Student Name: RANJITH A

Seat No: 272

Project ID: 17

Project title: One Credit Course Exemption

Technical Components

Component	Tech Stack
Backend	Node.js
Frontend	Angular
Database	MongoDB
API	Express.js

Implementation Timeline

Phase	Deadline	Status	Notes
Stage 1	01/08/2024	Under review	Planning and Requirement gathering
Stage 2			Design and Prototyping
Stage 3			DataBase Designing
Stage 4			Backend Development
Stage 5			Testing & Integration

Project Overview

Project Name: One Credit Course Exemption

Description:

This project aims to facilitate the process of course exemption for students who have completed certain one-credit courses in specified semesters. The system will have two types of users: students and administrators. Administrators will access the system using a staff email ID.

Key Features:

Student Role:

- View eligibility criteria for course exemption.
- Check completed one-credit courses.
- Apply for course exemption if eligible.

Admin Role:

- Verify student applications.
- Approve or reject course exemption requests.
- Access the database provided by the Controller of Examination to validate student records.

Eligibility Criteria:

- Students must have completed the one-credit courses in Semester 5, 6, or 7.
- Completion of three one-credit courses is mandatory for eligibility.
- Eligible students can apply for a course exemption in Semester 8.

Database Integration:

The system will fetch the necessary data from the Controller of Examination's database to verify the student's completion of one-credit courses.

System Architecture

User Interfaces:

Student Dashboard:

- Display list of completed one-credit courses.
- Show eligibility status for course exemption.
- Option to apply for exemption if eligible.

Admin Dashboard:

- View student applications for course exemption.
- Access student records from the database.
- Approve or reject applications based on verification.

BackEnd:

- Integration with the Controller of Examination's database to fetch student course completion data.
- Logic to determine eligibility based on completed courses in specified semesters.
- Functionality to update the status of course exemption applications.

Database Schema:

Tables:

Students:

- student_id (Primary Key)
- name
- email
- semester
- completed_courses (List of completed one-credit courses)

Courses:

- course_id (Primary Key)
- course_name
- credits

Applications:

- application_id (Primary Key)
- student_id (Foreign Key)
- status (Pending, Approved, Rejected)
- submission_date

Problem Statement:

The need for a streamlined process for course exemption, ensuring students who have completed required one-credit courses are efficiently identified and granted exemptions.

Purpose:

To develop a centralized system that efficiently manages the process of course exemptions for students, resolving existing Issues of eligibility verification and application processing.

Scope:

This system includes user authentication, eligibility verification, application submission, and a dashboard for viewing and managing applications. It integrates with existing student databases to ensure accurate and timely processing of exemption requests.

Business Context:

The centralized system aims to enhance the efficiency and accuracy of course exemption processes, thus boosting organizational efficiency by minimizing manual verification efforts. Primary stakeholders include students, faculty, administrative staff, and the IT department.

Considerations:

- All users possess active institutional accounts for authentication.
- Users have regular access to internet-enabled devices.

Dependencies:

- Integration with the institution’s authentication system for user login.
- Consistent performance and availability of the existing student database.

Functional Requirements:

- User Authentication: Secure login using institutional credentials.
- Application Form: Students input their details and apply for course exemption.
- Eligibility Verification: Automatic detection of eligibility based on completed courses.
- Dynamic Dashboard: Real-time application status viewing and interaction.
- Approval Process: Admins approve or reject applications based on verification.

Flow Diagram :