



Ahsanullah University of Science and Technology (AUST)
Department of Computer Science and Engineering

Project Proposal: Alumni360

Course No.: CSE4126

Course Title: Distributed Database Systems Lab

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Submitted To-

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Year: 4th

Semester: 1st

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Alumni360 - Distributed Alumni Relationship Management System:

The Global Schema for our system is:

alumni_fragment(alumni_id,first_name,last_name,graduation_year,email,phone_number,address,department,job_title,company,social_media_handles)

events_fragment(event_id,event_name,event_date,event_location,event_description)

donations_fragment(donation_id,alumni_id,donation_amount,donation_date,donation_purpose)

job_opportunities(job_id,job_title,job_description,job_location,company,job_posting_date)

The fragmentation schema:

alumni_fragment1=SL graduation_year <= 2015

alumni_fragment2=SL graduation_year > 2015

events_fragment1=SL event_date <= '2022-01-01'

events_fragment2=SL event_date > '2022-01-01'

The allocation schema:

alumni_fragment1,events_fragment1,donations_fragment1,job_opportunities1 at site 1

alumni_fragment2,events_fragment2,donations_fragment2,job_opportunities2 at site 2

Why a Distributed Database is needed:

A distributed database is essential for Alumni360 due to the following reasons:

Data Distribution: The system needs to handle a large number of alumni records, which may exceed the capacity of a single server or database. Distributing the alumni data across multiple sites allows for scalability and efficient storage management.

Performance: By distributing the data, the system can leverage the computing power and resources of multiple sites, resulting in improved performance for data retrieval and processing operations.

Functionalities: Alumni Directory: Their personal information, graduation year, and contact details.

Search and Filter: Provide search capabilities to allow users to find alumni based on various criteria such as name, graduation year, department, or location.

Event Management: Enable the management and tracking of alumni events, including registration, attendance, and event details.

Fund-raising: Facilitate fund-raising campaigns and donation tracking to support various initiatives and projects within the university.

Career Services: Offer features to connect alumni with job opportunities and networking events to enhance career development.