Employee Management Dashboard using Angular and TypeScript

1. Introduction

The Employee Management Dashboard is a web-based application developed using the Angular framework and TypeScript.

The main objective of this project is to manage employee information such as employee ID, name, role, department,

and salary in an interactive and user-friendly manner. This project helps learners understand Angular's core concepts

including components, routing, services, and data binding.

2. Objective

The objective of this project is to:

- Design a simple employee management system

- Display employee details in a structured manner

- Apply Angular architectural concepts

- Build a responsive UI using Angular Material

3. Tools and Technologies Used

- Framework: Angular (v17+)

- Language: TypeScript

- UI Library: Angular Material

- Backend (Optional): Mock JSON Server / REST API

- Tools: Node.js, Angular CLI, Visual Studio Code

4. System Architecture

The application follows Angular's component-based architecture. The system is divided into reusable components to

improve maintainability and scalability.

Main Components:

- Navbar Component: Used for navigation

- Employee List Component: Displays all employees

- Employee Detail Component: Views and edits employee information

5. Implementation Details

5.1 Setup and Fundamentals

Node.js and Angular CLI were installed to create the Angular project. The folder structure was configured automatically.

Employee data models were defined using TypeScript interfaces and classes.

5.2 Angular Components

The Employee List component uses *ngFor for dynamic data rendering.

The Employee Detail component uses data binding for viewing and editing employee information.

The Navbar component enables easy navigation.
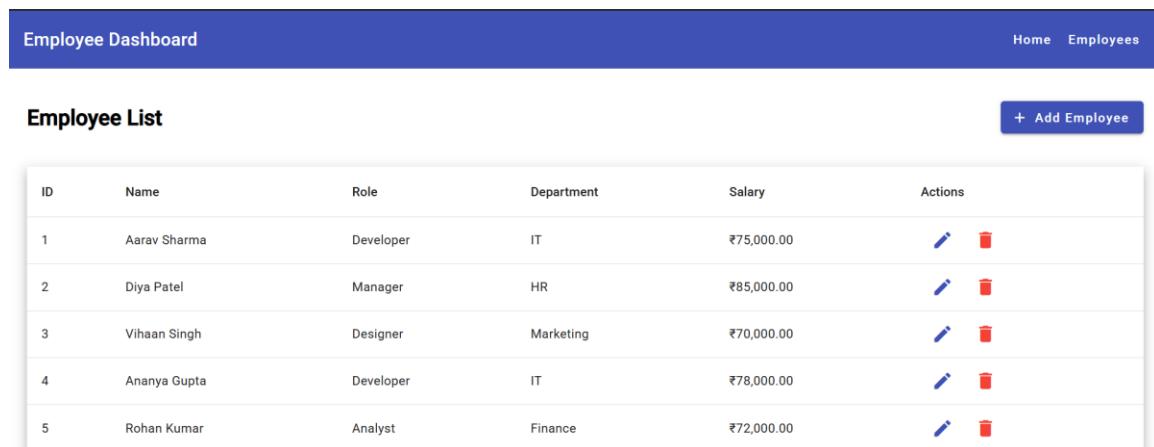
Angular Features Used:

- Data Binding

- Structural Directives (*ngIf, *ngFor)

- Routing

6. Conclusion
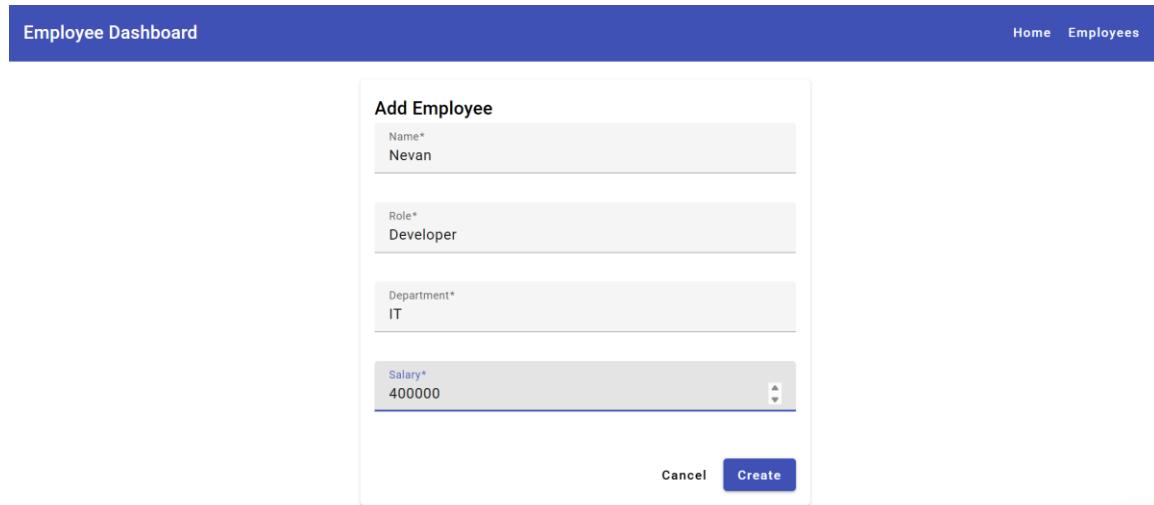
The Employee Management Dashboard project demonstrates the effective use of Angular and TypeScript to build a

modular and interactive web application. This project provides a strong foundation for advanced Angular development.

Screenshots:

Employee List

+ Add Employee

ID	Name	Role	Department	Salary	Actions
1	Aarav Sharma	Developer	IT	₹75,000.00	✏️ 🗑️
2	Diya Patel	Manager	HR	₹85,000.00	✏️ 🗑️
3	Vihaan Singh	Designer	Marketing	₹70,000.00	✏️ 🗑️
4	Ananya Gupta	Developer	IT	₹78,000.00	✏️ 🗑️
5	Rohan Kumar	Analyst	Finance	₹72,000.00	✏️ 🗑️
6	Nevan	Developer	IT	₹400,000.00	✏️ 🗑️

Edit Employee

Name*
Rohan Kumar

Role*
Analyst

Department*
Finance

Salary*
720000

Cancel   **Update**

Employee List

+ Add Employee

ID	Name	Role	Department	Salary	Actions
1	Aarav Sharma	Developer	IT	₹75,000.00	✏️ 🗑️
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4	Ananya Gupta	Developer	IT	₹78,000.00	✏️ 🗑️
5	Rohan Kumar	Analyst	Finance	₹720,000.00	✏️ 🗑️
6	Nevan	Developer	IT	₹400,000.00	✏️ 🗑️

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