SOFTWARE REQUIREMENT SPECIFICATION
FOR
COURSE FILE AUTOMATION

Name	PRIYANKA T
Roll no	7376221CS271
Seat no	162
Project ID	29
Problem Statement	COURSE FILE AUTOMATION

1. Project-flow

1.1. Purpose:

The purpose of this document is to provide a comprehensive description of the Course File Automation system. This document outlines the system's objectives, features, interfaces. The Course File Automation project is designed to streamline and automate the management of academic documents and signatures for faculty members. Utilizing the MERN stack (MongoDB, Express.js, React, and Node.js), this project aims to create an efficient and user-friendly system for collecting, organizing, and processing course-related paperwork.

1.2. Scope of Project:

- The Course File Automation project aims to digitize and automate the collection and management of academic documents, enhancing efficiency

and reducing manual effort. It provides a centralized platform for faculty and students to submit, review, and approve necessary course-related paperwork.

Digital Document Management:

- Automating the collection, storage, and retrieval of academic documents such as vision and mission statements, PEOs, POs, PSOs, academic schedules, syllabi, lesson plans, and lecture notes.

- Ensuring easy access and management of documents by faculty and administrative staff.

Streamlined Application Processes:

- Enabling students to submit TAC applications with necessary details and attachments.
- Allowing faculty and administrators to review, approve, or reject applications with remarks and track the status of each application.

Automated Assessment Handling:

- Managing the submission, review, and storage of periodical test documents, assignments, lab experiments, and optional tests.
- Facilitating the upload and organization of question papers, sample answer scripts, mark sheets, and COs-POs attainment reports.

Attendance and Evaluation Management:

- Automating the collection and storage of attendance records and internal marks with necessary approvals.
- Ensuring the upload and management of end-semester question papers, student feedback, and course exit surveys.

Reporting and Analytics:

- Providing dashboards for administrators to monitor applications, track course updates, and generate analytical reports.
- Enabling detailed tracking and reporting of application statuses, document submissions, and assessment outcomes.

2. System Overview:

- The Course File Automation system is designed to streamline the management of academic documents and processes by leveraging a comprehensive digital platform. It facilitates the efficient collection, organization, and processing of documents, such as student applications, test papers, and attendance records.
- The system features user-friendly interfaces for students and administrators, allowing seamless interactions for submitting applications, tracking status, and scheduling appointments.
- It includes robust reporting and analytics tools for administrators to monitor applications, generate reports, and manage appointments. Additionally, the system ensures data security, performance, and scalability to handle increasing volumes of data and users efficiently.

2.1. Features:

User Management:

➔ Faculty registration and login.

➔ Admin access control with an analytical dashboard.

Document Submission and Management:

➔ Submission of TAC applications with project details.

➔ Upload and organization of lesson plans, lecture notes, and other academic documents.

Application Tracking:

➔ Real-time status updates for student applications.

➔ Rejection remarks and application logs visibility.

Assessment Management:

➔ Manage periodical test documents, question papers, answer scripts, and mark sheets.

➔ Track COs-POs attainment and remedial actions.

Attendance and Evaluation:

➔ Maintain attendance records with signatures.

➔ Handle internal and end-semester evaluations.

Security and Performance:

➔ Secure data transmission and storage.

➔ Ensure responsive performance and handle concurrent users efficiently.

Reporting and Feedback:

➔ Generate detailed reports for administrative purposes.

