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**PROB 1. Write program code to demonstrate example of multiple inheritance using employee details example in c++ programming language.**

1. Enter employee's basic info:
2. Enter Name: Mickey
3. Enter Emp. Id: 1121
4. Enter Gender: F
5. Enter employee's department info:
6. Enter Department Name: Testing
7. Enter assigned work: Test Game OEM
8. Enter time in hours to complete work: 70
9. Employee's Information is:
10. Basic Information....:
11. Name: Mickey
12. Employee ID: 1121
13. Gender: F
14. Department Information....:
15. Department Name: Testing
16. Assigned Work: Test Game OEM
17. Time to complete work: 70

**PROB 2 Write program code to demonstrate example of hierarchical inheritance to get square and cube of a number in c++ programming language.**

```
Enter an integer number: 10
Square of 10 is: 100
Enter an integer number: 20
Cube of 10 is: 8000
```

A1)

```
#include <iostream>
#include <string>

using namespace std;

class Employee {
public:
    string name;
    int empId;
    char gender;

    void getBasicInfo() {
        cout << "Enter Name: ";
        cin >> name;
        cout << "Enter Emp. Id: ";
        cin >> empId;
        cout << "Enter Gender: ";
        cin >> gender;
    }

    void displayBasicInfo() {
        cout << "Name: " << name << endl;
        cout << "Employee ID: " << empId << endl;
        cout << "Gender: " << gender << endl;
    }
};

class Department {
public:
    string deptName;
    string assignedWork;
    int timeToComplete;

    void getDeptInfo() {
        cout << "Enter Department Name: ";
        cin >> deptName;
        cout << "Enter assigned work: ";
        cin >> assignedWork;
        cout << "Enter time in hours to complete work: ";
        cin >> timeToComplete;
    }

    void displayDeptInfo() {
```

```

        cout << "Department Name: " << deptName << endl;
        cout << "Assigned Work: " << assignedWork << endl;
        cout << "Time to complete work: " << timeToComplete << endl;
    }
};

class EmployeeDetails : public Employee, public Department {
public:
    void displayInfo() {
        cout << "Employee's Information is:" << endl;
        cout << "Basic Information..." << endl;
        displayBasicInfo();
        cout << "Department Information..." << endl;
        displayDeptInfo();
    }
};

int main() {
    EmployeeDetails emp;

    cout << "Enter employee's basic info:" << endl;
    emp.getBasicInfo();

    cout << "Enter employee's department info:" << endl;
    emp.getDeptInfo();

    emp.displayInfo();

    return 0;
}

```

**A2)**

```

#include <iostream>

using namespace std;

class Number {
public:
    int num;

    void getNumber() {
        cout << "Enter an integer number: ";
        cin >> num;
    }
};

```

```

    }
};

class Square : public Number {
public:
    void calculateSquare() {
        int square = num * num;
        cout << "Square of " << num << " is: " << square << endl;
    }
};

class Cube : public Number {
public:
    void calculateCube() {
        int cube = num * num * num;
        cout << "Cube of " << num << " is: " << cube << endl;
    }
};

int main() {
    Square s;
    Cube c;

    s.getNumber();
    s.calculateSquare();

    c.getNumber();
    c.calculateCube();

    return 0;
}

```