tailwind CSS & React Router
Back – End	Springboot With Java
Database	MYSQL
API's	REST full API

5. USERS :

5.1. Students :

Students can submit their problem statements, team member details, and guide details to their assigned guide. They can monitor their current progress using the status tracker. Upon completing the third review, students are required to submit their reports through the report submission feature. Additionally, a dashboard will be provided for students to view their overall progress.

5.2. Guide :

Guides have the ability to handle student problem statement requests and forward them to the expert committee. They also have access to a dashboard to monitor the number of students working under their guidance and can approve reports submitted by students.

5.3. Admin :

The admin possesses special privileges, allowing them to view the list of students and their details, as well as the list of guides and their details. Additionally, there will be a gallery page showcasing successfully completed products along with their respective details.

6. FUNCTIONALITY :

6.1. Registration :

Users are required to register using their institutional email addresses, specifying their user type. This information, including the email address, hashed password, and user type, will be stored in the database.

6.2. Login :

Once registration is completed, users are directed to the login page where they must enter their email address and password again. In the backend, a comparison is made between the registered credentials and the login credentials. If the credentials match and are appropriate for their user type, users are directed to their respective pages.

6.3 Student's page (PS Submission)

If the user is a student, they are directed to the student page where they have specific accessibility options. One of these options is the submission of a problem statement, which marks the initial stage of product development. Students are required to enter their own details, team

members' details, guide information, and product details. Upon clicking the submit button, their requests are directed to the relevant guide page.

6.3.1 Student's page (Status Tracker)

Another available option on the student page is the status tracker, which allows students to monitor their current progress. This includes tracking whether the request has been properly submitted, if the guide has approved or rejected it, if the expert team has approved or rejected it, whether reviews are completed, and if the product has been added to the gallery.

6.3.2 Student's page (Report Submission)

Upon successfully completing the third review, students are required to submit a final report detailing all aspects of their product, including the problem statement, solution, domain of the solution, total duration, project flow diagram, ER diagram (if applicable), and sample pictures of the original project in the specified format. This report undergoes processing, and its successful approval results in marking the product as completed.

6.3.3 Student's page (Dashboard)

A personalized dashboard is provided to each student, displaying basic student details along with information about their product development journey. This includes total number of problem statements submitted, number of problem statements approved, number of problem statements rejected, products currently under development, completed products, pending products, product domains, duration taken to complete each product, and more.

6.4 Guide Page (PS request)

If the user is a guide, they will be directed to the guide page, which offers various features. One such feature is the "PS request" section, where all submitted problem statement statements from students await approval. Guides have the authority to approve or reject submissions based on the novelty of the product. If a product is approved, students can track its status in their status tracker, and the submission proceeds to the expert team for further approval. Conversely, if a submission is rejected, students can track this on the same tracking page, indicated in red.