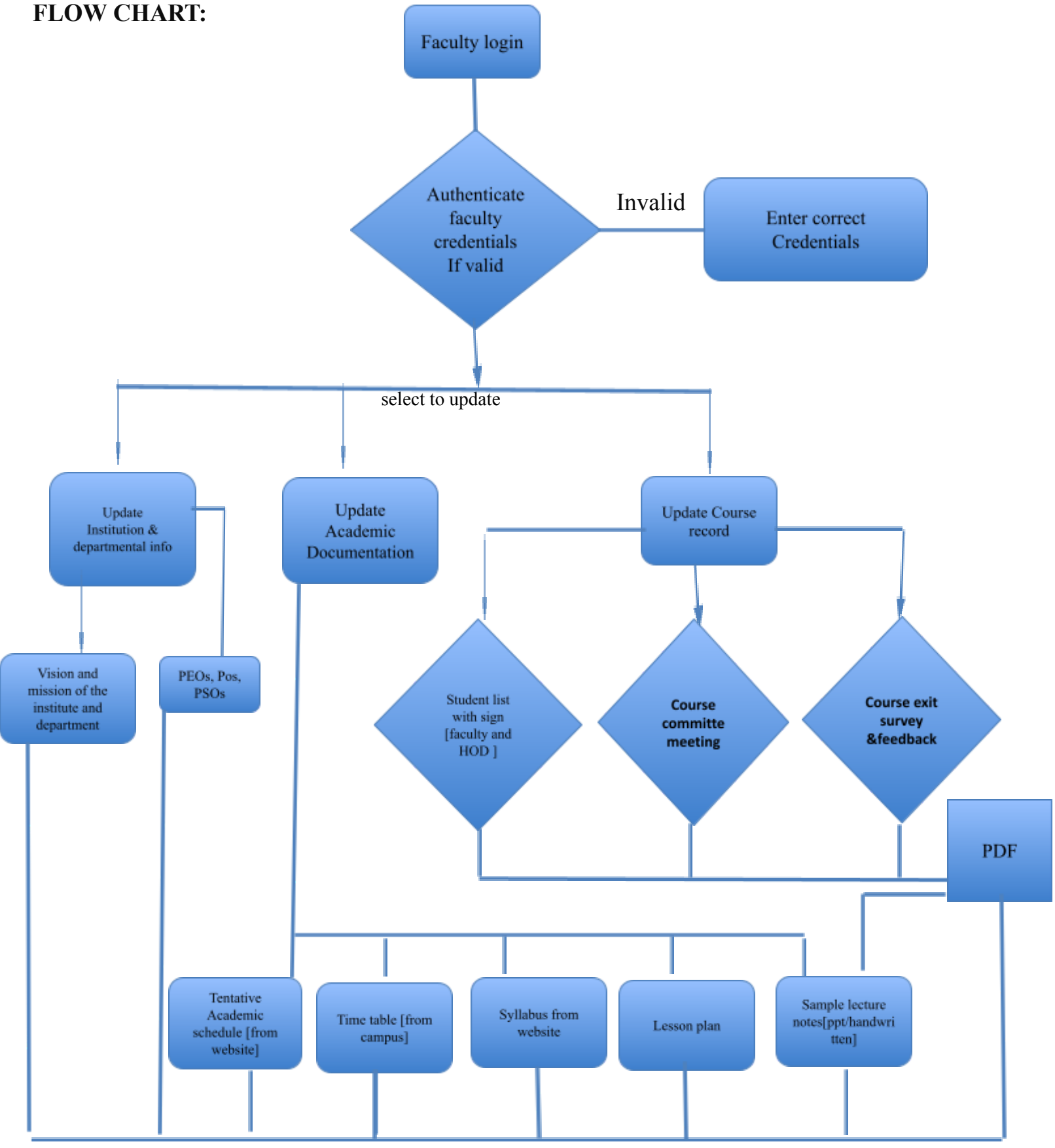
➔ Collect and manage student feedback and course exit surveys.

