FAIZAN CHOUDHARY

20BCS021

DSA LAB

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CODE: (code pasted in this format for readability)

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

struct employee {
    int empid;
    char name[20];
    int salary;
}emp[10];

int count=-1;

void add();
int check_id(int id)
{
    for (int i=0; i<=count; i++)
    {
        if (id==emp[i].empid)
        {
            cout<<"\nID already in record! Enter again...\n";
            count--;
            return -1;
        }
        return 0;
    }
}
void add ()
{
    int id;
    count++;
    cout<<"\nEnter the details of the employee:\n";
    cout<<"Enter the employee id: ";
    cin>>id;
    if (check_id(id)==-1)
     add();
    else
    {
        emp[count].empid=id;
        cout<<"Enter the employee name: ";
        char g=getchar();                       //or cin.ignore();
```

```
        cin.getline(emp[count].name, 20);
        cout<<"Enter salary: ";
        cin>>emp[count].salary;
    }
}

void display()
{
    cout<<"\nEMPLOYEE DETAILS:\n\n";
    cout<<"Employee ID\t\tEmployee name\t\tSalary\n";
    for (int i=0; i<=count; i++)
    {
        cout<<emp[i].empid;
        cout<<"\t\t\t"<<emp[i].name;
        cout<<"\t\t\t"<<emp[i].salary<<endl;
    }
}

void search_empid(int key)
{
    int flag=0;
    for (int i=0; i<=count; i++)
    {
        if (emp[i].empid==key)
        {
            flag=1;
            cout<<"\nEmployee found in record!";
            cout<<"\nEMPLOYEE DETAILS:\n\n";
            cout<<"Employee ID\t\tEmployee name\t\tSalary\n";
            cout<<emp[i].empid;
            cout<<"\t\t\t"<<emp[i].name;
            cout<<"\t\t\t"<<emp[i].salary;
        }
        if (flag==1)
         break;
        else if (flag==0)
         cout<<"\nEmployee not found in record!";
    }
}

void search_name(char test[])
{
    int flag=0;
    for (int i=0; i<=count; i++)
    {
        if (strcmp(test, emp[i].name)==0)
        {
            flag=1;
            cout<<"\nEmployee found in record!";
            cout<<"\nEMPLOYEE DETAILS:\n\n";
            cout<<"Employee ID\t\tEmployee name\t\tSalary\n";
            cout<<emp[i].empid;
            cout<<"\t\t\t"<<emp[i].name;
            cout<<"\t"<<emp[i].salary;
```

```
        }
        if (flag==1)
         return;
    }
    cout<<"\nEmployee not found in record!";
}

void highest_salary()
{
    int mx=0, index;
    for (int i=0; i<count; i++)
    {
        if (emp[i].salary>mx)
        {
            mx=emp[i].salary;
            index=i;
        }
    }
    cout<<"Employee with the highest salary is:\n";
    cout<<"Employee ID\t\tEmployee name\t\tSalary\n";
    cout<<emp[index+1].empid;
    cout<<"\t\t\t"<<emp[index+1].name;
    cout<<"\t\t\t"<<emp[index+1].salary;
}

int main()
{
    cout<<"\nFAIZAN CHOUDHARY\n20BCS021";

    int ch, key;
    char test[20], g1;
    while (1)
    {
        A:
        cout<<"\n\nMENU\n1. Add employee.\n2. Display all employees.\n3. Search employee b
y empid.\n4. Search employee by name.\n5. Employee having Highest Salary.\n6. Exit\n";
        cin>>ch;
        switch (ch)
        {
            case 1: if (count==10)
                    {
                        cout<<"\nMaximum employee limit (10) reached!\n";
                        goto A;
                    }
                    else if (count<10)
                     add();
                    break;
            case 2: if (count==-1)
                    {
                        cout<<"\nRecord is empty, add some employee details first!\n";
                        goto A;
                    }
                    else
                     display();
```

```
                break;
        case 3: cout<<"\nEnter employee ID to be searched for: ";
                cin>>key;
                search_empid(key);
                break;
        case 4: cout<<"\nEnter employee name to be searched for (case-sensitive): ";
                g1=getchar();
                cin.getline(test, 20);
                search_name(test);
                break;
        case 5: highest_salary();
                break;
        case 6: exit(0);
        default: cout<<"\nWrong choice! Enter again...\n";
                 goto A;
      }
   }
   return 0;
}
```

OUTPUT:

```
FAIZAN CHOUDHARY
20BCS021

MENU
1. Add employee.
2. Display all employees.
3. Search employee by empid.
4. Search employee by name.
5. Employee having Highest Salary.
6. Exit
1

Enter the details of the employee:
Enter the employee id: 12
Enter the employee name: Rakesh Kumar
Enter salary: 23000
```

```
MENU
1. Add employee.
2. Display all employees.
3. Search employee by empid.
4. Search employee by name.
5. Employee having Highest Salary.
6. Exit
1

Enter the details of the employee:
Enter the employee id: 12

ID already in record! Enter again...
```

```
Enter the details of the employee:
Enter the employee id: 13
Enter the employee name: Ganesh Pawar
Enter salary: 23900


MENU
1. Add employee.
2. Display all employees.
3. Search employee by empid.
4. Search employee by name.
5. Employee having Highest Salary.
6. Exit
2

EMPLOYEE DETAILS:

Employee ID             Employee name           Salary
12                      Rakesh Kumar                    23000
13                      Ganesh Pawar                    23900
```

```
MENU
1. Add employee.
2. Display all employees.
3. Search employee by empid.
4. Search employee by name.
5. Employee having Highest Salary.
6. Exit
3

Enter employee ID to be searched for: 12

Employee found in record!
EMPLOYEE DETAILS:

Employee ID             Employee name           Salary
12                      Rakesh Kumar                    23000
```

```
MENU
1. Add employee.
2. Display all employees.
3. Search employee by empid.
4. Search employee by name.
5. Employee having Highest Salary.
6. Exit
4

Enter employee name to be searched for (case-sensitive): Gajanan Anand

Employee not found in record!
```

```
MENU
1. Add employee.
2. Display all employees.
3. Search employee by empid.
4. Search employee by name.
5. Employee having Highest Salary.
6. Exit
5
Employee with the highest salary is:
Employee ID             Employee name           Salary
13                      Ganesh Pawar                    23900
```

```
MENU
1. Add employee.
2. Display all employees.
3. Search employee by empid.
4. Search employee by name.
5. Employee having Highest Salary.
6. Exit
6
```