# A 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**


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| **Project number** | **16** |
| **Problem statement** | **Internship course exemption** |

## PROBLEM STATEMENT:

Develop an online platform tailored to the needs of our campus community, facilitating the submission, evaluation, and approval of internship-based course exemption requests. The platform should feature separate interfaces for students and faculty members, emphasizing ease of use and efficiency in the evaluation process.

**Key Objectives:**

- Internship Proof Submission Portal:Implement a user-friendly submission portal where students can confidently submit their internship proofs. Enable students to upload supporting materials such as documents, images, or videos to enhance the clarity and comprehensiveness of their submissions.
- Efficient Evaluation Workflow:Create a streamlined evaluation process for faculty members to assess submitted proofs based on predefined criteria such as duration, relevance, and completeness. Provide tools for faculty to give timely feedback and suggestions for improvement directly within the platform.
- Transparent Approval Mechanism:Establish a clear and transparent approval mechanism that communicates the status of submitted proofs to students. Enable faculty members to mark proofs as approved, pending further review, or

rejected, ensuring that students receive timely updates on the progress of their submissions.

- Reward and Exemption Options:After approval, allow students to choose between reward redemption and course exemption. For course exemption, facilitate the booking of a review appointment with a faculty member. Provide a mechanism for faculty to upload grades post-review and determine eligibility for course exemption based on grades.

## STACK:

| **Component** | **Tech Stack** |
|---|---|
| Frontend | HTML, CSS, JavaScript |
| Backend | Python Stack |
| Database | MySQL |
| API | RESTFul API |

## PROGRESS - TIMELINE:

| Phase | Deadline | Status | Notes |
|---|---|---|---|
| Stage 1 | 06/06/2024 | **Completed** | Planning and Requirement Gathering |
| Stage 2 | | **In Progress** | Design and Prototyping |
| Stage 3 | | **Not Started** | DB Designing |
| Stage 4 | | **Not Started** | Backend Implementation |
| Stage 5 | | **Not Started** | Testing & Implementation |
| Stage 6 | | **Not Started** | Deployment |

## PROJECT OVERVIEW:

1. **Purpose**

   Develop an online platform for students to submit internship proofs for course exemption, and for faculty to evaluate and approve these submissions, enhancing campus administration efficiency and student support.

2. **Scope**

   The platform will provide distinct interfaces for students and faculty, streamlining proof submission, evaluation, and approval processes, promoting efficient collaboration and decision-making.

3. **Business Context**

   By simplifying internship proof management, the platform aims to streamline administrative processes, enabling seamless interaction between students and faculty, and facilitating timely decision-making on course exemptions.

4. **Dependencies**

   Successful implementation hinges on integrating with campus systems, maintaining a robust database, and ensuring reliable internet connectivity for seamless platform operation.

5. **Database Management System (DBMS)**

The system depends on a robust DBMS for storing and managing user information, proofs, and other relevant data. The database facilitates efficient data storage and retrieval, ensuring seamless operation of the system. It allows for structured organization and querying of data, enabling effective management of proofs and reviews. Allowing the user and administrator to access and edit specific data.

6. **User Personas**
   - Students: Will submit internship proofs for evaluation.
   - Faculty Members: Will assess and approve/reject submitted proofs, upload grades, and manage review appointments.
   - Administrators: Will oversee platform functionality and management.

## FUNCTIONAL REQUIREMENTS:

1. **User Authentication:**

   **Description:** Ensure secure access to the platform via university email IDs.
   **Features:**
   Authentication mechanism using university email IDs.
   Password protection for account security.

"Forgot Password" functionality for secure password recovery.

## 2. Proof Submission:

**Description:** Allow students to submit internship proofs with supporting media.
**Features:**
Submission form for proof entry with multimedia support.
Validation checks for data accuracy.
Secure submission process.

