BANNARI AMMAN INSTITUTE OF TECHNOLOGY
An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade
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Seat number	**-**
Project number	**36**
Problem statement	**Student Faculty ratio mapping for NBA, Anna university**

PROGRESS-TIMELINE:

PHASE	DEADLINE	STATUS	NOTES
Stage 1	01-08-2024	Completed	Planning And Requirement Gathering
Stage 2		Not Started	Design And Prototyping
Stage 3		Not Started	Db Designing
Stage 4		Not Started	Backend Development
Stage 5		Not Started	Testing & Implementation
Stage 6		Not Started	Development

PROBLEM STATEMENT:

Develop a student faculty ratio mapping system for the National Board of Accreditation (NBA) at Anna University using the LAMP stack. The system should provide a platform for mapping the student-to-faculty ratio for different courses and departments, ensuring accurate data collection and analysis. It should allow authorized users to input and update student and faculty information, generate reports and visualizations, and facilitate efficient decision-making regarding faculty allocation and resource planning.

Key Objectives:

- **Data Input and Management:** The system should allow authorized users to input and manage student and faculty data, including information such as course, department, student count, and faculty count. It should provide a user-friendly interface for data entry and validation.
- **Mapping and Visualization:** The system should generate visualizations and reports based on the input data, allowing users to view the student-to-faculty ratio for different courses and departments. This will help identify areas where the ratio is imbalanced and facilitate informed decision-making regarding faculty allocation.
- **Data Analysis:** The system should provide analytical tools to analyze the student-to-faculty ratio data, allowing users to identify trends, patterns, and areas of improvement. This will help in resource planning and optimizing faculty allocation.
- **Integration with Existing Systems:** The system should be designed to integrate with existing systems and databases at the National Board of Accreditation and Anna University, ensuring seamless data flow and avoiding duplication of efforts.

STACK:LAMP

COMPONENT	TECH STACK
Front End	Html Css Javascript
Back End	Linux Apache Web Server Php With Laravel Framework
Database	Mysql
Api	Rest Ful Api

PROJECT OVERVIEW:

- **Purpose:**

  The purpose of this project is to ensure that students, including lateral entry students, are mapped to faculty members at the required student-to-faculty ratio for both Anna University and the National Board of Accreditation (NBA). This project aims to automate the mapping process and handle faculty reassignments if there is a shortage in a specific department.

- **Scope:**

  The project involves developing a system using the LAMP stack (Linux, Apache, MySQL, PHP) to manage the student-faculty ratio mapping. The system should be able to handle student and faculty data, calculate the required ratios, and facilitate faculty reassignments if necessary. It should provide an interface for administrators to view and manage the mapping process.

- **Business Context:**

  The student-faculty ratio mapping is crucial for maintaining the quality of education and ensuring that each student receives adequate

attention and support from faculty members. By automating this process, the institution can efficiently manage the mapping and reassignment of faculty, ensuring compliance with the requirements of Anna University and NBA.

- **Dependencies:**

  The project relies on the LAMP stack, including Linux as the operating system, Apache as the web server, MySQL as the database management system, and PHP as the server-side scripting language. Additionally, the project may utilize frameworks and libraries such as Laravel or CodeIgniter for efficient development.

- **Database Management System (DBMS):** The project will use MySQL as the database management system. MySQL is a widely-used relational database that provides robust data storage and retrieval capabilities. It will store student and faculty information, department details, and the mapping data required for the project.

- **User Personas:**

- **Administrators:** Responsible for managing the student-faculty ratio mapping process. They should have access to view and update student and faculty data, calculate ratios, and initiate faculty reassignments if necessary.
- **Faculty Members:** Provide information about their availability and expertise to be mapped to students accordingly.
- **Students:** Provide information about their program and specialization to be mapped to faculty members based on the required ratios.

FUNCTIONAL REQUIREMENTS:

- **Mapping Students to Faculty Members:** The system should ensure that students, including lateral entry students, are mapped to faculty members at a ratio of 1:20 for the entire institution.

- In the specific department visited by the NBA, students, including lateral entry students, must be mapped to faculty members at a ratio of 1:15.

- If there is a shortage of faculty in the specific department, eligible faculty from other departments should be reassigned to meet the required student-to-faculty ratio.

- **Faculty Reassignment:**The system should identify eligible faculty members from other departments who can be reassigned to the specific department with a shortage of faculty.

