

# Database Management System ( IT 214 )

Network Nexus (Application Database)

Course Instructor : Prof. PM Jat



## Task 1: Description of the scenario

Lab Group-2

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# Network Nexus

## **Objective:**

The main objective of our database is to provide a professional networking platform where individuals can connect with colleagues, peers, employers, and potential employees. It allows users to build and maintain their professional identity online, showcase their skills and experience through profiles, connect with others in their industry, and join groups. It aims to facilitate professional networking, career development, and knowledge sharing among its users.

Our idea for database is inspired from LinkedIn.

Let the application be called “[Network Nexus](#)”.

## **Application Users:**

1. Students
2. Employees
3. Company

## **Use Cases:**

### 1. Students / Employees:

- Networking: It provides a platform for students to connect with professionals, alumni, recruiters, and peers in their field of interest.
- Career Exploration: Students can use Network Nexus to explore various career paths by following companies, joining groups related to their interests, and viewing posts shared by professionals in different industries.
- Endorsements: They can receive endorsements from connections for specific skills listed on their profile, which adds credibility to their qualifications.
- It would help students and employees showcase their skills, experiences, and achievements on their profiles to establish credibility.

### **I. User Signup:**

Users must register before starting any activity on the site. When they register, they receive a unique user ID. Users, have to fill in their details like

First Name, Middle Name, Last Name, Date of Birth, City, and Contact Information (Email, Phone Number, Address).

Please note that this field is mandatory and must be filled out to complete the sign-up process. Now, They can set up their profile by adding more information like their education details, experiences, skills, certificates and achievements.

## **II. Education Details:**

In the Education Detail section, users can add information about their academic background, including schooling and graduation.

Each entry will have a unique Education ID for easy reference within our database. Users can list multiple institutes they've attended, specifying details such as the institute's name, the degree or qualification obtained, the field of study, joining and leaving dates, grades achieved, and any notable achievements during their time there.

Additionally, users can indicate skills they acquired during their education, enriching their profile with valuable qualifications.

To ensure accuracy and consistency, each institute will be assigned a unique ID, and a separate table will store additional information about the institute's location.

## **III. Professional Experience:**

In the User Experience section, users can add details about their professional experiences.

Users will input essential information such as the company they worked for, start and end dates of employment, the field or department they worked in, and a brief description of their role and responsibilities. This complete strategy highlights their abilities, expertise, and knowledge, increasing their profile's appeal and credibility in the professional community.

The skills from experience section allows users to highlight skills **gained through professional experience**. Users can list various skills they've acquired in the workplace, providing an overall overview of their capabilities.

## **IV. Skills:**

There is also a section for skills. This section contains all the skills that user acquired from their experience and education and one can also add some general skills. Users can receive endorsements from other users for a particular skill, indicating their proficiency in a skill.

## **V. Certifications and License:**

In this section, users can record details about their professional certifications and licenses, including the issuing organization, certificate name, issue and expiration dates, and credential ID. This information enhances the user's profile by showcasing their qualifications and expertise in specific areas. Additionally, it provides validation of their skills and credentials to employers and professional connections.

## **VI. Connections:**

Users can send connection requests to other users and receive requests from users who wish to connect with them. Users can also track when they receive or send requests and check the request status, which indicates whether their request has been accepted or is pending.

## **VII. Interest:**

Many users with similar interests and skills can form a group with a specific group name. Each group has a designated leader, and they are assigned a unique group ID. After the group is formed, any user with similar interests can join the group and access its activities.

Users can follow companies based on their interests and stay updated on company activities through their posts and hiring statuses.

## **2. Company:**

- **Recruitment:** Companies can use 'Network Nexus' to post job openings, search for candidates, and even proactively reach out to professionals who meet their specific skill and experience requirements. Additionally, it offers advanced search filters that enable recruiters to find potential candidates.
- **Networking:** It provides a platform for companies to connect with students and employees.

### **I. Company register:**

Companies must register before commencing any activities on the site. Companies are required to fill in their CIN (Corporate Identification Number), Company Name, Company Description, Location, and Hiring Status. Once they register, they begin to add up followers.

### 3. For Both Users and Company:

#### **I. Followers:**

Users can access information about their followers, including the individuals who follow them. Additionally, they can view their following list, which comprises the individuals they follow.

#### **II. Analytics:**

Users can find out how many users have searched for them (in the search appearance section) and viewed their profile (in the profile views section). They also know about their post impressions which refers to the number of times a post appears on someone's screen as they scroll through their feed.

#### **III. Post and Comment and their reaction:**

Each user can post their achievements, certificates, and new responsibilities, etc. describing the post's content in the description. They can also update or delete their posts and their descriptions. Additionally, users can view posts from other users, react to them, and see the dates they were originally posted and last updated. Users can also leave comments on posts.

### **Tentative list of Applications of 'Network Nexus' (Queries):**

1. Discover all users' personal and contact information, education history, and institution details.
2. Find alumni who studied at a specific institute.
3. Locate users currently pursuing or holding degrees from a particular institution.
4. Connect with alumni or colleagues from your institute or similar educational backgrounds.
5. Identify users with specific skills and where they acquired them.
6. Find users who has endorsed on your skills.
7. Discover potential employees with relevant experience and skill sets.
8. Identify companies with open or closed hiring statuses.
9. Retrieve users interested in specific groups or companies and gather information about them.

10. View connections with users and mutual connections.
11. Find users who haven't updated their profiles.
12. Find users who have posted or reacted to others' posts.
13. Identify users with licenses or certificates from specific organizations.
14. List all the skills which is common in employees of particular company.
15. User can find 1<sup>st</sup> and 2<sup>nd</sup> level of connection.

( 1st Level Connection: These are people you're directly connected with on Network Nexus.

2nd Level Connection: These are people connected to your 1st level connections but not directly connected to you. )