6.4.1 Guide Page (Students list)

A list of students, their respective products, and their current status (initiated, ongoing, completed) will be available, along with detailed product information. This setup facilitates easy lookup for the guide.
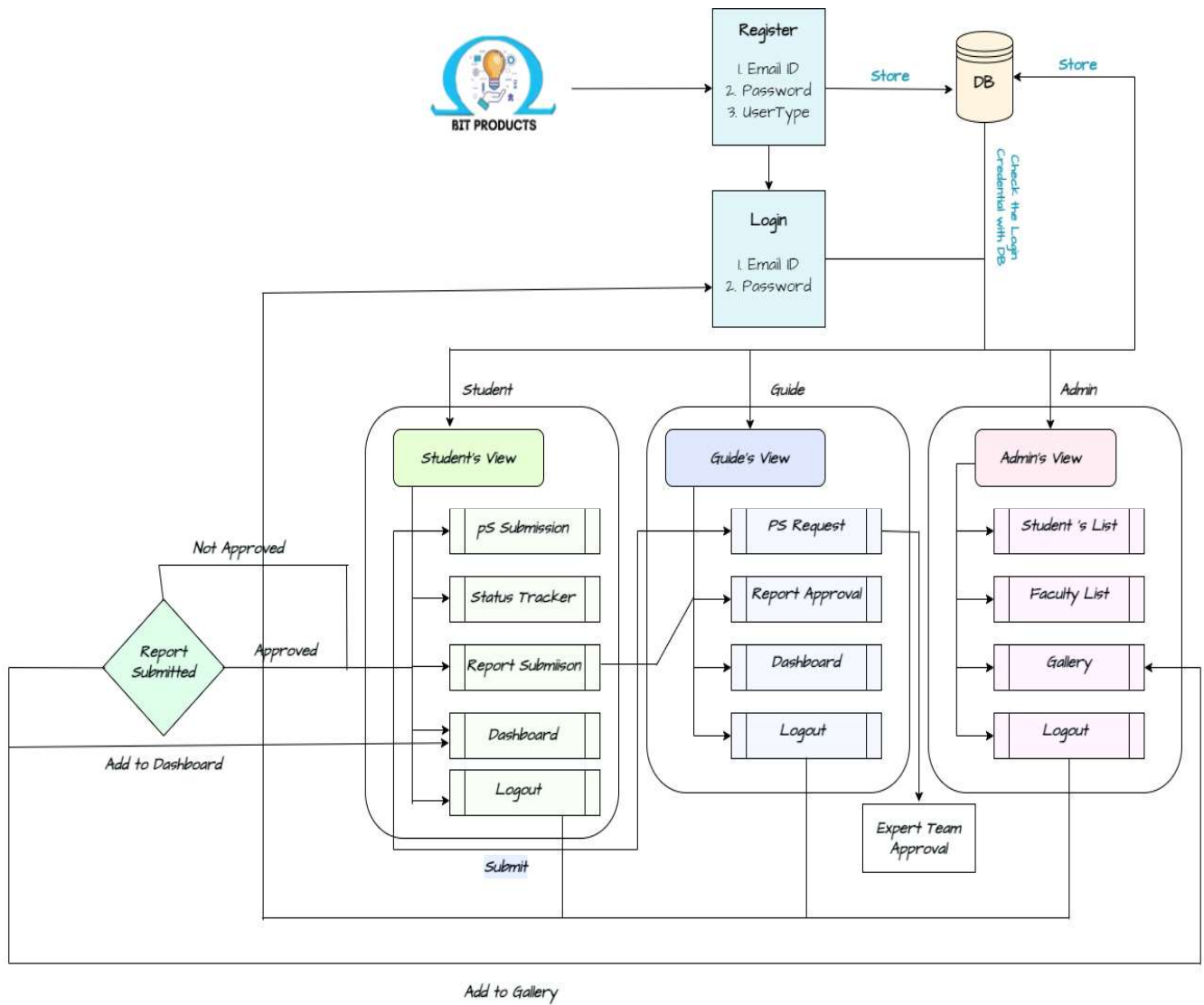
6.4.2 Guide page (Slot Booking)

Guide can book slots for reviews from the available options. Each slot can be booked only once, with a maximum of three slots allowed per one product. Three reviews will be conducted for each product before the report submission.

6.5.1 Admin page (Students list)

A list of students, their respective products, and their current status (initiated, ongoing, completed) will be available, along with detailed product information. This setup facilitates easy lookup for the guide.

6.5.2 Admin page (Guide list)

A list of Guide, their respective product developing students, and their current status (initiated, ongoing, completed) will be available, along with detailed product information. This setup facilitates easy lookup for the guide.

6.5.3 Admin page (Gallery)

This page will display all completed products along with their necessary details.

