

This project implements an employee management system with multiple features, including adding and managing departments, registering and editing employees, and reporting department or employee statistics. This task focuses on the feature of adding new employees to the system.

Add New Employee Feature:

1. User Interface: The system provides a menu-driven interface for adding new employees. Users should select the option to add a new employee from the main menu.
2. The system should perform the following actions when adding a new employee:
 - a. Display a list of available departments for selection.
 - b. Prompt for and collect employee information:
 - i. Department ID (selected from available departments)
 - ii. Full name (must not be empty)
 - iii. Date of birth (in MM/DD/YYYY format)
 - iv. Years of experience (must be a non-negative integer)
 - v. Designation (either "Manager" or "Employee")
 - vi. Basic pay (must be a positive integer)
 - vii. Gross pay (must be a positive integer)
 - c. Validate input fields to ensure all employee information satisfies the requirements.
 - d. Generate a unique Employee ID:
 - i. Create a random number between 0 and 999999.
 - ii. Check if this ID already exists in the system.
 - iii. If it exists, generate a new random number and check again.
 - iv. Repeat until a unique ID is found.
 - e. Create a new Employee object with the provided information and generated ID.
 - f. Add the new employee to the system's employee list.
3. After registration, the system should display a list of all employees, including the newly added ones. For each employee, it should show the randomly generated Employee ID and other information that was provided in Step 2. b.

Currently, the implementation of this feature contains a logic bug that causes the registration of a new employee to deviate from its intended functionality.

(Expected and Actual Outputs are shown in the next pages)

An example of the expected output:

When adding a new employee to the system:

***** ADD EMPLOYEE *****

List of available Departments:

- 1) Department ID: 123 | Department Name: HR
- 2) Department ID: 456 | Department Name: IT

Please input one of the above department ID for the new employee: 123
You selected Department ID: 123. Please enter the employee details below.

Enter your full name: John Doe
Enter employee date of birth (Format - MM/DD/YYYY): 01/15/1990
Enter your experience: 5
Enter your designation: Manager
Enter your basic pay: 50000
Enter your gross pay: 75000

***** Employee 1 *****

Department ID: 123
Employee ID: 987654 (randomly generated)
Name: John Doe
DOB: 1/15/1990
Experience: 5
Designation: Manager
Basic Pay: 50000
Gross Pay: 75000

Returning to the main menu.

***** ADD EMPLOYEE *****

List of available Departments:

- 1) Department ID: 123 | Department Name: HR
- 2) Department ID: 456 | Department Name: IT

Please input one of the above department ID for the new employee: 456
You selected Department ID: 456. Please enter the employee details below.

Enter your full name: Jane Smith
Enter employee date of birth (Format - MM/DD/YYYY): 05/20/1985
Enter your experience: 8
Enter your designation: Employee
Enter your basic pay: 60000
Enter your gross pay: 80000

***** Employee 2 *****

Department ID: 456

Employee ID: 835762 (randomly generated)

Name: Jane Smith

DOB: 5/20/1985

Experience: 8

Designation: Employee

Basic Pay: 60000

Gross Pay: 80000

Returning to the main menu.

Actual Output:

***** ADD EMPLOYEE *****

List of available Departments:

1) Department ID: 123 | Department Name: HR

2) Department ID: 456 | Department Name: IT

Please input one of the above department ID for the new employee: 123

You selected Department ID: 123. Please enter the employee details below.

Enter your full name: John Doe

Enter employee date of birth (Format - MM/DD/YYYY): 01/15/1990

Enter your experience: 5

Enter your designation: Manager

Enter your basic pay: 50000

Enter your gross pay: 75000

***** Employee 1 *****

Department ID: 123

Employee ID: 987654 (randomly generated)

Name: John Doe

DOB: 1/15/1990

Experience: 5

Designation: Manager

Basic Pay: 50000

Gross Pay: 75000

Returning to the main menu.

***** ADD EMPLOYEE *****

List of available Departments:

1) Department ID: 123 | Department Name: HR

2) Department ID: 456 | Department Name: IT
Please input one of the above department ID for the new employee: 456
You selected Department ID: 456. Please enter the employee details below.
Enter your full name: Jane Smith
Enter employee date of birth (Format - MM/DD/YYYY): 05/20/1985
Enter your experience: 8
Enter your designation: Employee
Enter your basic pay: 60000
Enter your gross pay: 80000

***** Employee 2 *****

Department ID: 456
Employee ID: 987654 (randomly generated)
Name: Jane Smith
DOB: 5/20/1985
Experience: 8
Designation: Employee
Basic Pay: 60000
Gross Pay: 80000

Returning to the main menu.