Contents

1. <u>Introduction</u>

This project is assigned to me for developing an Employee Management System with the help of basic C programming language.

The basic aim of the project is to create an employee management system where we need to put up basic employee details and thereby with the help of c programming, we have to create a portal (.exe file) for adding employee data including their name, employee ID, salary, age and job title; updating employee data, deleting employee data and finally displaying all the employees' data in the system at a glance.

2. <u>Objective</u>

To develop a C program for an **Employee Management System**

3. <u>Description</u>

3.1) Variables:

- `struct Employee employees[100]`: An array of `Employee` structs to store employee data. It has a maximum capacity of 100 employees.

- `int count`: An integer variable to keep track of the number of employees currently stored in the `employees` array.

- `int choice`: An integer variable to store the user's choice for the menu options.

3.2) Functions:

- `void addEmployee(struct Employee *employees, int *count, FILE *file)`: A function to add a new employee to the database. It takes pointers to the `employees` array, `count`, and a file pointer `file` for reading and writing employee data.
- `void updateEmployee(struct Employee *employees, int count, FILE *file)`: A function to update an existing employee's details. It takes the `employees` array, `count`, and `file` as parameters.

- `void deleteEmployee(struct Employee *employees, int *count, FILE *file)`: A function to delete an employee from the database. It takes pointers to the `employees` array, `count`, and `file`.

- `void displayEmployees(struct Employee *employees, int count)`: A function to display all employees' details. It takes the `employees` array and `count` as parameters.

3.3) Files:
- `"employees.txt"`: A text file used to store employee data. It is opened in the main function and passed to the other functions for reading and writing employee records.

3.4) Datasets:
- None explicitly mentioned. Employee data is stored in the `employees` array and persisted in the `"employees.txt"` file.

3.5) Features:
- The code provides a menu-based interface to interact with an employee management system.

- Users can choose options to add, update, delete, or display employee records.

- Employee data includes ID, name, age, salary, and job title.

- Existing employee data is loaded from the `"employees.txt"` file when the program starts, and any changes made are written back to the file before exiting.

5. <u>OUTPUTS:</u>

Sample outputs (screenshots) to demonstrate the functionalities in programs are listed below.

i. *Add an employee……*

```
Employee Management System

Select an option:
1. Add an employee
2. Update an employee
3. Delete an employee
4. Display employees
5. Exit
Enter your choice: 1
Enter employee details:
Employee ID: 101
Employee Name: ASMIT BANDYOPADHYAY
Employee Age: 19
Employee Salary: 943723
Enter employee job title: RESEARCH SCIENTIST
Employee added successfully.
```

ii. *Update an employee……*

```
Employee Management System

Select an option:
1. Add an employee
2. Update an employee
3. Delete an employee
4. Display employees
5. Exit
Enter your choice: 2
Enter the employee ID to update: 101
Enter new details for the employee:
Employee Name: ASMIT BANDYOPADHYAY
Employee Age: 19
Employee Salary: 1258904
Employee job title: RESEARCH SCIENTIST
Employee details updated successfully.
```

iii. *Delete an employee……*

```
Employee Management System

Select an option:
1. Add an employee
2. Update an employee
3. Delete an employee
4. Display employees
5. Exit
Enter your choice: 3
Enter the employee ID to delete: 105
Employee deleted successfully.
```

iv.   *Display employees......*

```
Employee Management System

Select an option:
1. Add an employee
2. Update an employee
3. Delete an employee
4. Display employees
5. Exit
Enter your choice: 4
Employee Database:
ID       Name      Age      Salary   Job title
101      ASMIT BANDYOPADHYAY      19       1258904.00      RESEARCH SCIENTIST
102      AKASH KUNDU      20       850069.00      IT MANAGER
103      SHAON BANDOPADHYAY      24       2300687.00      DATA ENGINEER
104      DIP PARUA      19       750091.00      JUNIOR DEVELOPER
204      NILJIT SARKAR      20       65789.00      LAB ASSISTANT
307      SUVAON SAHA      20       740665.00      WEB DEVELOPER
805      DEBOBROTO SUR      25       740856.00      SALES MANAGER
1107     BIKRAM JOARDAR      25       780512.00      MARKETING MANAGER
```

v.   employees.txt

```
employees - Notepad
File   Edit   View

101,ASMIT BANDYOPADHYAY,19,1258904.00,RESEARCH SCIENTIST
102,AKASH KUNDU,20,850069.00,IT MANAGER
103,SHAON BANDOPADHYAY,24,2300687.00,DATA ENGINEER
104,DIP PARUA,19,750091.00,JUNIOR DEVELOPER
204,NILJIT SARKAR,20,65789.00,LAB ASSISTANT
307,SUVAON SAHA,20,740665.00,WEB DEVELOPER
805,DEBOBROTO SUR,25,740856.00,SALES MANAGER
1107,BIKRAM JOARDAR,25,780512.00,MARKETING MANAGER
```