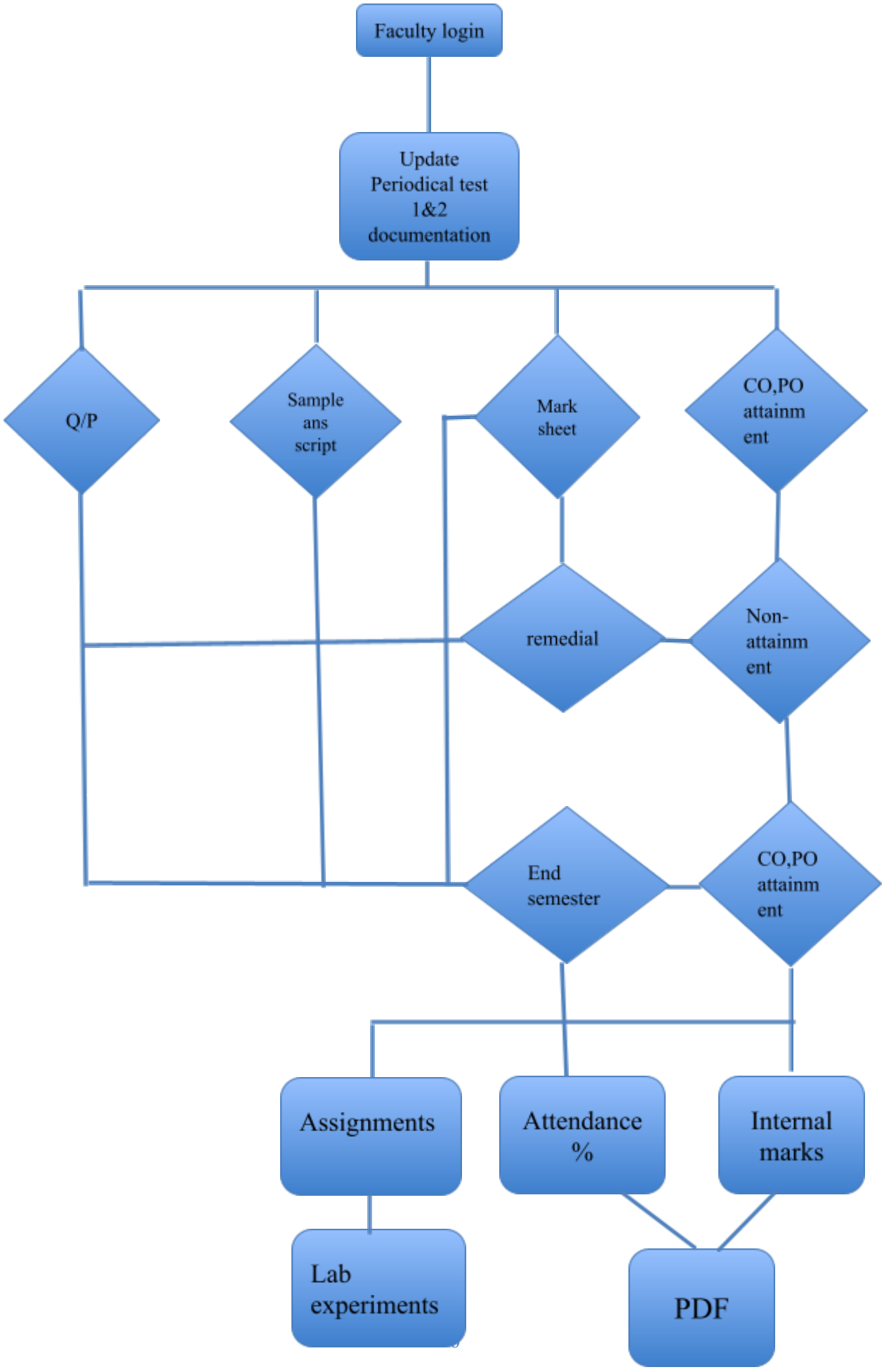
TECHNICAL COMPONENTS:

MERN STACK

Front End	React Js
Backend	Node Js, Express
Data Base	MongoDB

FLOW CHART:


Faculty login
Authenticate faculty credentials If valid
Invalid
Enter correct Credentials
select to update
Update Institution & departmental info
Update Academic Documentation
Update Course record
Vision and mission of the institute and department
PEOs, Pos, PSOs
Student list with sign [faculty and HOD]
Course committe meeting
Course exit survey &feedback
PDF
Tentative Academic schedule [from website]
Time table [from campus]
Syllabus from website
Lesson plan
Sample lecture notes[ppt/handwritten]


Faculty login
Update Periodical test 1&2 documentation
Q/P
Sample ans script
Mark sheet
CO,PO attainment
remedial
Non-attainment
End semester
CO,PO attainment
Assignments
Attendance %
Internal marks
Lab experiments
PDF

3.1 Functional Requirements:

Document Management:

