

IE 6700: Data Management for Analytics

**UniQuad : A Campus Community Platform for
Meaningful Connections and Collaborative Growth**

Team : 23

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PROBLEM STATEMENT

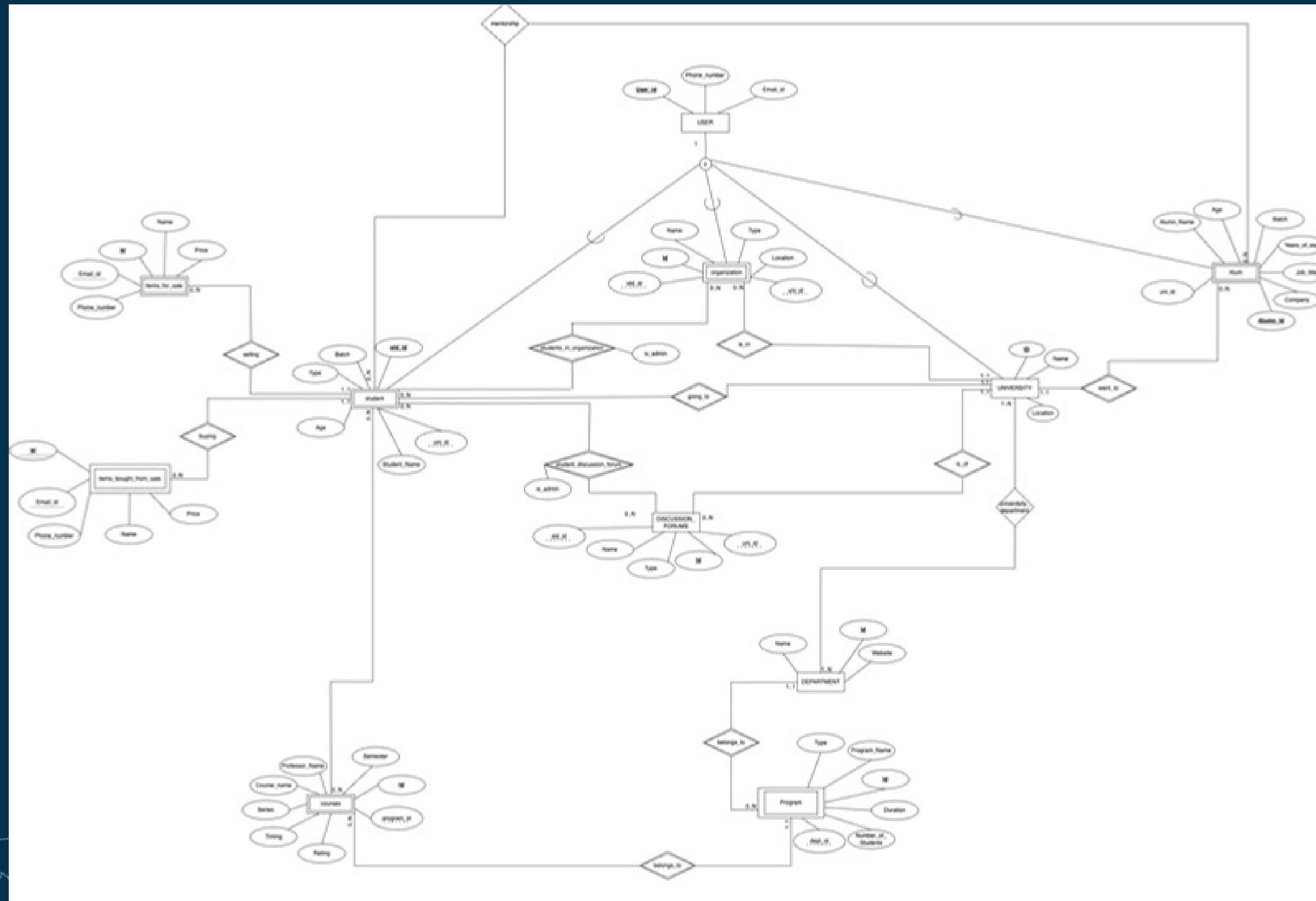
Universities aim to cultivate knowledge and relationships that support learners throughout their lives. However,

- Conventional digital platforms lack specificity in addressing the unique needs of university students.
- The absence of a dedicated networking university ecosystem limits the potential for impactful exchanges among students and alumni.
- Students miss out on valuable mentorship, peer support, and opportunities for personal and professional development.