6.6 Logout :
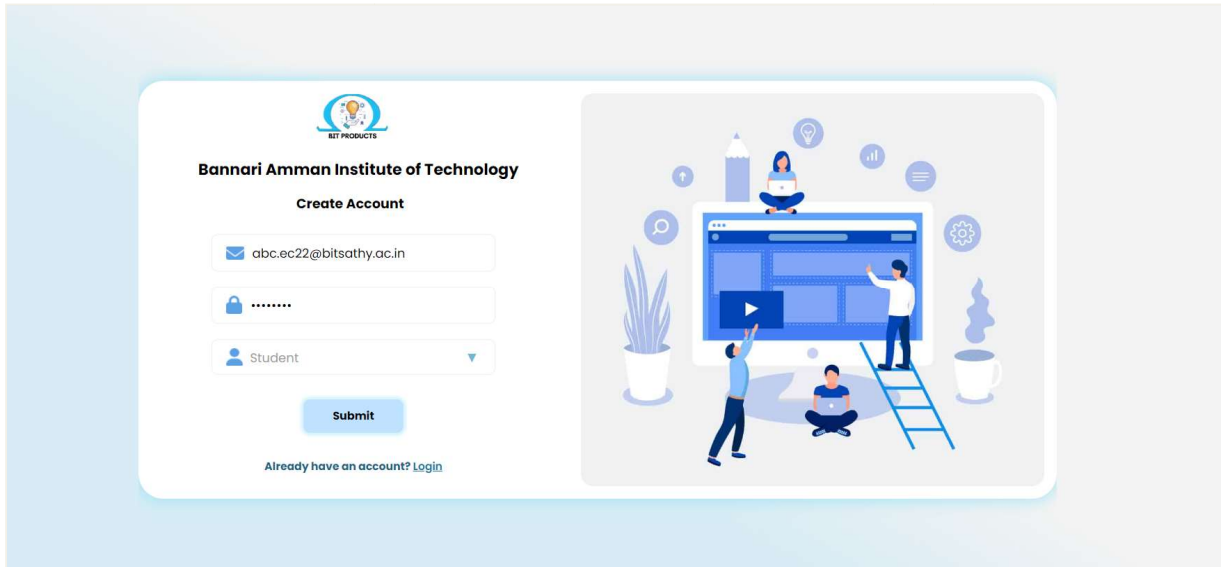
Logout bar will be present in all type of user pages. Onclicking the logout option it will take the user back to the login page.

7. FLOWCHART :
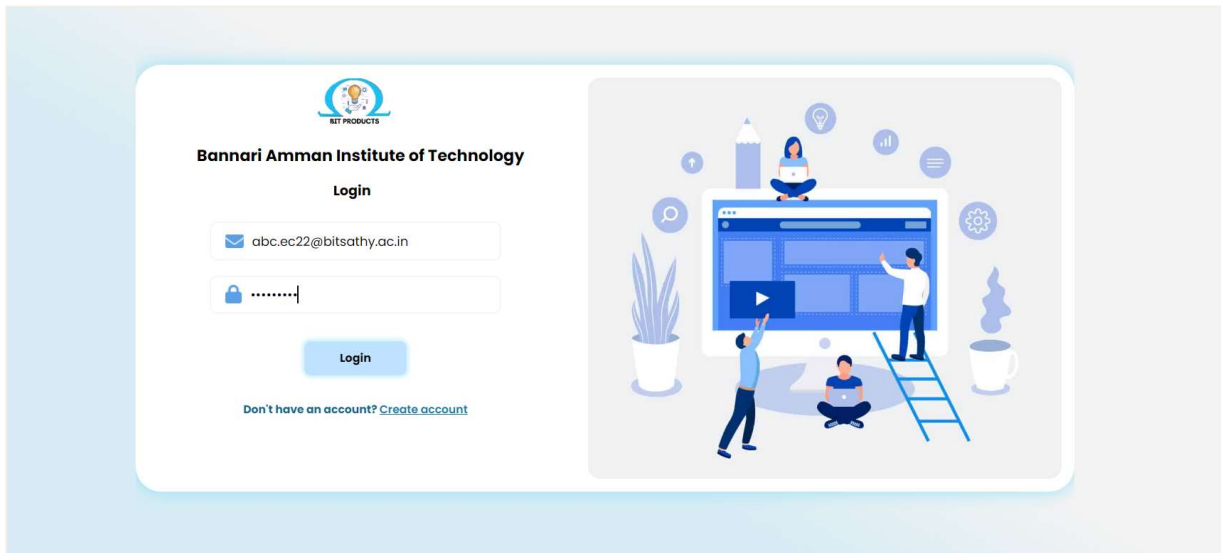
8. SAMPLE OVERVIEW OF THE PORTAL :

1. Register Page

2. Login Page

3. Students View (Status Tracker)

4. Students View (PS Submission)

9. PACKAGES AND DEPENDENCIES TO BE USED :

Platform	Visual Studio Code
Front End Skeleton	React JS (JSX & JS) and Related React dependenci
Fonts	fonts.googleapis.com
Routing	React-Router-dom
Styling	CSS & Tailwind CSS
Icons	Google Icons & Fontawesome Icons
Backend	Java (Spring boot) and Related spring Dependencies
Database	MYSQL
API's	REST full API, Open API

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