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Project Completed as phase 1

Technology project

Name :Employee Directory search

Submitted by:

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Problem Statement:

Organizations often face difficulties in managing and quickly accessing employee information. As teams grow, finding specific employees based on their name, department, role, or skills becomes time-consuming, especially when data is stored in static files or scattered across multiple sources.

The lack of a centralized, searchable employee directory leads to:

- Delays in communication and collaboration.
- Difficulty for new employees to get familiar with their colleagues.
- Inefficient HR processes when updating or retrieving employee details.

There is a need for a centralized employee directory system with an efficient search feature that allows users to:

1. Quickly search and filter employees by name, department, designation, or other attributes.
2. Access up-to-date employee details (contact info, reporting manager, etc.).
3. Provide a user-friendly interface for both administrators and employees.

This solution will improve internal collaboration, enhance productivity, and serve as a single source of truth for employee data.

Users

These are the people who will actively use the system:

1. **Employees** – to find colleagues' contact details, roles, departments, and reporting hierarchy.
2. **HR/Admin Staff** – to manage and update employee records (add, edit, delete).
3. **Managers/Team Leads** – to look up team members, assign tasks, and track reporting structures.
4. **New Joiners** – to explore and get familiar with coworkers across teams.

Stakeholders

These are individuals or groups who have an interest in the success of the system:

1. **Human Resources (HR) Department** – for maintaining accurate employee data and streamlining onboarding.
2. **IT Department** – for system maintenance, data security, and integration with other enterprise tools.
3. **Employees (Organization-wide)** – as end-users benefiting from easy access to information.
4. **Management/Executives** – for decision-making, organizational transparency, and productivity improvement.
5. **Project Sponsors/Clients** – those funding or approving the development of the directory.

User Stories for Employee Directory with Search

1. For Employees

- **As an employee,** I want to search for colleagues by name or department, so that I can quickly contact the right person.
- **As an employee,** I want to view a colleague's profile (role, email, phone, skills, reporting manager), so that I can collaborate efficiently.
- **As an employee,** I want to filter results by department/designation/skills, so that I can find the right expertise easily.
- **As an employee,** I want to see my reporting manager and team members, so that I understand my team structure better.

2. For HR/Admin Staff

- **As an HR staff,** I want to add a new employee profile, so that new joiners' details are available immediately.
- **As an HR staff,** I want to edit or update employee information, so that records are always up to date.
- **As an HR staff,** I want to delete outdated employee records, so that inactive employees are removed from the directory.
- **As an HR staff,** I want to generate reports on employees (by department, role, or location), so that I can support organizational needs.

3. For Managers/Team Leads

- **As a manager,** I want to see all employees reporting to me, so that I can track my team structure.

- **As a manager,** I want to search for employees with specific skills across departments, so that I can assign tasks effectively.
- **As a manager,** I want to view an organizational hierarchy chart, so that I can understand inter-departmental structures.

4. For New Joiners

- **As a new employee,** I want to search and explore team members, so that I can adapt faster to my new environment.
- **As a new employee,** I want to find my reporting manager and department head, so that I know whom to reach out to for guidance.

5. For IT Department (Support Role)

- **As an IT admin,** I want to control user access (admin vs normal user), so that sensitive employee data is secure.
- **As an IT admin,** I want to integrate the directory with company email or chat tools, so that employees can connect directly.

MVP Features for Employee Directory with Search

1. Employee Data Management

- Basic employee profiles: name, designation, department, email, phone.
- HR/Admin ability to add, edit, delete employee records.
- Centralized database (SQL or NoSQL) to store records.

2. Search & Filter

- Search by name (fast lookup).
- Filter by department/designation.
- Search results page with quick profile view.

3. Employee Profile View

- Individual profile page with key details:
  - Contact info (email, phone)
  - Role & department
  - Reporting manager (basic hierarchy link)

4. Authentication & Roles

- Login system (basic username/email + password).

- Role-based access:
  - Employee → Can search and view.
  - HR/Admin → Can manage records.

5. Core Tech Setup

- Offline-first database (SQLite/Room DB for mobile or PostgreSQL/MySQL for web).
- Cloud sync (optional for later, but local database is MVP-ready).
- Secure storage of employee info.

Wireframe (MVP-Level)

1. Login Page

- Fields: Email / Employee ID, Password
- Buttons: Login, Forgot Password

2. Home / Search Page

- Top: Search bar (enter name/department)
- Filter dropdown: Department | Designation
- List of employees (basic card view):
  - Name
  - Designation
  - Department

3. Employee Profile Page

- Profile Header: Name, Designation, Department
- Contact Info: Email, Phone
- Reporting Manager (clickable link to their profile)
- Back button to Search page

4. Admin Dashboard (HR)

- Buttons: Add Employee | Edit | Delete
- Table/List of employees with actions.

API Endpoint List (REST - MVP)

Base URL example: /api/v1

Auth

- POST /auth/login -> User login (employee/ admin).
- POST /auth/logout -> End session.

Employees

- GET /employees -> Get all employees (with optional query params for search/filter). Example: /employees?name=John&department=IT
- GET /employees/{id} -> Get details of a specific employee.
- POST /employees -> Add new employee (Admin only).
- PUT /employees/{id} → Update employee details (Admin only).
- DELETE /employees/{id} → Delete employee record (Admin only).

Departments

- GET /departments → List all departments.
- GET /departments/{id}/employees → Get employees in a department.

Optional (Later Versions)

- GET /orgchart → Return organizational hierarchy.
- GET /employees/skills?skill=Java → Search employees by skills.

Acceptance Criteria for Employee Directory with Search (MVP)

1. Login / Authentication

- **Given** a registered user with valid credentials, **When** they log in, **Then** they should be granted access to the system.
- **Given** an invalid login attempt, **When** credentials are wrong, **Then** the system should show an error message without logging in.

2. Search Employees

- **Given** an employee exists in the system, **When** a user searches by name, **Then** the employee should appear in the search results.
- **Given** multiple employees exist in the same department, **When** a user filters by department, **Then** only employees from that department should be displayed.

3. View Employee Profile

- **Given** an employee appears in the search results, **When** the user clicks on the profile, **Then** the system should display the employee’s details (name, designation, department, email, phone, reporting manager).

4. Manage Employee Records (Admin Only)

- **Given** an admin is logged in, **When** they add a new employee, **Then** the new employee should be visible in the search results.
- **Given** an admin edits an existing employee, **When** they save the changes, **Then** the updated details should be reflected in the profile and search results.
- **Given** an admin deletes an employee, **When** they confirm deletion, **Then** the employee should no longer appear in the directory.

5. Access Control

- **Given** a normal employee is logged in, **When** they use the system, **Then** they should only be able to search and view profiles, not modify them.
- **Given** an HR/admin is logged in, **When** they access the dashboard, **Then** they should see options to add, edit, and delete employee records.

6. System Requirements

- The search must return results within 2 seconds for a dataset of at least 1,000 employees.
- Employee details must remain persistent in the database after restart.
- System must be mobile and desktop responsive for basic usage.