REWARD POINTS CALCULATION PORTAL FOR TAC(TECHNICAL APPROVAL COMMITTEE) PROJECTS

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PROBLEM STATEMENT	SKILL

INTRODUCTION:

The goal of the TAC project Reward Point Calculation Portal is to automate the process of calculating final reward points by using reviewers' given review marks. For TAC projects, the site speeds up the award point calculation and simplifies the evaluation process. This document describes the portal's full-stack development strategy, including all of its features and components.

GOALS AND OBJECTIVES:

The portal's objective is to offer a precise and effective method for computing award points for TAC initiatives. The main goals consist of:

- ➔ Automating the process of calculating reward points.
- ➔ Enabling safe and convenient project component submission.
- ➔ Encouraging contact between reviewers and project teams.
- ➔ ensuring that final reports are free of plagiarism.
- ➔ supplying an exhaustive work log to monitor the advancement of the project.

TECHNOLOGY STACK:

The Reward points calculating portal is developed using the following stack

Frontend	React
Backend	Node.js, Express

Database	MongoDB(NoSQL)
Authentication	JSON Web Token (JWT)

COMPONENTS AND FUNCTIONALITIES:

1.User Verification

- ❖ Permit users to create accounts, log in, and securely manage them.
- ❖ Enable permission and authentication to access portal resources and features.

2. The dashboard

- ❖ Create a user-friendly dashboard that shows the specifics of the project, the submission status, and the calculated rewards points.
- ❖ Incorporate graphics to show the distribution of reward points and the status of the project.

3.Project Submission Forms

- ❖ Create and put into use forms for submitting the initial project, the final report, and the plagiarism report.
- ❖ Verify the form entries to make sure all necessary data is entered.

4. Interface for Reviewers

- ❖ Provide a feedback-submitting interface so that reviewers can submit their grades for each project component.
- ❖ Give reviewers the ability to see and download project submissions for assessment.

5.Anti-Plagiarism Software

- ❖ Incorporate a plagiarism detection program or service to look for any instances of plagiarized text in the final reports.
- ❖ Give users a way to examine plagiarism reports and take the appropriate action.

6. Calculus-Based Engine

- ❖ Develop a module that automatically calculates the final reward points based on the review marks and predefined weights for each project component.
- ❖ Implement logic to handle different weightings for initial submission, final report, and review marks.

7. Team Communication

- ❖ It provides a commenting or message tool so that reviewers and project team members may talk about and exchange information about project-related topics.
- ❖ Allow collaboration and file exchange through the portal.

8.Work Log

- ❖ Create a comprehensive work log feature that allows project team members to track their work hours, activities, and progress and the reward points for their working hours is provided automatically based on their working hours.
- ❖ Provide a timeline view for tracking project milestones and accomplishments.