- ➢ Institute and Department Vision/Mission: Display and manage vision and mission statements for the institute and department.
- ➢ PEOs, POs, and PSOs: Provide access to Program Educational Objectives (PEOs), Program Outcomes (POs), and Program Specific Outcomes (PSOs).
- ➢ Academic Schedule and Timetable: Display the tentative academic schedule and timetable from the institute's website.
- ➢ Syllabus and Timetable: Access and manage syllabi and timetables from the website and campus.
- ➢ Lesson Plans and Lecture Notes: Upload and organize lesson plans and sample lecture notes (PPT printouts/handwritten materials).
- ➢ Student List and Signatures: Maintain a list of students with signatures from faculty and Head of Department (HoD).
- ➢ Course Committee Meeting Minutes: Archive meeting minutes with signatures.
- ➢ Periodical Test Documentation: Manage test papers, sample answer scripts, mark sheets, COs-POs attainment reports, and remedial actions.
- ➢ Assignments and Innovative Practices: Collect and manage assignments, innovative practices, question papers, sample answer scripts, mark sheets, and COs-POs attainment for theory courses.
- ➢ Lab Experiments Documentation: Maintain lists of lab experiments, lab manuals, and sample records for courses with lab components.
- ➢ End Semester Documentation: Handle end-semester question papers, student feedback, course exit surveys, and final COs-POs attainment reports.

Signature Management:

➢ Signature Collection: Ensure that all documents requiring signatures are collected and managed digitally.

Assessment Tracking:

➢ Track Assessments: Monitor and track periodical tests, optional tests, and their associated documentation.

Attendance Management:

➢ Record Attendance: Maintain and manage attendance records with signatures.

3.2. Non-Functional Requirements:

Performance:

➢ Response Time: The system should respond to user actions within 2 seconds.

➢ Concurrent Users: Handle at least 100 concurrent users without significant performance degradation.

Security:

➢ Data Protection: Encrypt user data during transmission and storage.

➢ Access Control: Restrict access to sensitive functionalities through secure authentication mechanisms.

Usability:

➢ User Interface: Ensure the user interface is intuitive and user-friendly.

➢ Error Messages: Provide clear and concise error messages to guide users in case of input errors or system failures.

Reliability:

➢ Availability: Ensure system availability 24/7 with minimal downtime.

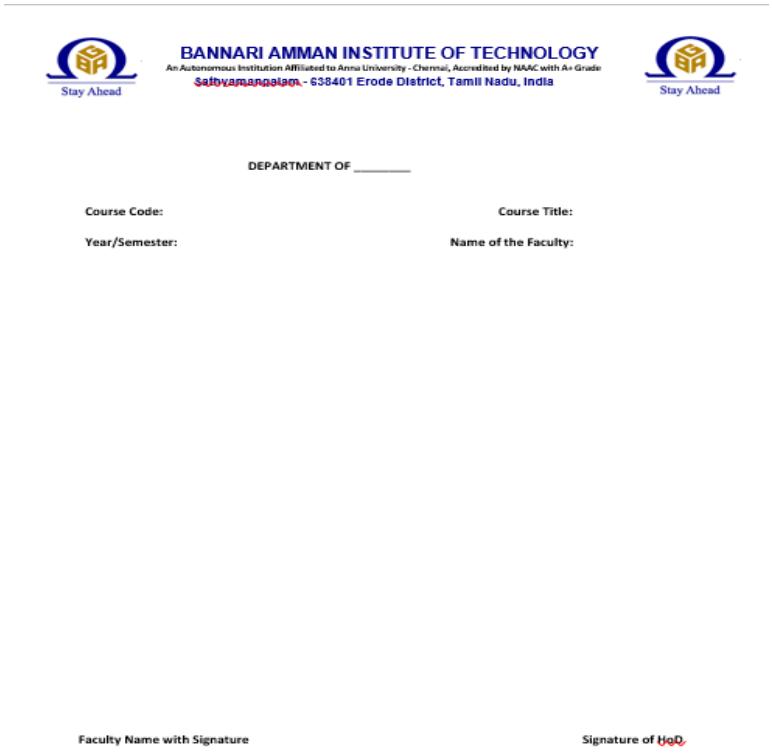
➢ Backup and Recovery: Implement a backup and recovery mechanism to prevent data loss.

Scalability:

➢ Growth Accommodation: Design the system to accommodate increasing numbers of users and data volume.

➢ Feature Expansion: Allow for scalability to support additional features and functionalities in the future.

FORMAT:



BANNARI AMMAN INSTITUTE OF TECHNOLOGY

An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade

Sathyamangalam - 638401 Erode District, Tamil Nadu, India

Stay Ahead

Stay Ahead

DEPARTMENT OF _____

Course Code: Course Title:

Year/Semester: Name of the Faculty:

Faculty Name with Signature Signature of HoD