`

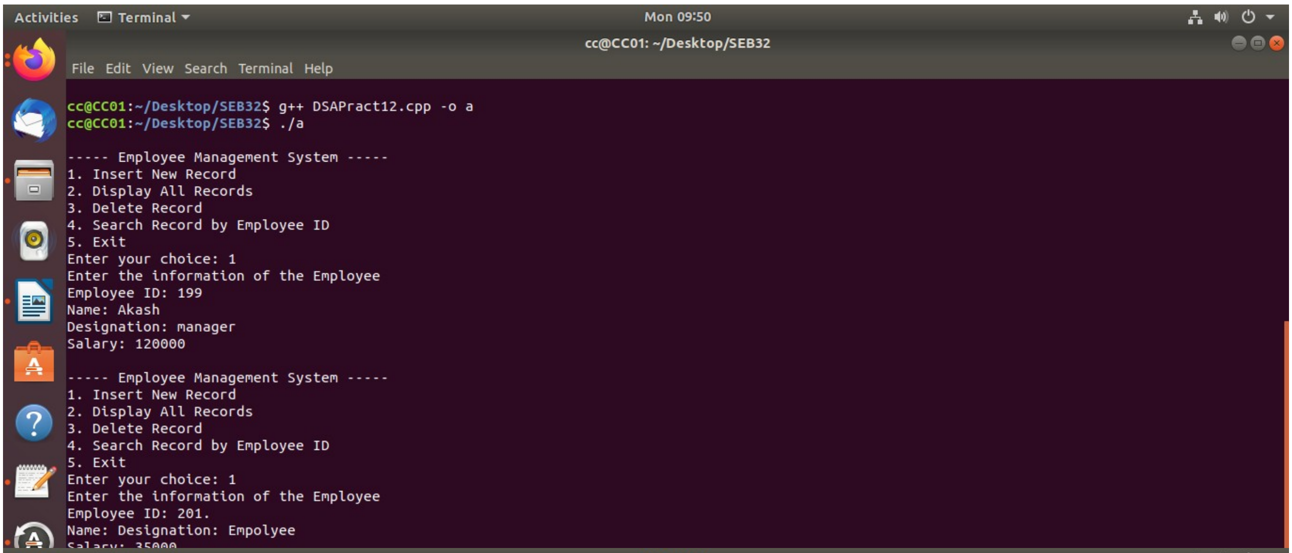
# Assignment No – 12

Problem Statement:
Company maintains employee information as employee ID, name, designation and salary. Allow user to add, delete information of employee. Display information of particular employee. If employee does not exist an appropriate message is displayed. If it is, then the system displays the employee details. Use index sequential file to maintain the data.

