Nishanth P – 24BAD405

Week 7

1. Vehicle Mileage Tracker

Vehicle Mileage Tracker

locked

Problem | Submissions | Leaderboard | Discussions

Submitted 15 hours ago • Score: 5.00 Status: Accepted

✔ Test Case #0 ✔ Test Case #1 ✔ Test Case #2

Submitted Code

Language: C++ Open in editor

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;

class Vehicle{
    protected:
    virtual void mileage(string type, int distance)=0;
};
class Mileage:public Vehicle{
    public:
    void mileage(string type, int distance) override{
        if(type=="car"){
            cout<<distance/15;
        }else if(type=="bike"){
            cout<<distance/40;
        }
    }
};
int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    string type;
    int dis;
    cin>>type>>dis;
    if(dis>0){
        Mileage milese;
        milese.mileage(type, dis);
    }
    return 0;
}

```

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Week 7

2. Payment Gateway Simulation

Payment Gateway Simulation

locked

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Submitted 14 hours ago • Score: 5.00 Status: Accepted

✔ Test Case #0 ✔ Test Case #1 ✔ Test Case #2

Submitted Code

Language: C++ Open in editor

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;

class Payment{
    protected:
    virtual void processPayment(int amount);
};

class Credit:public Payment{
    public:
        void processPayment(int amount) override{
            cout<<amount*1.02;
        }
};

class Debit:public Payment{
    public:
        void processPayment(int amount) override{
            cout<<amount*1.01;
        }
};

class UPI:public Payment{
    public:
        void processPayment(int amount) override{
            cout<<static_cast<int>(amount*1.005);
        }
};
int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    int payment;
    string mode;
    cin>>payment>>mode;
    if(payment>0){
        if(mode=="credit"){
            Credit credit;
            credit.processPayment(payment);
        }
        else if(mode=="debit"){
            Debit debit;
            debit.processPayment(payment);
        }
        else if(mode=="upi"){
            UPI upi;
            upi.processPayment(payment);
        }
    }
    return 0;
}
```

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Week 7

3. Insurance Premium Calculator

Insurance Premium Calculator

locked

Problem | Submissions | Leaderboard | Discussions

Submitted 14 hours ago • Score: 5.00 Status: Accepted

✔ Test Case #0 ✔ Test Case #1

Submitted Code

Language: C++ Open in editor

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;

class Insurance{
    protected:
    virtual void calculatePremium(int amount)=0;
};

class HealthInsurance:public Insurance{
    public:
    void calculatePremium(int amount) override{
        cout<<amount*1.10;
    }
};

class LifeInsurance:public Insurance{
    public:
    void calculatePremium(int amount) override{
        cout<<amount*1.15;
    }
};

