Inspiring Excellence

CSE370 : Database Systems
Project Report
Project Title : GradLink

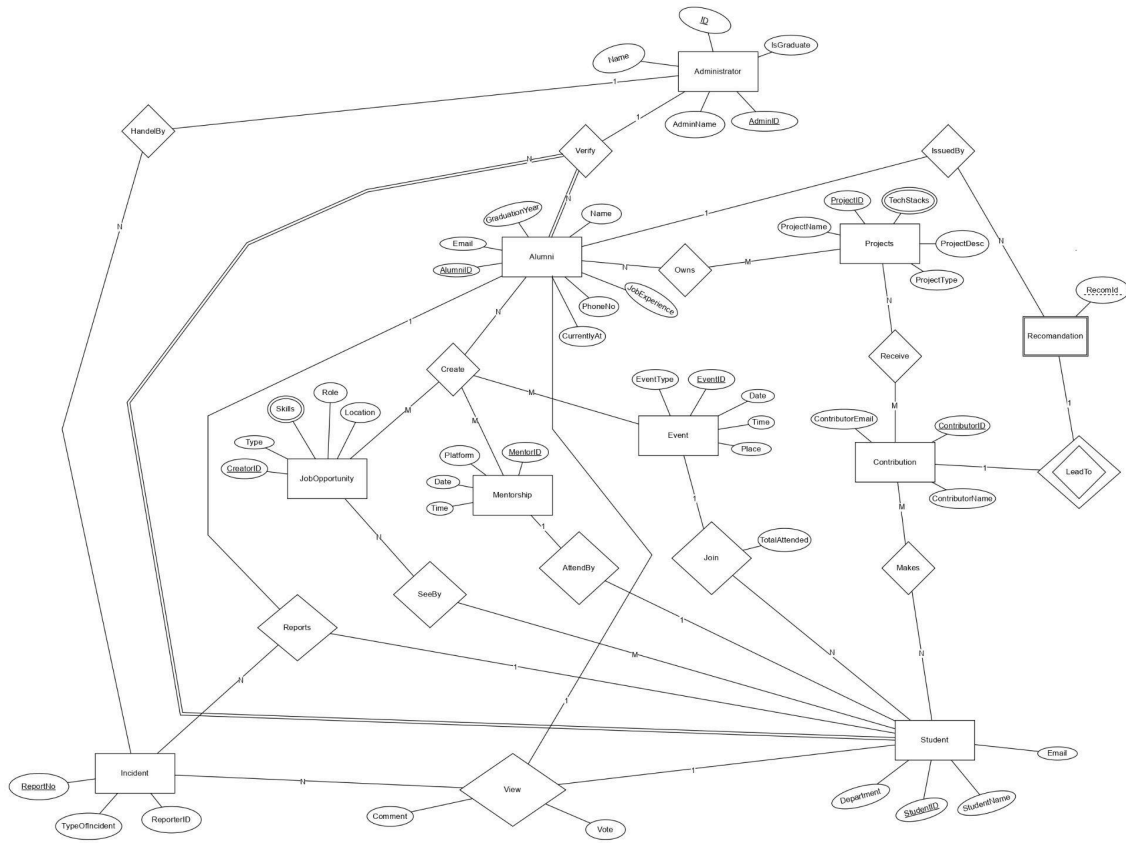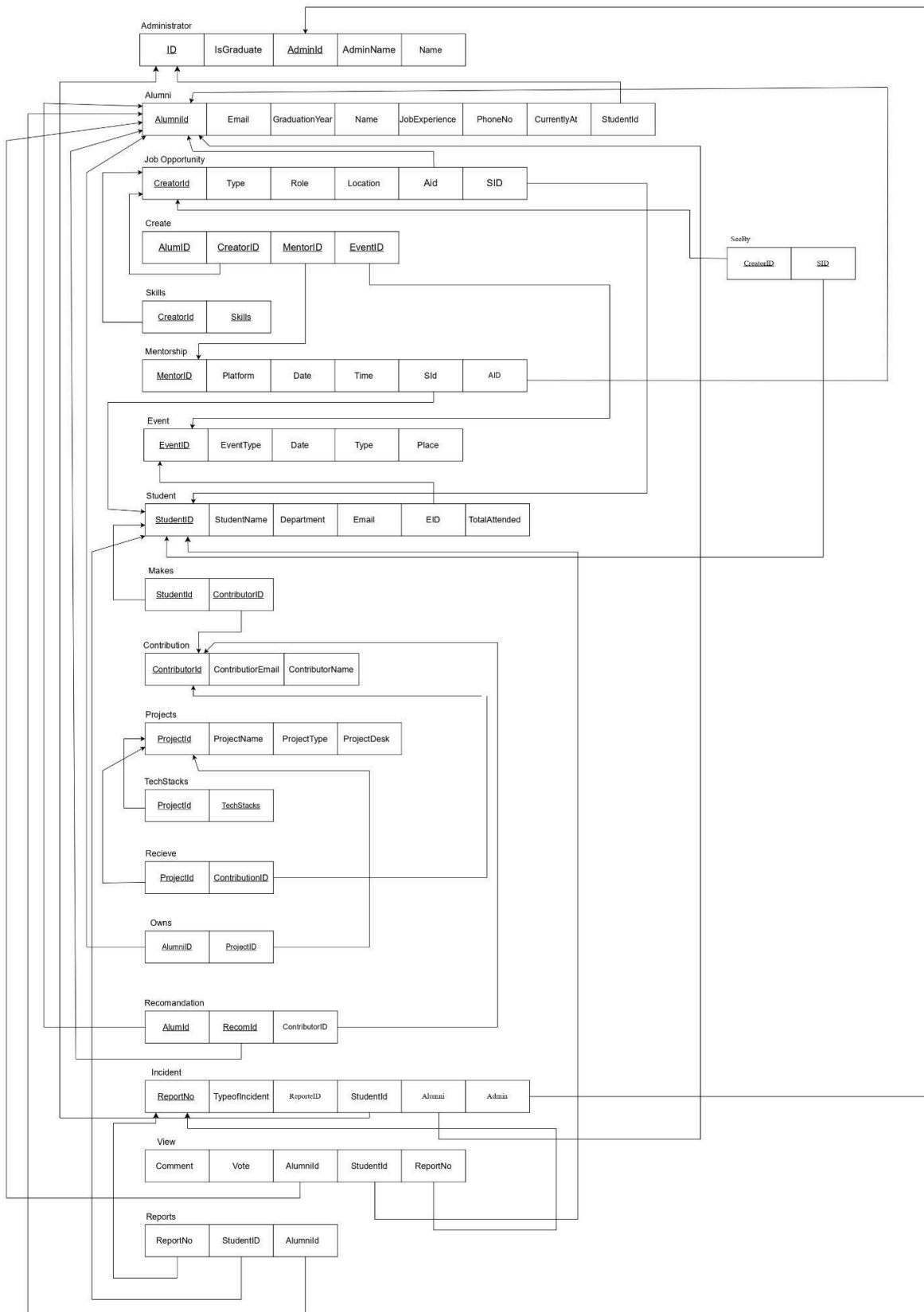| Group No : 07, CSE370 Lab Section : 05, Summer 2025		
ID	**Name**	**Contribution**
22299079	MD.Sohanur Rahman Shimul	Database, Backend
22299329	MD.Mahmudul Islam Sohan	Frontend, Backend
22299398	Samiul Mahmud	Frontend, API