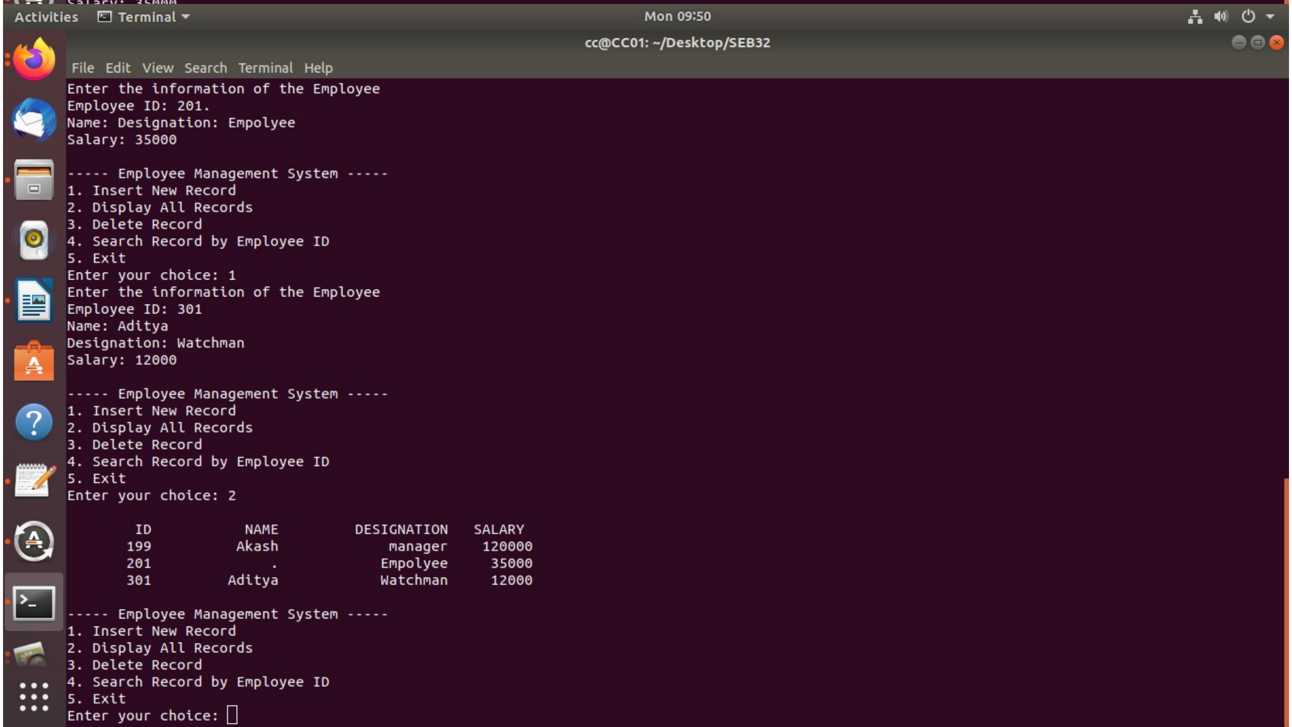
Source Code:

```
#include <iostream>
#include <iomanip>
using namespace std;

#define max 10

// Structure of Employee
struct employee {
    string name;
    long int employee_id;
    string designation;
    int salary;
};

int num = -1;

// Array to store employees
employee emp[max];

// Function to insert data
void insert() {
    if (num < max - 1) {
        num++;
        cout << "Enter the information of the Employee\n";
        cout << "Employee ID: ";
        cin >> emp[num].employee_id;
        cout << "Name: ";
        cin >> emp[num].name;
        cout << "Designation: ";
        cin >> emp[num].designation;
        cout << "Salary: ";
        cin >> emp[num].salary;
    } else {
        cout << "Employee Table Full\n";
    }
}

// Function to delete record at index i
void deleteIndex(int i) {
    for (int j = i; j < num; j++) {
        emp[j] = emp[j + 1];
    }
}

// Function to display all records
void displayAllRecords() {
    if (num == -1) {
        cout << "No records present!\n";
        return;
    }

    cout << endl << setw(10) << "ID"
         << setw(15) << "NAME"
         << setw(20) << "DESIGNATION"
         << setw(10) << "SALARY\n";

    for (int i = 0; i <= num; i++) {
        cout << setw(10) << emp[i].employee_id
             << setw(15) << emp[i].name
             << setw(20) << emp[i].designation
             << setw(10) << emp[i].salary << endl;
    }
}

// Function to delete a record by employee ID
void deleteRecord() {
    int employee_id;
    cout << "Enter the Employee ID to Delete Record: ";
    cin >> employee_id;

    for (int i = 0; i <= num; i++) {
        if (emp[i].employee_id == employee_id) {
            deleteIndex(i);
            num--;
            cout << "Record deleted successfully.\n";
            return;
        }
    }
    cout << "Employee record not found.\n";
}

// Function to search for a record
void searchRecord() {
    int employee_id;
    cout << "Enter the Employee ID to Search Record: ";
    cin >> employee_id;

    for (int i = 0; i <= num; i++) {
        if (emp[i].employee_id == employee_id) {
            cout << endl << setw(10) << "ID"
                 << setw(15) << "NAME"
                 << setw(20) << "DESIGNATION"
                 << setw(10) << "SALARY\n";

            cout << setw(10) << emp[i].employee_id
                 << setw(15) << emp[i].name
                 << setw(20) << emp[i].designation
                 << setw(10) << emp[i].salary << endl;
            return;
        }
    }

    cout << "Employee record not found.\n";
}

// Driver code
int main() {
    int option = 0;

    while (option != 5) {
        cout << "\n----- Employee Management System -----\n";
        cout << "1. Insert New Record\n";
        cout << "2. Display All Records\n";
        cout << "3. Delete Record\n";
        cout << "4. Search Record by Employee ID\n";
        cout << "5. Exit\n";
        cout << "Enter your choice: ";
        cin >> option;

        switch (option) {
            case 1: insert(); break;
            case 2: displayAllRecords(); break;
            case 3: deleteRecord(); break;
            case 4: searchRecord(); break;
            case 5: cout << "\n***** You have exited *****\n"; break;
            default: cout << "Enter valid option!\n"; break;
        }
    }

    return 0;
}
```

Output:



```
cc@CC01:~/Desktop/SEB32$ g++ DSAPract12.cpp -o a
cc@CC01:~/Desktop/SEB32$ ./a

----- Employee Management System -----
1. Insert New Record
2. Display All Records
3. Delete Record
4. Search Record by Employee ID
5. Exit
Enter your choice: 1
Enter the information of the Employee
Employee ID: 199
Name: Akash
Designation: manager
Salary: 120000

----- Employee Management System -----
1. Insert New Record
2. Display All Records
3. Delete Record
4. Search Record by Employee ID
5. Exit
Enter your choice: 1
Enter the information of the Employee
Employee ID: 201.
Name: Designation: Empolyee
Salary: 35000
```



```
Enter the information of the Employee
Employee ID: 201.
Name: Designation: Empolyee
Salary: 35000

----- Employee Management System -----
1. Insert New Record
2. Display All Records
3. Delete Record
4. Search Record by Employee ID
5. Exit
Enter your choice: 1
Enter the information of the Employee
Employee ID: 301
Name: Aditya
Designation: Watchman
Salary: 12000

----- Employee Management System -----
1. Insert New Record
2. Display All Records
3. Delete Record
4. Search Record by Employee ID
5. Exit
Enter your choice: 2

        ID          NAME        DESIGNATION    SALARY
       199         Akash            manager    120000
       201             .           Empolyee     35000
       301        Aditya           Watchman     12000

----- Employee Management System -----
1. Insert New Record
2. Display All Records
3. Delete Record
4. Search Record by Employee ID
5. Exit
Enter your choice: 
```