COLLEGE CODE : 9623

COLLEGE NAME : Amrita College Of Engineering And Technology

DEPARTMENT : Computer Science And Engineering

STUDENT NM-ID : B37DA48F799EA26BC904F19F7A1B6163

ROLL NO : 962323104044

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Completed the project named as Phase-3 TECHNOLOGY

PROJECT NAME : Employee Directory Search

SUBMITTED BY,

NAME : K. Jegan
MOBILE NO : 8428217644

Project Setup

Feature DesignProject SetupSelect a tech stack for the directory (e.g., React for frontend, Node.js for backend, and MongoDB/MySQL for data storage) �?�

Initialize the application repository using a version control system such as GitHub to track changes and manage collaboration �

Create a project directory structure, including separate folders for source code, assets, configuration, and tests.

Core FeaturesEmployee Profiles:

Each entry should contain name, job title, department, email, phone number, location, photo, and skills �?�

Search Functionality:

Implement text-based search that allows filtering by name, department, or other fields �?�

UI/UX ConsiderationsDesign a clean, intuitive interface using a component-based architecture.Prioritize usability—group employees by department, provide alphabetical filtering, and support mobile responsiveness �?�

Add list views and detail pages for individual employees with easy navigation.Page

Data Storage and Core ImplementationData StorageLocal State:

Use React's state management for temporary data during development �?�

Database Integration:

Set up a database (MongoDB or MySQL). Define a schema for employee data with required fields like name, department, contact info, and profile picture �?�

API Layer:

 Create RESTful API endpoints for Create, Read, Update, and Delete (CRUD) operations on employee data.Implementing SearchUse API queries to enable searching by keywords and filters (e.g., department, location).

Optimize the search algorithm for speed and relevance, showing only relevant results and supporting partial matches.Consider adding advanced search features such as filtering by skills, designation, or location �

Security and PermissionsRestrict data modification rights to authorized users (HR/admin) while allowing all employees to view directory data �

Implement authentication (email/password, SSO, or social login as needed) to protect sensitive employee information

Testing and Version ControlTesting Core FeaturesWrite unit tests for UI components (employee cards, search bar, filters) using frameworks like Jest or Mocha �

Develop integration tests for API endpoints and data flows to ensure CRUD operations work smoothly �

Test edge cases, such as incorrect search queries, missing profile entries, and unauthorized user access.

Use manual and automated tests to validate the user experience and detect bugs before launch.Version Control & DeploymentMaintain all code in a GitHub repository, using branches and pull requests for feature development �

Document all changes in the repository using commit messages and README files.Set up CI/CD pipelines (e.g., GitHub Actions) for automated build, test, and deployment cycles.Deploy the MVP on a cloud platform (e.g., Heroku, AWS, Azure) or within the company's intranet ��

Future EnhancementsAdd features such as org charts, digital business cards, and event notifications for a richer directory experience �

Enable bulk data import/export and advanced analytics reporting for HR �