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Introduction

GradLink is a web-based platform designed to connect students and alumni in a secure and organized way. The system allows only **admin-verified** users to access role-based dashboards, where alumni can create mentorship sessions, projects, and events, and students can participate, contribute, and request recommendation letters. Additional features include a preference-based search for skills, companies, and roles. The frontend was built using React, Tailwind CSS, and DaisyUI, while the backend uses Node.js, Express.js, and MySQL Database. This project aims to improve learning, networking, and career development by providing a reliable platform for interaction between students and alumni.

Project Features

ID, Name	Features [3 per member]	
22299398, Samiul Mahmud	Ft 1	Admin Verification
	Ft 2	Role Based Dashboard
	Ft 3	Profile Edit & Updation
22299079, Sohanur Rahman Shimul	Ft 1	Project Section
	Ft 2	Event Section
	Ft 3	Contribution based Recommendation
22299329, Mahmudul Islam Sohan	Ft 1	Mentorship Section
	Ft 2	Job Section
	Ft 3	Preference-Based Search

ER Diagram [PDF](#)

Schema Diagram [PDF](#)

Administrator

ID	IsGraduate	AdminId	AdminName	Name

Alumni

AlumniId	Email	GraduationYear	Name	JobExperience	PhoneNo	CurrentlyAt	StudentId

Job Opportunity

CreatorId	Type	Role	Location	Aid	SID

Create

AlumID	CreatorID	MentorID	EventID

SeeBy

CreatorID	SID

Skills

CreatorId	Skills

Mentorship

MentorID	Platform	Date	Time	SId	AID

Event

EventID	EventType	Date	Type	Place

Student

StudentID	StudentName	Department	Email	EID	TotalAttended

Makes

StudentId	ContributorID

Contribution

ContributorId	ContributiorEmail	ContributorName

Projects

ProjectId	ProjectName	ProjectType	ProjectDesk

TechStacks

ProjectId	TechStacks

Recieve

ProjectId	ContributionID

Owns

AlumniID	ProjectID

Recomandation

AlumId	RecomId	ContributorID

Incident

ReportNo	TypeofIncident	ReporteID	StudentId	Alumni	Admin

View

Comment	Vote	AlumniId	StudentId	ReportNo

Reports

ReportNo	StudentID	AlumniId

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Normalization

a. Explain if your converted Schema is in 1NF or not. If not, decompose it to 1NF.
   Ans : Yes, our Schema is in 1NF.

b. Explain if your converted Schema is in 2NF or not. If not, decompose it to 2NF. Can there be any partial functional dependencies in your relational schema?
   Ans : Yes, our schema is in 2NF and there are no functional dependencies.

c. Explain if your converted Schema is in 3NF or not. If not, decompose it to 3NF. Can there be any transitive dependencies in your relational schema?
   Ans : Our present schema is already in 3NF and we do not think that there are any transitive dependencies in our relational schema.

Frontend Development

The frontend of GradLink was implemented using **React.js** with **Tailwind CSS** and **DaisyUI**, ensuring a modern and responsive interface. The design focused on simplicity and accessibility so that verified students and alumni could easily interact with mentorship sessions, projects, events, and the Q&A forum.

Contribution of ID : 22299398, Name : Samiul Mahmud

Focused on profile management, recommendation letter requests. Styled and fine-tuned the landing page and public routes, ensuring consistency across the platform. Also, created the Verify page for verification requests after logging in. Designed the Sign Up and Login page also.

Contribution of ID : 22299079, Name : Sohanur Rahman Shimul

Worked on the mentorship, event and project sections, designing interactive interfaces where alumni could create opportunities and students and alumni both can view, apply, and contribute. Accepted contributions will be added into their personal profile.

Contribution of ID : 22299329, Name : MD. Mahmudul Islam Sohan

Developed the authentication and verification flows, including role-based dashboards (student, alumni, admin) with conditional rendering for features accessible to each role. Created protected and private routes to ensure security and inclusivity. Also, designed the project UI/UX and themes.

Backend Development

The backend was built using **Node.js** with **Express.js** for handling APIs and **MySQL** as the database to store and manage user, student, alumni, project, mentorship, event-related data and so on. The backend ensured secure authentication, role-based access control, and efficient data handling across all modules.

Contribution of ID : 22299398, Name : Samiul Mahmud

Created **University database** table to match data from the **verify request**. Handled Pending verification request to manually update and send the **verified status** to the student and alumni list API. Also, handled the **profile** edit and update APIs.

Contribution of ID : 22299079, Name : MD.Sohanur Rahman Shimul

Created the database on MySQL Workbench and connected it with the backend. Developed the **mentorship, event, and project APIs**, handling creation, updates, and contribution workflows, including acceptance/rejection logic.

Contribution of ID : 22299329, Name : MD. Mahmudul Islam Sohan

Created a **userType** hook to fetch data from the backend to see which user type is logged in for showing the separate dashboard. Developed **verified users, alumni list and student list** API to show data on the admin dashboard. Created **users table** by posting user data from Firebase users. Developed a **Job API** to post job openings by alumni.

Source Code Repository

GitHub : https://github.com/shimul47/GradLink

Conclusion

GradLink is a web platform that connects students and alumni through verified accounts. It provides role-based dashboards where alumni can create mentorships, projects, and events, while students can join, contribute and request recommendation letters and apply for jobs. We built the frontend with React, Tailwind CSS, and DaisyUI, and the backend with Node.js, Express.js, and MySQL as the database. With three members, we divided tasks clearly and completed all core features. The project meets its goal of making communication between students and alumni easier and more effective.

References

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DaisyUI. (2023). *daisyUI – Tailwind CSS Components*. https://daisyui.com