#include <iostream>

#include <string>

using namespace std;

// Base class: Person

class Person {

protected:

    string name;

public:

    void setName(string n) {

        name = n;

    }

    string getName() {

        return name;

    }

};

// Derived class: LibraryMember

class LibraryMember : public Person {

private:

    int memberID;

    int booksBorrowed;

public:

    LibraryMember(string n, int id, int borrowed) : Person() {

        setName(n);

        memberID = id;

        booksBorrowed = borrowed;

    }

    int getMemberID() {

        return memberID;

    }

    int getBooksBorrowed() {

        return booksBorrowed;

    }

};

// Derived class: PremiumMember

class PremiumMember : public LibraryMember {

private:

    double membershipFee;

public:

    PremiumMember(string n, int id, int borrowed, double fee) : LibraryMember(n, id, borrowed) {

        membershipFee = fee;

    }

    double getMembershipFee() {

        return membershipFee;

    }

};

int main() {

    // Create a LibraryMember object

    LibraryMember member1("Alice", 101, 2);

    cout << "Library Member:" << endl;

    cout << "Name: " << member1.getName() << endl;

    cout << "Member ID: " << member1.getMemberID() << endl;

    cout << "Books Borrowed: " << member1.getBooksBorrowed() << endl;

    cout << endl;

    // Create a PremiumMember object

    PremiumMember member2("Bob", 201, 5, 50.0);

    cout << "Premium Member:" << endl;

    cout << "Name: " << member2.getName() << endl;

    cout << "Member ID: " << member2.getMemberID() << endl;

    cout << "Books Borrowed: " << member2.getBooksBorrowed() << endl;

    cout << "Membership Fee: $" << member2.getMembershipFee() << endl;

    return 0;

}