## 3. Evaluation and Approval:

**Description:**Enable faculty to review and approve submitted proofs.
**Features:**
Faculty dashboard for proof review.
Feedback tools for faculty to provide comments.
Approval workflow with criteria-based decision-making.

## 4. User Interface:

**Description:** Design intuitive interfaces for both students and faculty.
**Features:**
Separate interfaces for students and faculty.
User-friendly design for easy navigation.
Customization based on user roles and needs.

## 5. Notification System:

**Description:**Keep users informed about proof submission and approval statuses.
**Features:**
Notifications for proof submission confirmation.
Alerts for faculty to review submitted proofs.
Updates on approval or rejection statuses.

## 6. Reporting:

**Description:**Generate comprehensive reports summarizing proof submissions and evaluations.
**Features:**
Report generation with proof descriptions and evaluation details.
Options for exporting reports in various formats.
Insights for sharing and analysis.

## PROGRESS AND TOOLS BY STAGE:

**Stage 1:** Planning and Requirement Gathering

**Tools:**

Jira or Trello: For creating tasks and tracking progress.
Confluence: For documenting requirements and planning.
Slack or Microsoft Teams: For team communication and meetings.

**Stage 2:** Design and Prototyping

**Tools:**

Figma or Adobe XD: For creating wireframes and prototypes.
Balsamiq: For low-fidelity wireframing.
Lucidchart: For creating flowcharts and system diagrams.

**Stage 3:** Database Designing

**Tools:**

MySQL Workbench: For database schema design.
ERDPlus or dbdiagram.io: For entity-relationship diagrams.
DBeaver: For database management and querying.

**Stage 4**: Backend Implementation

**Tech Stack:**

Django: For developing RESTful APIs and backend logic.

**Tools:**

PyCharm or Visual Studio Code: For Python development.
Postman: For API testing.
Django Rest Framework: For building RESTful APIs.
UnitTest: For backend testing.

**Stage 5:** Frontend Implementation

**Tech Stack:**

HTML, CSS, JavaScript: For building the user interface.

**Tools:**

Visual Studio Code: For frontend development.
Bootstrap or Materialize CSS: For UI components.
Axios: For handling HTTP requests.

**Stage 6:** Testing & Implementation

**Tools:**

Django Testing Framework: For backend testing.
Jest and React Testing Library: For frontend testing.
Selenium or Cypress: For end-to-end testing.
SonarQube: For code quality analysis.