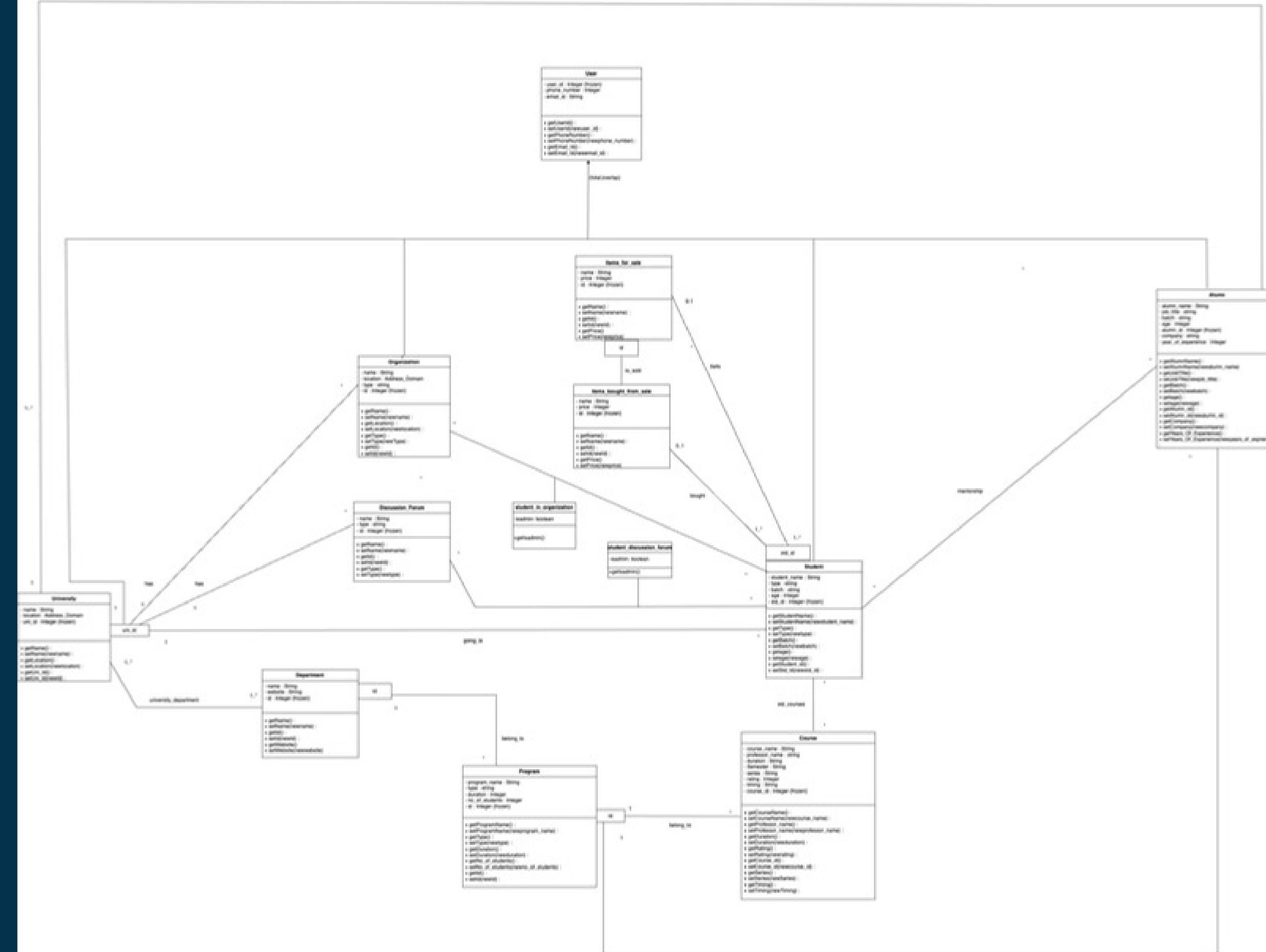
PROPOSED SOLUTION

- **Unified Platform:** UniQuad offers a centralized platform for students, integrating support systems, mentorship, and career support.
- **Secure Networking:** Facilitates secure connections with alumni, fostering meaningful relationships within the university community.
- **Comprehensive Support:** Beyond social networking, UniQuad serves as a lifeline, providing academic guidance, career assistance, and even a marketplace for trusted transactions within the university network.

CONCEPTUAL MODELING: EER MODEL



UML MODEL



RELATIONAL MODEL

- USER (User_id, phone_number, email_id)
- DEPARTMENT (Id, name)
- UNIVERSITY (Uni_id, name, location, user_id)
- STUDENT (Std_id, batch, type, age, std_name, user_id, Uni_Id, Program_Id)
- ALUM (Alum_Id, company, job_title, years_of_experience, batch, age, alum_name, user_id, Uni_id, Program_id)
- PROGRAM (Id, type, name, duration, number_of_students, Dept_Id)
- COURSES (Id, course_name, professor_name, semester, series, timing, rating, Program_Id)

RELATIONAL MODEL

- ORGANIZATION (**Id**, name, type, location, **user_id**, **Uni_id**)
- DISCUSSION_FORUMS (**Id**, name, type, **Uni_Id**)
- ITEM_BOUGHT_FROM_SALE (**Id**, Name, Price, **Std_Id**)
- ITEMS_FOR_SALE (**Id**, Name, Price, **Std_Id**)
- MENTORSHIP (**Alum_Id**, **Std_id**)
- UNIVERSITY_DEPARTMENT (**University_Id**, **Dept_Id**)
- STD_COURSES (**course_id**, **Std_id**)
- STUDENT_IN_ORGANIZATION (**Std_Id**, **Org_id**, IsAdmin)
- STUDENT_DISCUSSION_FORUM (**Std_Id**, **Forum_Id**, IsAdmin)



UNIQUAD

MySQL demonstration



NoSQL demonstration

Application demonstration



SUMMARY

- UniQuad provides a dedicated platform for students to connect with peers, alumni, and faculty, facilitating mentorship and fostering a supportive community.
- The database centralizes and tracks key data related to programs, departments, courses, students, alumni, discussion forum, buying and selling of items among the student community.
- The project leverages a powerful database with optimized queries executed in MySQL and NoSQL, thereby contributing to efficient data management.
- The project draws on the power of Python's mysql.connector for efficient database interaction, enabling data visualization through Python libraries.

Thank
you!