**Name:- Abitha S**

**Class:-SY-2**

**PRN:-B25CE2015**

**Title:** **Educational Institution System**

**Problem Statement**:- 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.

**Input:**

#include <iostream>

using namespace std;

// Base class

class Staff {

public:

string name;

int staffID;

string department;

void getData() {

cout << "Enter Name: ";

cin >> name;

cout << "Enter ID: ";

cin >> staffID;

cout << "Enter Department: ";

cin >> department;

}

void showData() {

cout << "Name: " << name << ", ID: " << staffID << ", Dept: " << department;

}

};

// Derived class Teacher

class Teacher : public Staff {

public:

string subject;

string qualification;

void getData() {

Staff::getData();

cout << "Enter Subject: ";

cin >> subject;

cout << "Enter Qualification: ";

cin >> qualification;

}

void showData() {

Staff::showData();

cout << ", Subject: " << subject << ", Qualification: " << qualification << endl;

}

};

// Derived class Administrator

class Administrator : public Staff {

public:

string designation;

void getData() {

Staff::getData();

cout << "Enter Designation: ";

cin >> designation;

}

void showData() {

Staff::showData();

cout << ", Designation: " << designation << endl;

}

};

// Derived class Support Staff

class SupportStaff : public Staff {

public:

string duty;

void getData() {

Staff::getData();

cout << "Enter Duty: ";

cin >> duty;

}

void showData() {

Staff::showData();

cout << ", Duty: " << duty << endl;

}

};

int main() {

Teacher t;

Administrator a;

SupportStaff s;

cout << "\nEnter Teacher Details:\n";

t.getData();

cout << "\nEnter Administrator Details:\n";

a.getData();

cout << "\nEnter Support Staff Details:\n";

s.getData();

cout << "\n--- Staff Database ---\n";

t.showData();

a.showData();

s.showData();

return 0;

}

**OUTPUT:**

Enter Teacher Details:

Enter Name: abitha

Enter ID: 101

Enter Department: Computer

Enter Subject: Programming

Enter Qualification: PhD

Enter Administrator Details:

Enter Name: Ayush

Enter ID: 201

Enter Department: Administration

Enter Designation: Manager

Enter Support Staff Details:

Enter Name: avni

Enter ID: 301

Enter Department: Maintenance

Enter Duty: Cleaning

--- Staff Database ---

Name: John, ID: 101, Dept: Computer, Subject: Programming, Qualification: PhD

Name: Sarah, ID: 201, Dept: Administration, Designation: Manager

Name: Mike, ID: 301, Dept: Maintenance, Duty: Cleaning