**Stage 7**: Deployment

**Tools:**

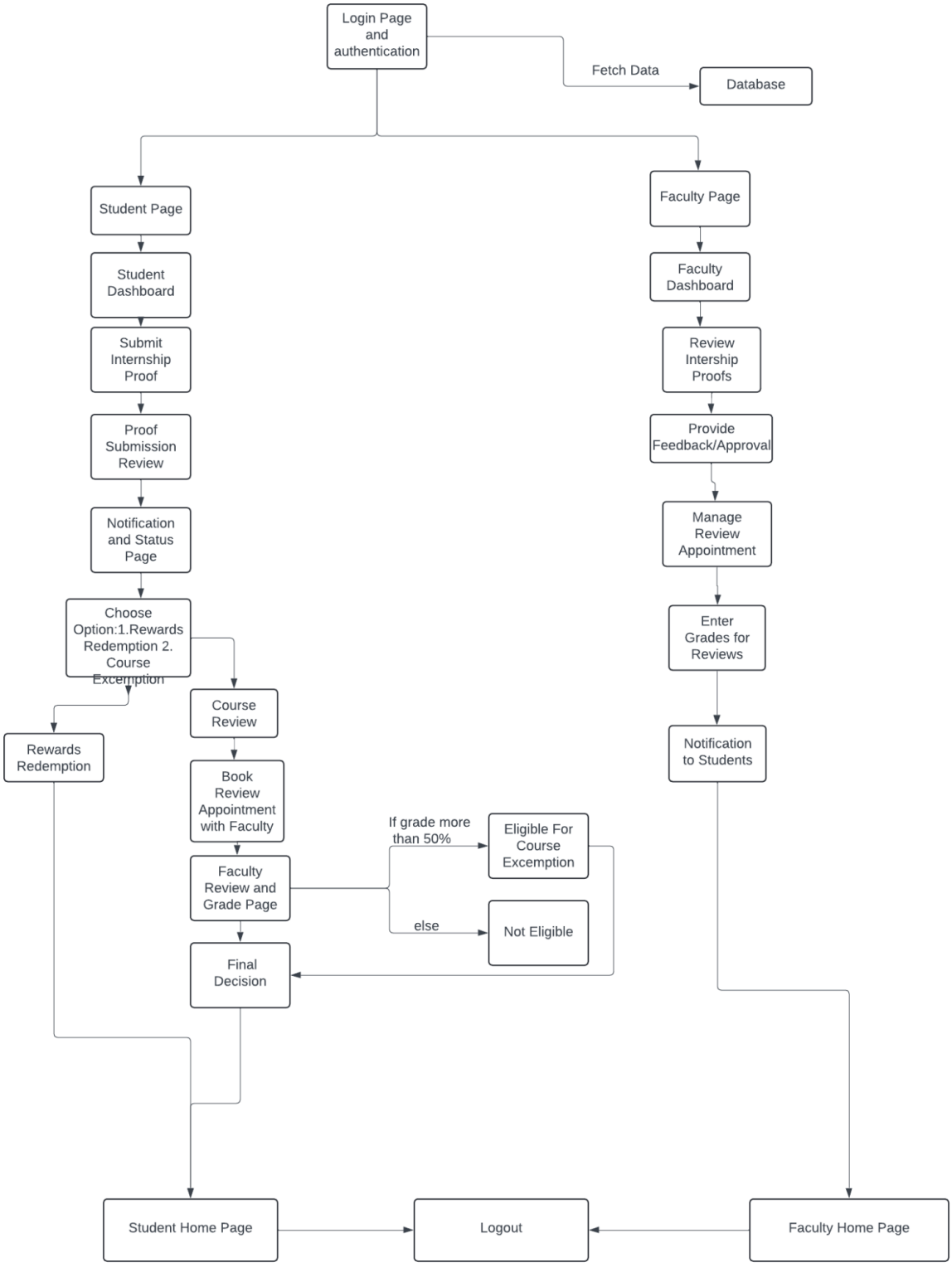
Docker: For containerizing the application.

Kubernetes: For orchestration if needed.
Jenkins or GitHub Actions: For CI/CD pipelines.
AWS, Azure, or GCP: For cloud deployment and hosting.
Nginx or Apache: For serving the frontend and reverse proxy.

## Strategies to Enhance Workflow:

- Simplified Processes: Streamline the proof submission process with intuitive forms and clear instructions, reducing unnecessary steps and complexities for students.
- Automated Notifications: Implement automated notifications to keep users informed about the status of their submissions, feedback from faculty, and approval decisions, ensuring timely communication throughout the workflow.
- Continuous Improvement: Regularly gather feedback from users and stakeholders to identify areas for improvement in the workflow, user interface, and system functionality, enabling ongoing enhancements to optimize efficiency.

**FLOWCHART:**


Login Page and authentication
Fetch Data
Database
Student Page
Student Dashboard
Submit Internship Proof
Proof Submission Review
Notification and Status Page
Choose Option:1.Rewards Redemption 2. Course Exemption
Rewards Redemption
Course Review
Book Review Appointment with Faculty
Faculty Review and Grade Page
If grade more than 50%
Eligible For Course Exemption
else
Not Eligible
Final Decision
Faculty Page
Faculty Dashboard
Review Intership Proofs
Provide Feedback/Approval
Manage Review Appointment
Enter Grades for Reviews
Notification to Students
Student Home Page
Logout
Faculty Home Page