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# Data Structure Lab

## CEN-391

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# Program 5

## Code :-

```
#include <iostream>
#include <string.h>
using namespace std;

struct Employee
{
    int Eid;
    char Name[30];
    float Salary;
    struct Employee *next;
};

void Add_Employee(Employee *&Emp_Data, int &size)
{
    cout << "Add Employee..." << endl;
    struct Employee *newEmployee = (Employee
*)malloc(sizeof(Employee));
```

```

int Eid;
bool check = false;
do
{
    cout << "Enter The Employee Eid : ";
    cin >> Eid;
    Employee*temp=Emp_Data;
    while(temp!=nullptr)
    {
        if (Eid == temp->Eid)
        {
            cout << endl
                << "Eid Already Exist!" << endl;
            cout << "Try Again!" << endl
                << endl;
            check = true;
        }
        temp=temp->next;
    }
} while (check);

newEmployee->Eid = Eid;
fflush(stdin);
cout << "Enter The Employee Name : ";
gets(newEmployee->Name);
cout << "Enter The Employee Salary : ";
cin >> newEmployee->Salary;

newEmployee->next = Emp_Data;
Emp_Data = newEmployee;
size++;
}

void Display_Employee(Employee *Emp_Data, int &size)
{
    if (size == 0)
    {
        cout << endl
            << "Empty!" << endl;
        return;
    }
    cout << "Display All Employee..." << endl;
}

```

```

    cout << "|Eid\t\t|"
         << "Name\t\t|"
         << "Salary\t\t|" << endl;

    Employee *temp = Emp_Data;

    while (temp != nullptr)
    {
        cout << "\t" << temp->Eid << "\t";
        cout << temp->Name << "\t";
        cout << temp->Salary << "\t" << endl;
        temp = temp->next;
    }
}

void Search_Employee_Eid(Employee *Emp_Data, int &size)
{
    cout << "Search Employee By Eid..." << endl;
    if (size == 0)
    {
        cout << "Empty!" << endl;
        return;
    }
    int Eid;
    cout << "Enter The Employee Eid : ";
    cin >> Eid;
    cout << endl;
    Employee *temp = Emp_Data;
    while (temp != nullptr)
    {
        if (temp->Eid == Eid)
        {
            cout << "Employee Found!\n\nDetails..." << endl;
            cout << "Eid : " << temp->Eid << "\t ";
            cout << "Name : " << temp->Name << "\t ";
            cout << "Salary : " << temp->Salary << endl;
            break;
        }
        temp = temp->next;
    }
    if (temp == nullptr)
    {

```

```

        cout << "Employee Not Found!" << endl;
    }
}

void Search_Employee_Name(Employee *Emp_Data, int &size)
{
    cout << "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);
    cout << endl;
    Employee *temp = Emp_Data;
    while (temp != nullptr)
    {
        if (!strcmp(Name, temp->Name))
        {
            cout << "Employee Found!\n\nDetails..." << endl;
            cout << "Eid : " << temp->Eid << "\t ";
            cout << "Name : " << temp->Name << "\t ";
            cout << "Salary : " << temp->Salary << endl;
            break;
        }
        temp = temp->next;
    }
    if (temp == nullptr)
    {
        cout << "Employee Not Found!" << endl;
    }
}

void Highest_Salary(Employee *Emp_Data, int &size)
{
    cout << "Highest Salary Of Employee" << endl;
    if (size == 0)
    {
        cout << "Empty!" << endl;
    }
}

```

```

        return;
    }
    Employee *temp = Emp_Data->next, *MaxEmployee = Emp_Data;

    while (temp != nullptr)
    {
        if (MaxEmployee->Salary < temp->Salary)
        {
            MaxEmployee = temp;
        }
        temp=temp->next;
    }
    temp = Emp_Data;
    while (temp != nullptr)
    {
        if (MaxEmployee->Salary == temp->Salary)
        {
            cout << "Eid : " << temp->Eid << "\t ";
            cout << "Name : " << temp->Name << "\t ";
            cout << "Salary : " << temp->Salary << endl;
        }
        temp=temp->next;
    }
}

void Total_Employee(int &size)
{
    cout << endl
        << "No Of Employee..." << endl;
    cout << endl
        << "Total No Of Employee : ";
    cout << size << endl;
}

void AnsBar()
{
    cout<<"-----\n";
}

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.Total No Of Employee" << endl;
    cout << "7.Exit" << endl;
    cout << "Enter Your Choice : ";
}

```

```

bool Options(Employee *&Emp_Data, int &size)
{
    int opt;
    cin >> opt;
    switch (opt)
    {
        case 1:AnsBar();
            Add_Employee(Emp_Data, size);
            break;
        case 2:AnsBar();
            Display_Employee(Emp_Data, size);
            break;
        case 3:AnsBar();
            Search_Employee_Eid(Emp_Data, size);
            break;
        case 4:AnsBar();
            Search_Employee_Name(Emp_Data, size);
            break;
        case 5:AnsBar();
            Highest_Salary(Emp_Data, size);
            break;
        case 6:AnsBar();
            Total_Employee(size);
            break;
        case 7:AnsBar();
            cout<<"Exit Operation Is Selected"<<endl;
            AnsBar();
            return 0;
        default:

```

```
        cout << "Invalid Input!\nTry Again!" << endl;
    }
    AnsBar();
    return 1;
}

int main()
{
    system("cls");
    cout << "__Vicky Gupta 20BCS070__" << endl;

    struct Employee *Emp_Data = nullptr;
    int size = 0;

    while (true)
    {
        Menu();
        if (!Options(Emp_Data, size))
            break;
    }
    cout << endl
        << "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.Total No Of Employee
- 7.Exit

```
Enter Your Choice : 1
```

```
-----  
Add Employee...
```

```
Enter The Employee Eid : 3
```

```
Enter The Employee Name : Vicky Gupta
```

```
Enter The Employee Salary : 78900  
-----
```

```
___Operations___
```

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

```
Enter Your Choice : 1
```

```
-----  
Add Employee...
```

```
Enter The Employee Eid : 2
```

```
Enter The Employee Name : Anuj Sharma
```

```
Enter The Employee Salary : 87890  
-----
```



\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 1

-----  
Add Employee...

Enter The Employee Eid : 1

Enter The Employee Name : Jugnu Gupta

Enter The Employee Salary : 98990  
-----

\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 2

-----  
Display All Employee...

	Eid		Name		Salary	
	1		Jugnu Gupta		98990	
	2		Anuj Sharma		87890	
	3		Vicky Gupta		78900	

-----

\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 3

-----  
Search Employee By Eid...

Enter The Employee Eid : 3

Employee Found!

Details...

Eid : 3    Name : Vicky Gupta        Salary : 78900

\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 4

-----  
Search Employee By Name...

Enter The Name Of Your Employee : Anuj Sharma

Employee Found!

Details...

Eid : 2    Name : Anuj Sharma        Salary : 87890

\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 5

-----  
Highest Salary Of Employee

Eid : 1    Name : Jugnu Gupta    Salary : 98990  
-----

\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 6

-----  
No Of Employee...

Total No Of Employee : 3  
-----

\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 6

-----

No Of Employee...

Total No Of Employee : 3

-----

\_\_\_Operations\_\_\_

- 1.Add Employee
- 2.Display Employee
- 3.Search Employee Byy Eid
- 4.Search Employee By Name
- 5.Employee having Higest Salary
- 6.Total No Of Employee
- 7.Exit

Enter Your Choice : 7

-----

Exit Operation Is Selected

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Exiting...