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**PRN - B24CE1069**  
**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<n;i++){
    cout<<"\nEnter Details"<<i+1<<";";
    s1[i].accept2();
}
for(int i=0;i<n;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
```