

CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY**DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY & RESEARCH**

Department of Computer Engineering/Computer Science & Engineering/

Information Technology

Subject Name: Object Oriented Programming with C++**Semester: II****Subject Code: CE144****Academic year: 2023-24****Practical 13**

No.	Aim of the Practical
13.	<p>Update the CHARUSAT employee system (practical 8) as per given class diagram.</p> <p><u>PROGRAM CODE:</u></p> <pre>#include <iostream> #include <cstdio> #include <math.h> #include <string.h> using namespace std; class employee{ public: int empid; string name; float experience; string Qualifications; long long int contact; int retid(){ return empid; } }</pre>

```
virtual void AddNewEmp(){  
  
    cout<<"Enter employee Id:"<<endl;  
    cin>>empid;  
    fflush(stdin);  
    cout<<empid;  
    cout<<"Enter employee Name:"<<endl;  
    getline(cin,name);  
    fflush(stdin);  
    cout<<"Enter employee experience:"<<endl;  
    cin>>experience;  
    fflush(stdin);  
    cout<<"Enter employee Qualification:"<<endl;  
    getline(cin,Qualifications);  
    cout<<"Enter employee Contact:"<<endl;  
    cin>>contact;  
  
}  
virtual void DisplayEmp(){  
    cout<<"Id: "<<empid<<endl;  
    cout<<"Name: "<<name<<endl;  
    cout<<"Qualifications: "<<Qualifications<<endl;  
    cout<<"Experience: "<<experience<<endl;  
    cout<<"Contact: "<<contact<<endl;  
  
}  
};  
class NonTeachingEmployee: public employee{  
private:  
    float salary;  
public:  
    void AddNewEmp() override{  
        employee::AddNewEmp();  
        cout<<"Enter employee salary:";  
        cin>>salary;  
    }  
    void DisplayEmp() override{  
        cout<<" "<<endl;  
        employee::DisplayEmp();  
        cout<<" "<<endl;  
    }  
};
```

```
    }  
};  
  
class TeachingEmployee: public employee{  
private:  
    float payscale;  
    string area_of_specialization;  
    string Designation;  
public:  
    void AddNewEmp() override{  
        employee::AddNewEmp();  
        cout<<"enter area of specialization: "<<endl;  
        fflush(stdin);  
        getline(cin,area_of_specialization);  
  
        cout<<"enter pay-scale:"<<endl;  
        fflush(stdin);  
        cin>>payscale;  
  
        cout<<"enter Designation: "<<endl;  
        fflush(stdin);  
        getline(cin,Designation);  
    }  
    void DisplayEmp() override{  
        cout<<"*"<<endl;  
        employee::DisplayEmp();  
        cout<<"Payscale: "<<payscale<<endl;  
        cout<<"Area of Specialization: "<<area_of_specialization<<endl;  
        cout<<"Designation: "<<Designation<<endl;  
        cout<<"*"<<endl;  
    }  
};  
  
/*virtual void employee::AddNewEmp(){  
  
    cout<<"Enter employee Id:"<<endl;  
    cin>>empid;  
    cout<<"Enter employee Name:"<<endl;  
    getline(cin,name);
```

```

cout<<"Enter employee experience:"<<endl;
cin>>experience;
cout<<"Enter employee Qualification:"<<endl;
getline(cin,Qualifications);
cout<<"Enter employee Contact:"<<endl;
cin>>contact;

}*/

/*virtual void employee::DisplayEmp() const{
cout<<"Id: "<<empid<<endl;
cout<<"Name: "<<name<<endl;
cout<<"Qualifications: "<<Qualifications<<endl;
cout<<"Experience: "<<experience<<endl;
cout<<"Contact: "<<contact<<endl;
}*/

int main(){

    cout<<"how many employees: "<<endl;
    int numbemp;
    cin>>numbemp;
    int j=0,k=0;
    string choice;
    class NonTeachingEmployee nte[numbemp];
    class TeachingEmployee te[numbemp];
    for(int i=0;i<numbemp;i++){
        cout<<"Teaching Employee or Non Teaching(t for teaching and nt for non
teaching): "<<endl;
        /*while(strcmp(choice,"\n")!=0 || j<=2){
            cin>>choice[j];
            j++;
            cout<<j;
        }*/
        cin>>choice;
        fflush(stdin);
        if(choice=="t" || choice=="T"){
            te[k].AddNewEmp();
            k++;}

        else if(choice=="nt" || choice=="NT"){

```

```
        nte[j].AddNewEmp();
        j++;
    }

    cout<<"Employee information stored successfully"<<endl;
}
do{
    cout<<endl;
    cout<<"do you want to search for an employee? y for yes and n for no"<<endl;
    cin>>choice;
    if(choice=="y" || choice=="Y"){
        cout<<"Teaching or Non Teaching staff?:"<<endl;
        cin>>choice;
        int testno;
        cout<<"enter the employee id:"<<endl;
        cin>>testno;
        if(choice=="t" || choice=="T"){
            for(int i=0;i<numbemp;i++){
                if (te[i].retid()==testno){
                    testno=i;
                }
            }
            te[testno].DisplayEmp();
        }
        else if(choice=="nt" || choice=="NT"){
            for(int i=0;i<numbemp;i++){
                if (nte[i].retid()==testno){
                    testno=i;
                }
            }
            nte[testno].DisplayEmp();
        }
    }
}while(choice!="n");
cout<<"23dcs058_HITARTH_MALVIYA"<<endl;
return 0;
}
```

OUTPUT:

```
enter pay-scale:
30000
enter Designation:
professor
Employee information stored successfully

do you want to search for an employee? y for yes and n for no
y
Teaching or Non Teaching staff?:
t
enter the employee id:
1
*
Id: 1
Name: hitarth malviya
Qualifications: btech
Experience: 5.5
Contact: 6351450612
Payscale: 30000
Area of Specialization: artificial intelligence
Designation: professor
*

do you want to search for an employee? y for yes and n for no
n
23dcs058_HITARTH_MALVIYA

-----
Process exited after 97.64 seconds with return value 0
Press any key to continue . . .
```

CONCLUSION:

This program teaches us how to take inputs of different data types such as strings, integers, floats and store them in structures in c++. It taught us about access modifiers such as private and public. It showed us how to create a method for an object like getdata and fetchdata. This program also teaches us how to use static member variables and static member functions. It also teaches us how to use inheritance. It also taught us how to use override functions and virtual functions.