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**PRN - B24cCE1079**

**Subject - Object Oriented Programming**

**Assignment 3**

### **PROGRAM**

/\*Design an educational Institution that maintains a database of all staff members where the database is segregated into a number of classes having hierarchical relationships. Define all classes with suitable data members and required member functions to build the database and fetch individual details .\*/

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

//Base class
class Staff
{
protected:
    string name,dept;
    int staff_id;

public:
    void accept(){
        cout<<"Enter name of the staff:";
        cin>>name;
        cout<<"Enter department:";
        cin>>dept;
        cout<<"Enter staff_id:";
        cin>>staff_id;
    }
    void display(){
        cout<<"\nName of the staff:"<<name;
        cout<<"\nDepartment:"<<dept;
        cout<<"\nStaff id:"<<staff_id;
    }
}
```

```

};

class teacher:public Staff
{
    string subject;
    int experience;

    public:
        void accept1();
        void display1();
};

class support_staff:public Staff
{
    string role;
    int experience;

    public:
        void accept2();
        void display2();
};

class administrator:public Staff
{
    string designation;
    int years_of_service;

    public:
        void accept3();
        void display3();
};

void administrator::accept3()
{
    administrator::accept();
    cout<<"Enter designation:";
    cin>>designation;
    cout<<"Enter years of service:";
    cin>>years_of_service;
}

```

```
void administrator::display3()
{
    administrator::display();
    cout<<"\nDesignation:"<<designation;
    cout<<"\nYears of service:"<<years_of_service;
}
```

```
void support_staff::accept2()
{
    support_staff::accept();
    cout<<"Enter role:";
    cin>>role;
    cout<<"Enter experience:";
    cin>>experience;
}
```

```
void support_staff::display2()
{
    support_staff::display();
    cout<<"\nRole:"<<role;
    cout<<"\nExperience:"<<experience;
}
```

```
void teacher::accept1()
{
    Staff::accept();
    cout<<"Enter subject:";
    cin>>subject;
    cout<<"Enter experience:";
    cin>>experience;
}
```

```
void teacher::display1()
{
    Staff::display();
    cout<<"\nSubject:"<<subject;
    cout<<"\nExperience:"<<experience;
}
```

```
int main()
```

```

{
    int n;
    cout<<"Enter number of teachers:";
    cin>>n;
    teacher t1[n];
    for(int i=0;i<n;i++){
        cout<<"\nEnter Details\n "<<i+1<<".";
        t1[i].accept1();
    }
    for(int i=0;i<n;i++){
        cout<<"\n---Teacher details---\n";
        t1[i].display1();
    }

    int m;
    cout<<"\n";
    cout<<"Enter number of supporting staff:";
    cin>>m;
    support_staff s1[m];
    for(int i=0;i<m;i++){
        cout<<"\nEnter Details"<<i+1<<".";
        s1[i].accept2();
    }
    for(int i=0;i<m;i++){
        cout<<"\n----Support staff details----\n";
        s1[i].display2();
    }

    int p;
    cout<<"\n";
    cout<<"Enter number of administrators:";
    cin>>p;
    administrator a1[p];
    for(int i=0;i<p;i++){
        cout<<"\nEnter Details"<<i+1<<".";
        a1[i].accept3();
    }
    for(int i=0;i<p;i++){
        cout<<"\n----Administrator details----\n";
        a1[i].display3();
    }
}

```

```
    }  
    return 0;  
}
```

## **OUTPUT**

```
Enter number of teachers:1  
  
Enter Details  
1:Enter name of the staff:Srushti  
Enter department:CE  
Enter staff_id:123  
Enter subject:OOP  
Enter experience:8  
  
---Teacher details---  
  
Name of the staff:Srushti  
Department:CE  
Staff id:123  
Subject:OOP  
Experience:8  
  
Enter number of supporting staff:1  
  
Enter Details  
1:Enter name of the staff:Anvi  
Enter department:chemistryLab  
Enter staff_id:345  
Enter role:labAssistant  
Enter experience:5  
  
----Support staff details----  
  
Name of the staff:Anvi  
Department:chemistryLab  
Staff id:345  
Role:labAssistant  
Experience:5
```

Enter number of administrators:1

Enter Details

1:Enter name of the staff:Suyash

Enter department:GeneralAdministration

Enter staff\_id:8901

Enter designation:Principal

Enter years of service:9

----Administrator details----

Name of the staff:Suyash

Department:GeneralAdministration

Staff id:8901

Designation:Principal

Years of service:9