Data Structure Lab

CEN-391

Program 3

Code :-

```
#include <iostream>
#include <string.h>
using namespace std;
#define Max_size 10
struct Employee
{
    int Eid;
    char Name[30];
    float Salary;
};

void Add_Employee(Employee Emp_Data[], int &size)
{
    cout << endl
         << "Add Employee..." << endl;
    if (size == Max_size)
    {
```

```
        cout << "Overflow" << endl;
        return;
    }
repeat:
    int Eid;
    cout << "Enter The Employee Eid : ";
    cin >> Eid;
    for (int i = 0; i < size; i++)
    {
        if (Eid == Emp_Data[i].Eid)
        {
            cout <<endl<< "Eid Already Exist!" << endl;
            cout << "Try Again!" << endl<<endl;
            goto repeat;
        }
    }
    Emp_Data[size].Eid=Eid;
    fflush(stdin);
    cout << "Enter The Employee Name : ";
    gets(Emp_Data[size].Name);
    cout << "Enter The Employee Salary : ";
    cin >> Emp_Data[size].Salary;
    size++;
}

void Display_Employee(Employee Emp_Data[], int &size)
{
    if (size == 0)
    {
        cout << "Empty!" << endl;
        return;
    }
    cout << endl
         << "Display All Employee..." << endl;
    cout << "|\tEid \t|"
         << "\t    Name     \t|"
         << "\t Salary \t|" << endl;
    for (int i = 0; i < size; i++)
    {
        cout << "\t" << Emp_Data[i].Eid << "\t";
        cout << "\t" << Emp_Data[i].Name << "\t";
        cout << "\t" << Emp_Data[i].Salary << "\t" << endl;
```

```
    }
}

void Search_Employee_Eid(Employee Emp_Data[], int &size)
{
    cout << endl
         << "Search Employee By Eid..." << endl;
    if (size == 0)
    {
        cout << "Empty!" << endl;
        return;
    }
    int Eid;
    cout << "Enter The Employee Eid : ";
    cin >> Eid;
    int i;
    cout << endl;
    for (i = 0; i < size; i++)
    {
        if (Emp_Data[i].Eid == Eid)
        {
            cout << "Employee Found!\n\nDetails..." << endl;
            cout << "Eid : " << Emp_Data[i].Eid << "\t  ";
            cout << "Name : " << Emp_Data[i].Name << "\t  ";
            cout << "Salary : " << Emp_Data[i].Salary << endl;
            break;
        }
    }
    if (i == size)
    {
        cout << "Employee Not Found!" << endl;
    }
}

void Search_Employee_Name(Employee Emp_Data[], int &size)
{
    cout << endl
         << "Search Employee By Name..." << endl;
    if (size == 0)
    {
        cout << "Empty!" << endl;
        return;
```

```
    }
    char Name[30];
    cout << "Enter The Name Of Your Employee : ";
    fflush(stdin);
    gets(Name);
    int i;
    cout << endl;
    for (i = 0; i < size; i++)
    {
        int j;
        if (!strcmp(Name, Emp_Data[i].Name))
        {
            cout << "Employee Found!\n\nDetails..." << endl;
            cout << "Eid : " << Emp_Data[i].Eid << "\t  ";
            cout << "Name : " << Emp_Data[i].Name << "\t  ";
            cout << "Salary : " << Emp_Data[i].Salary << endl;
            break;
        }
    }
    if (i == size)
    {
        cout << "Employee Not Found!" << endl;
    }
}

void Highest_Salary(Employee Emp_Data[], int &size)
{
    cout << endl
         << "Highest Salary Of Employee" << endl;
    if (size == 0)
    {
        cout << "Empty!" << endl;
        return;
    }
    float Max_Salary = 0;
    for (int i = 0; i < size; i++)
    {
        if (Max_Salary < Emp_Data[i].Salary)
        {
            Max_Salary = Emp_Data[i].Salary;
        }
    }
```

```
    for (int i = 0; i < size; i++)
    {
        if (Max_Salary == Emp_Data[i].Salary)
        {
            cout << "Eid : " << Emp_Data[i].Eid << "\t  ";
            cout << "Name : " << Emp_Data[i].Name << "\t ";
            cout << "Salary : " << Emp_Data[i].Salary << endl;
        }
    }
}

void Menu()
{
    cout << endl
         << endl
         << "___Operations___" << endl;
    cout << "1.Add Employee" << endl;
    cout << "2.Display Employee" << endl;
    cout << "3.Search Employee Byy Eid" << endl;
    cout << "4.Search Employee By Name" << endl;
    cout << "5.Employee having Higest Salary" << endl;
    cout << "6.Exit" << endl;
    cout << "Enter Your Choice : ";
}

bool Options(Employee Emp_Data[], int &size)
{
    int opt;
    cin >> opt;
    switch (opt)
    {
    case 1:
        Add_Employee(Emp_Data, size);
        break;
    case 2:
        Display_Employee(Emp_Data, size);
        break;
    case 3:
        Search_Employee_Eid(Emp_Data, size);
        break;
    case 4:
        Search_Employee_Name(Emp_Data, size);
```

```
            break;
        case 5:
            Highest_Salary(Emp_Data, size);
            break;
        case 6:
            return 0;
        default:
            cout << "Invalid Input!\nTry Again!" << endl;
        }
        return 1;
    }

    int main()
    {
        system("cls");
        cout << "__Vicky Gupta 20BCS070__";
        struct Employee Emp_Data[Max_size];
        int size = 0;
        while (true)
        {
            Menu();
            if (!Options(Emp_Data, size))
                break;
        }
        cout<<"Exiting..."<<endl;
        return 0;
    }
```

Output :-

```
__Vicky Gupta 20BCS070__

___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 1

Add Employee...
Enter The Employee Eid : 1
Enter The Employee Name : Vicky Gupta
Enter The Employee Salary : 98421.5


___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 1

Add Employee...
Enter The Employee Eid : 2
Enter The Employee Name : Anuj Sharma
Enter The Employee Salary : 99321.6
```

```
___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 1

Add Employee...
Enter The Employee Eid : 2

Eid Already Exist!
Try Again!

Enter The Employee Eid : 3
Enter The Employee Name : Ayush Gupta
Enter The Employee Salary : 87521.9


___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 2

Display All Employee...
|       Eid     |           Name          |         Salary          |
        1               Vicky Gupta             98421.5
        2               Anuj Sharma             99321.6
        3               Ayush Gupta             87521.9
```

```
___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 3

Search Employee By Eid...
Enter The Employee Eid : 2

Employee Found!

Details...
Eid : 2   Name : Anuj Sharma      Salary : 99321.6


___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 4

Search Employee By Name...
Enter The Name Of Your Employee : Vicky Gupta

Employee Found!

Details...
Eid : 1   Name : Vicky Gupta      Salary : 98421.5
```

```
___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 5

Highest Salary Of Employee
Eid : 2   Name : Anuj Sharma     Salary : 99321.6


___Operations___
1.Add Employee
2.Display Employee
3.Search Employee Byy Eid
4.Search Employee By Name
5.Employee having Higest Salary
6.Exit
Enter Your Choice : 6
Exiting...
```