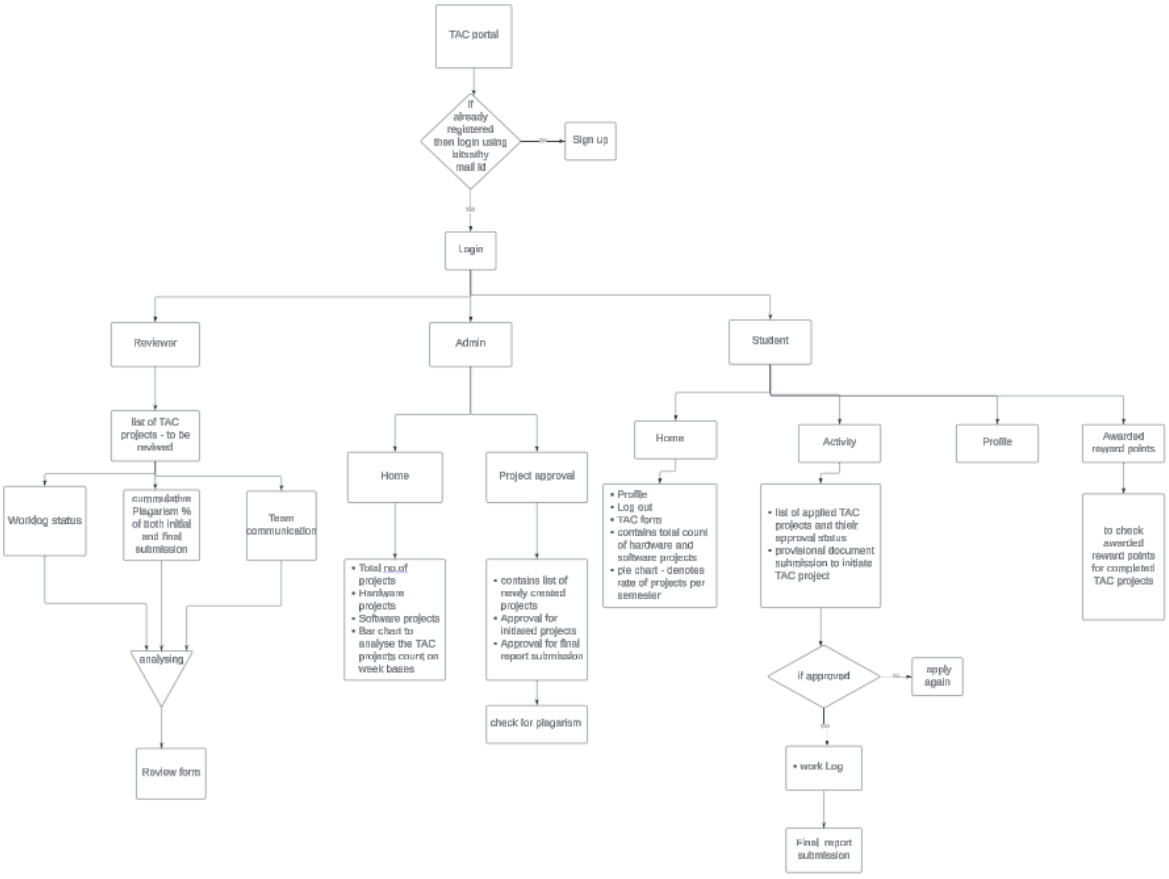
DEPLOYMENT AND HOSTING

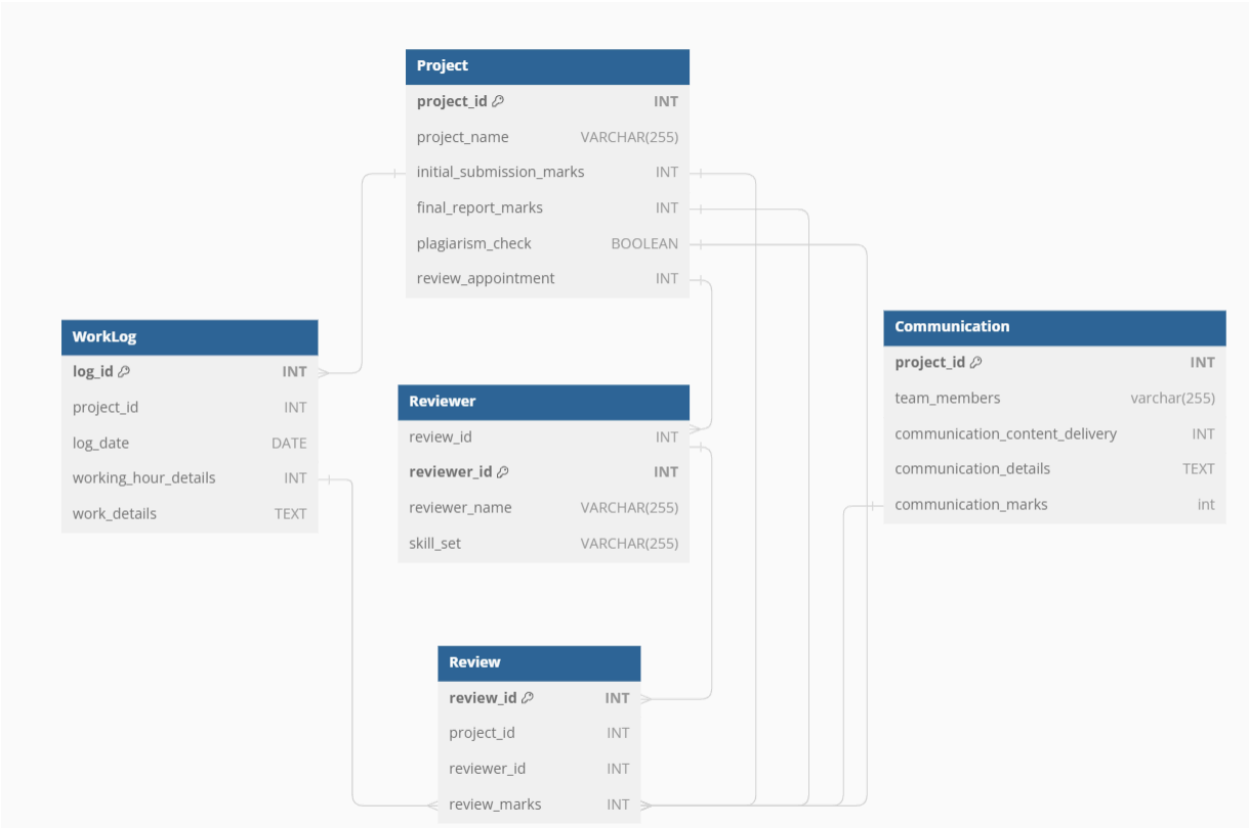
- ➔ Deploy the portal on a cloud platform (e.g., AWS, Azure, Google Cloud) for scalability and availability.
- ➔ Configure a CI/CD pipeline for automated build, testing, and deployment processes.
- ➔ Implement necessary security measures, such as SSL/TLS encryption, secure authentication, and access control, to protect sensitive project data.

CONCLUSION

This document presents an overview of the full-stack development plan for the Reward Point Calculation Portal for TAC projects. By implementing the outlined components and functionalities, the portal will automate reward point calculations, simplify project submissions, facilitate communication, and provide comprehensive tracking of project progress

FLOW CHART


TAC portal
If already registered then login using bitsathy mail id
no
Sign up
Login
Reviewer
Admin
Student
list of TAC projects - to be revived
Worklog status
cummulative Plagarism % of both initial and final submission
Team communication
analysing
Review form
Home
Project approval
• Total no.of projects
• Hardware projects
• Software projects
• Bar chart to analyse the TAC projects count on week bases
• contains list of newly created projects
• Approval for initialed projects
• Approval for final report submission
check for plagarism
Home
Activity
Profile
Awarded reward points
• Profile
• Log out
• TAC form
• contains total count of hardware and software projects
• pie chart - denotes rate of projects per semester
• list of applied TAC projects and their approval status
• provisional document submission to initiate TAC project
to check awarded reward points for completed TAC projects
If approved
no
apply again
yes
• work Log
Final report submission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final_report_marks INT
plagiarism_check BOOLEAN
review_appointment INT
WorkLog
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project_id INT
log_date DATE
working_hour_details INT
work_details TEXT
Reviewer
review_id INT
reviewer_id INT
reviewer_name VARCHAR(255)
skill_set VARCHAR(255)
Communication
project_id INT
team_members varchar(255)
communication_content_delivery INT
communication_details TEXT
communication_marks int
Review
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project_id INT
reviewer_id INT
review_marks INT