- Eligibility criteria for faculty reassignment should be defined, such as qualifications, expertise, workload, and availability.

- The system should facilitate the reassignment process, including notifying the faculty members and updating their department assignments.

- **Integration with Existing Systems:** The system should integrate with the institution's existing student and faculty management systems to access relevant data for mapping and reassignment.

- It should synchronize data on student enrollment, lateral entry students, faculty assignments, and department information to ensure accurate mapping.

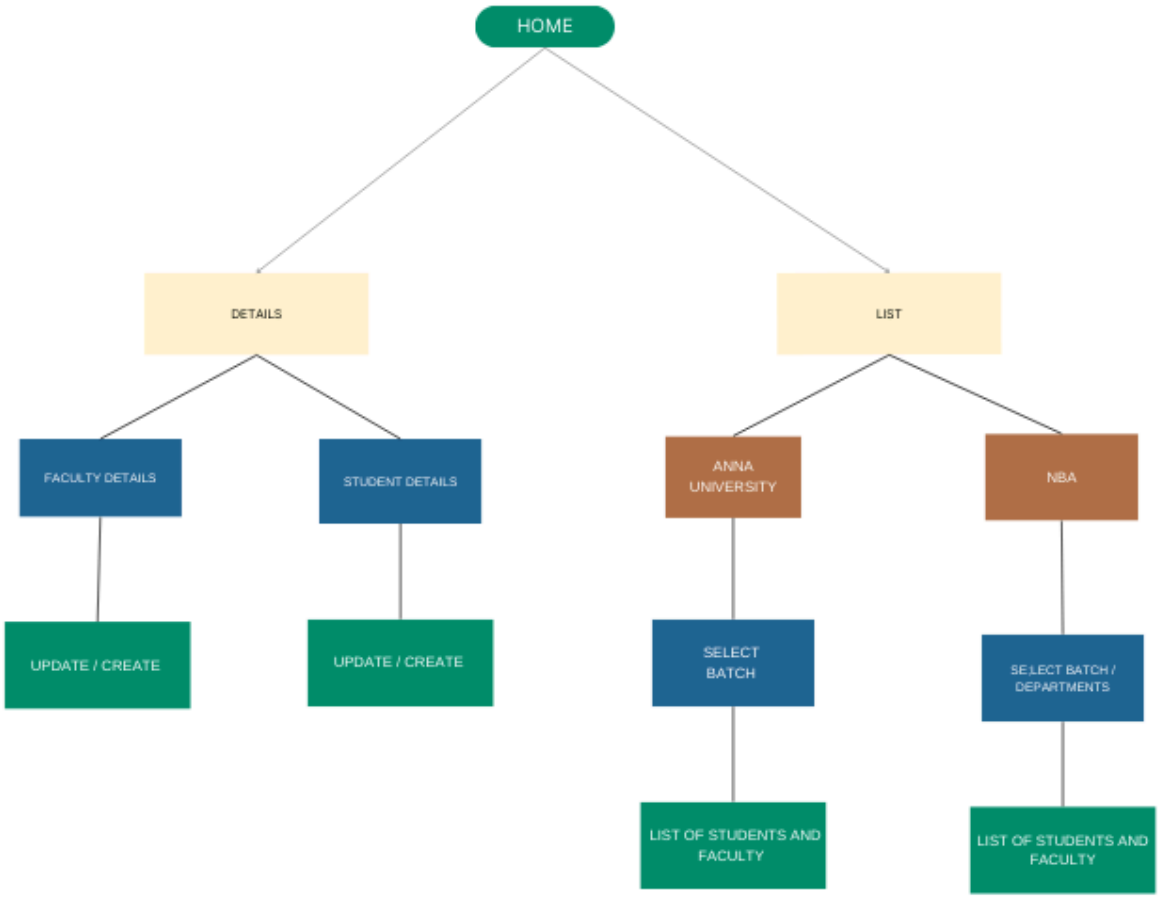
- **User Roles and Permissions:** The system should support different user roles and permissions, such as administrators, department heads, and faculty members.Administrators should have full access to manage the mapping and reassignment processes.

- Department heads should have access to view and monitor the mapping status in their respective departments.Faculty members should have access to view their assigned students and provide feedback if necessary.

- **Notifications and Communication:** The system should provide notifications and communication channels to inform faculty members, department heads, and administrators about mapping changes, reassignments, and updates.

- Notifications can be sent via email, in-app messages, or other appropriate communication methods.

FlowChart :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