Career Networking Platform

Mini World Selection and Process Documentation

Individual Project CIS344

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CIS 344 Spring 2026

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1. **Introduction**

This document explains the Career Networking Platform database project. It covers why this mini world was selected and provides detailed information about system design requirements, entity relationship modeling decisions, and how different design choices were made. The Career Networking Platform is a complex real world example that includes multiple connected entities and various business needs, which makes it a good choice for showing database design principles.

Research/Interviews

The system requirements for the Career Networking Platform were gathered through extensive research of existing professional networking platforms, primarily LinkedIn. LinkedIn was analyzed for its comprehensive professional networking features including user profiles, connection management, job posting, content sharing,endorsement, and messaging systems. The findings from this analysis directly informed the functional requirements such as connection request, job applications and skill endorsements.

Link to article on miniworld
https://www.geeksforgeeks.org/dbms/how-to-design-a-database-for-linkedin/

I spoke with Nicole Allen, the career specialist at Lehman College. She mentioned many prospective employees do not really leverage LinkedIn as they should. It's not just enough to create a user account but the content you add to it. Content can be associated with all other tables, due to the flexibility of it. Content can be shared on post and messages, content can be in video format, there's educational content that can be used to demonstrate your skills and other people to endorse those skills. Your linkedIn account is essentially your professional resume but built as a profile user.Nicole Allen, a career specialist at Lehman College, emphasized that many job seekers underutilize LinkedIn. She noted that merely creating an account is insufficient; the quality of the content added is what truly matters. Content is highly flexible, associating with all other tables in the system. It can be used in posts and

messages, presented in video format, or shared as educational material to showcase skills and receive endorsements. Essentially, a LinkedIn account functions as a professional resume built into a user profile.

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2. **Justification**

The Career Networking Platform mini world works well for this database project because it has the right level of complexity. The platform needs many entities including users, companies,job postings,applications,skills,endorsement,post,comments,messages, and connections. This gives many opportunities for database design. It has complex relationships like many to many relationships between users and post, companies and jobs. It includes real world business rules such as privacy settings and data.

3. **System Requirement**

User Management- users need to register their email and verify their account**.** Users can create profile resumes with their work history, education and skills. Users can also attach a picture.

Connection Management- Users can send connection requests to a recruiter at their dream career. The system can track whether requests have been accepted, pending or rejected.

Job Posting- Companies post job openings with descriptions, requirements, salary information. Users search for jobs by location, industry, experience level, and pay. Users apply to jobs with cover letters and resumes. Companies review applications and update the status. The system tracks each application from submitted to interview to offer or rejection.

Content Sharing- Users create posts with text, images, documents, and links. Users can like, comment and share posts. Posts can be public, visible to connections only, or visible to specific groups. The system shows posts in a personalized feed based on who you follow and what interests you.

Skills and Endorsements- Users add skills to their profile. Connections can endorse someone for a specific skill. The system counts how many endorsements each skill has and tracks who gave them. Skills are organized by categories.

Messaging- Users send direct messages to their connections. The system organizes messages into conversation threads. Messages can include attachments and links. Users can mark messages as read or unread and archive old conversations.

Non-Functional Requirements

Security- Passwords are encrypted and stored securely. Users sessions expire after a period of inactivity. Different users have different permission levels. All data sent between users and the system is encrypted.

Performance- there will always be availability. The system handles millions of users at a time. Database queries use proper indexing for speed.
Data Integrity- All relationships between data tables are properly maintained. Data is validated before being saved to the database. Important actions are logged for record keeping.
Scalability- The database can grow as more users join. System performance stays consistent as data increases. Frequently requested data is stored in cached for speed purposes.