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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;

}