

Job Simulation: Employee Dashboard Simulation

Project Title:

Implementation of an Employee Management Dashboard

Role:

Front-End Development Inter

Technology Stack:

HTML, CSS, JavaScript

Objective:

To design and implement a fully responsive dashboard that displays, filters, and analyzes employee data. The project introduces practical experience with JavaScript's higher-order functions such as `map()`, `filter()`, `reduce()`, `find()`, and `forEach()`. You will create a basic UI using HTML and CSS, and integrate interactivity using modular JavaScript code.

Task Overview:

You are required to build a dynamic, user-friendly dashboard that allows users to:

- View a table of employee data
- Filter employees by department
- Search employees by name
- Calculate and display average salary
- Convert all employee names to uppercase
- View summarized results in a separate panel

This task simulates real-world employee data management with visual interactivity.

Task Requirements:

1. Functionality:

- Create a JavaScript array of employee objects with these properties:
 - name, age, department, role, salary
- Use `forEach()` to dynamically generate table rows for each employee
- Use `map()` to convert all employee names to uppercase when a button is clicked, then update the table
- Use `filter()` to filter employees based on selected department from a dropdown menu
- Use `reduce()` to calculate and display the **average salary** in the result panel
- Use `find()` to search and display full details of an employee when a name is entered in the search field

2. User Interface (UI):

Build a responsive layout with the following sections:

- **Header:**
Title: *Employee Management Dashboard*
- **Controls Panel:**
 - Search bar to input employee names
 - Dropdown to filter by department
 - Buttons for:
 - Convert Names to Uppercase
 - Calculate Average Salary
- **Employee Table:**
Columns: Name, Age, Department, Role, Salary

- **Result Panel:**

Displays:

- Average salary
- Searched employee's full information

CSS Styling Requirements:

- Use consistent padding, spacing, and modern color schemes
- Apply background color or card-style boxes to different sections
- Make the employee table scrollable and fully responsive
- Highlight table rows on hover with smooth transitions

3. Code Structure:

- Use **separate files**:
 - index.html – HTML layout and structure
 - style.css – CSS styles for layout, color, and responsiveness
 - script.js – JavaScript logic for all data operations and UI updates
- Create **modular JavaScript functions**, such as:
 - filterByDepartment()
 - calculateAverageSalary()
 - convertNamesToUpperCase()
 - searchEmployeeByName()
 - displayEmployeeTable()
- Bind UI elements and events using document.querySelector() and related DOM methods
- Add **2–3 line comments** in script.js explaining how each array method (map, filter, reduce, find, forEach) is being used

Bonus (Optional Features):

- Add a **light/dark mode toggle** using CSS class switching
- **Validate search input** to display “No match found” when the entered name doesn’t exist
- Animate row highlighting using transition and :hover
- Show the **total number of employees** currently displayed in the table

Deliverables:

Submit a project folder containing:

- index.html – Markup for the dashboard layout
- style.css – Styles for layout, responsive design, and theming
- script.js – JavaScript for managing data and updating the UI

Make sure it includes inline comments for every higher-order function used.

Learning Outcomes:

By completing this project, you will gain practical experience in:

- Using JavaScript’s higher-order functions to process and manipulate arrays
- Creating and updating DOM elements dynamically
- Designing modular and maintainable JavaScript code
- Building responsive and styled layouts using HTML and CSS
- Handling and validating user inputs to enhance interactivity

Employee Management Dashboard

Search by name

All Departments

Uppercase Names

Average Salary

| Name | Age | Department | Role | Salary |
|---------|-----|-------------|-------------|--------|
| Alice | 30 | HR | Manager | 50000 |
| Bob | 25 | Engineering | Developer | 70000 |
| Charlie | 28 | Sales | Salesperson | 45000 |
| Diana | 35 | Engineering | Team Lead | 80000 |
| Eva | 32 | HR | Recruiter | 48000 |

Average Salary: -

Searched Employee: -

Total Employees Displayed: 5

Type here to search

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Employee Management Dashboard

Search by name

Engineering

Uppercase Names

Average Salary

| Name | Age | Department | Role | Salary |
|-------|-----|-------------|-----------|--------|
| Bob | 25 | Engineering | Developer | 70000 |
| Diana | 35 | Engineering | Team Lead | 80000 |

Average Salary: -

Searched Employee: -

Total Employees Displayed: 2

Type here to search

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