class VehicleInsurance :public Insurance{
    public:
    void calculatePremium(int amount) override{
        cout<<amount*1.05;
    }
};
int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    int amount;
    string type;
    cin>>amount>>type;
    if(amount>0){
        if(type=="health"){
            HealthInsurance health;
            health.calculatePremium(amount);
        }
        else if(type=="life"){
            LifeInsurance life;
            life.calculatePremium(amount);
        }
        else if(type=="vehicle"){
            VehicleInsurance vehicle;
            vehicle.calculatePremium(amount);
        }
    }
    return 0;
}
```

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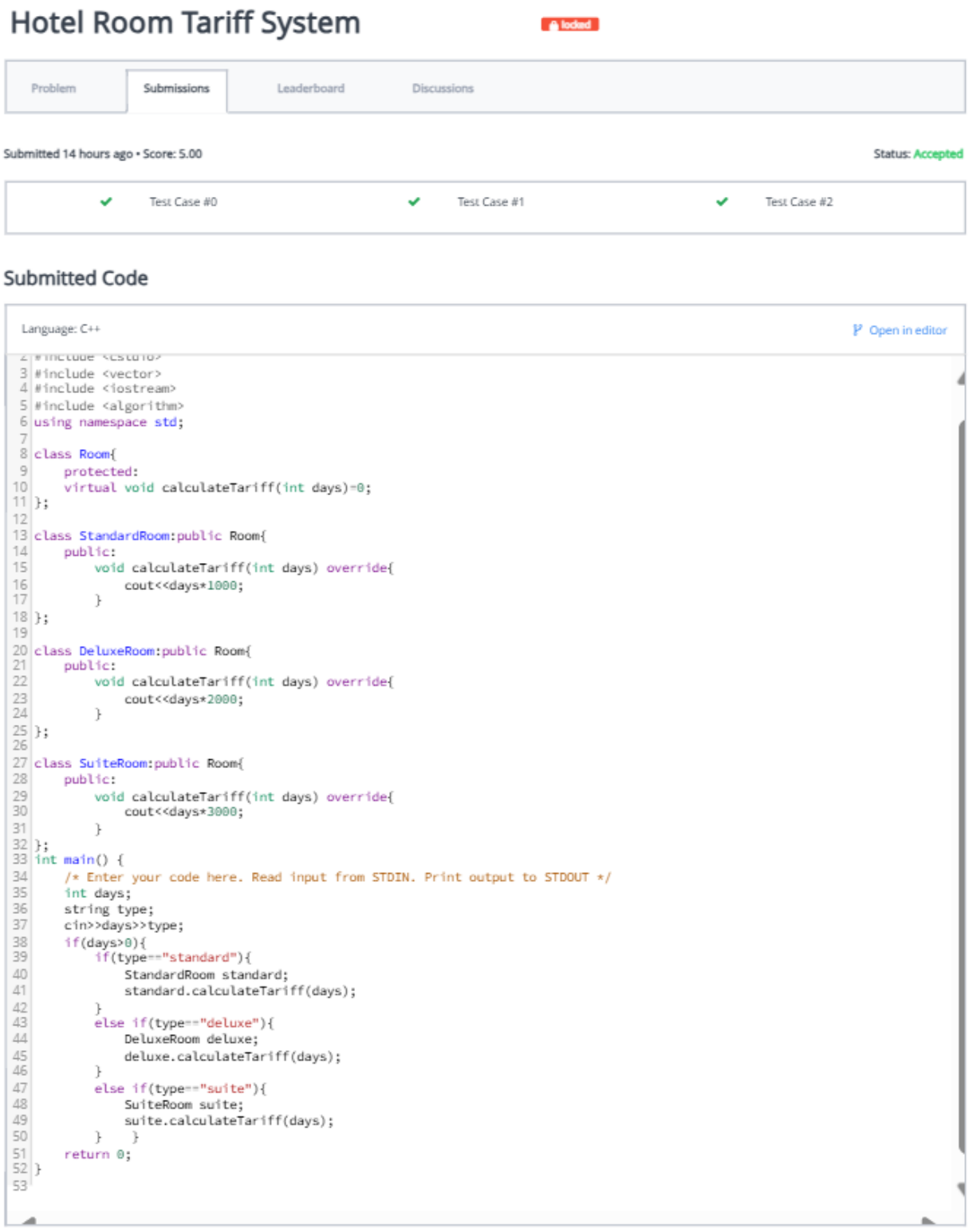
Week 7

4. Hotel Room Tariff System




```cpp
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;

class Room{
    protected:
    virtual void calculateTariff(int days)=0;
};

class StandardRoom:public Room{
    public:
        void calculateTariff(int days) override{
            cout<<days*1000;
        }
};

class DeluxeRoom:public Room{
    public:
        void calculateTariff(int days) override{
            cout<<days*2000;
        }
};

class SuiteRoom:public Room{
    public:
        void calculateTariff(int days) override{
            cout<<days*3000;
        }
};
int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    int days;
    string type;
    cin>>days>>type;
    if(days>0){
        if(type=="standard"){
            StandardRoom standard;
            standard.calculateTariff(days);
        }
        else if(type=="deluxe"){
            DeluxeRoom deluxe;
            deluxe.calculateTariff(days);
        }
        else if(type=="suite"){
            SuiteRoom suite;
            suite.calculateTariff(days);
        }   }
    return 0;
}
```

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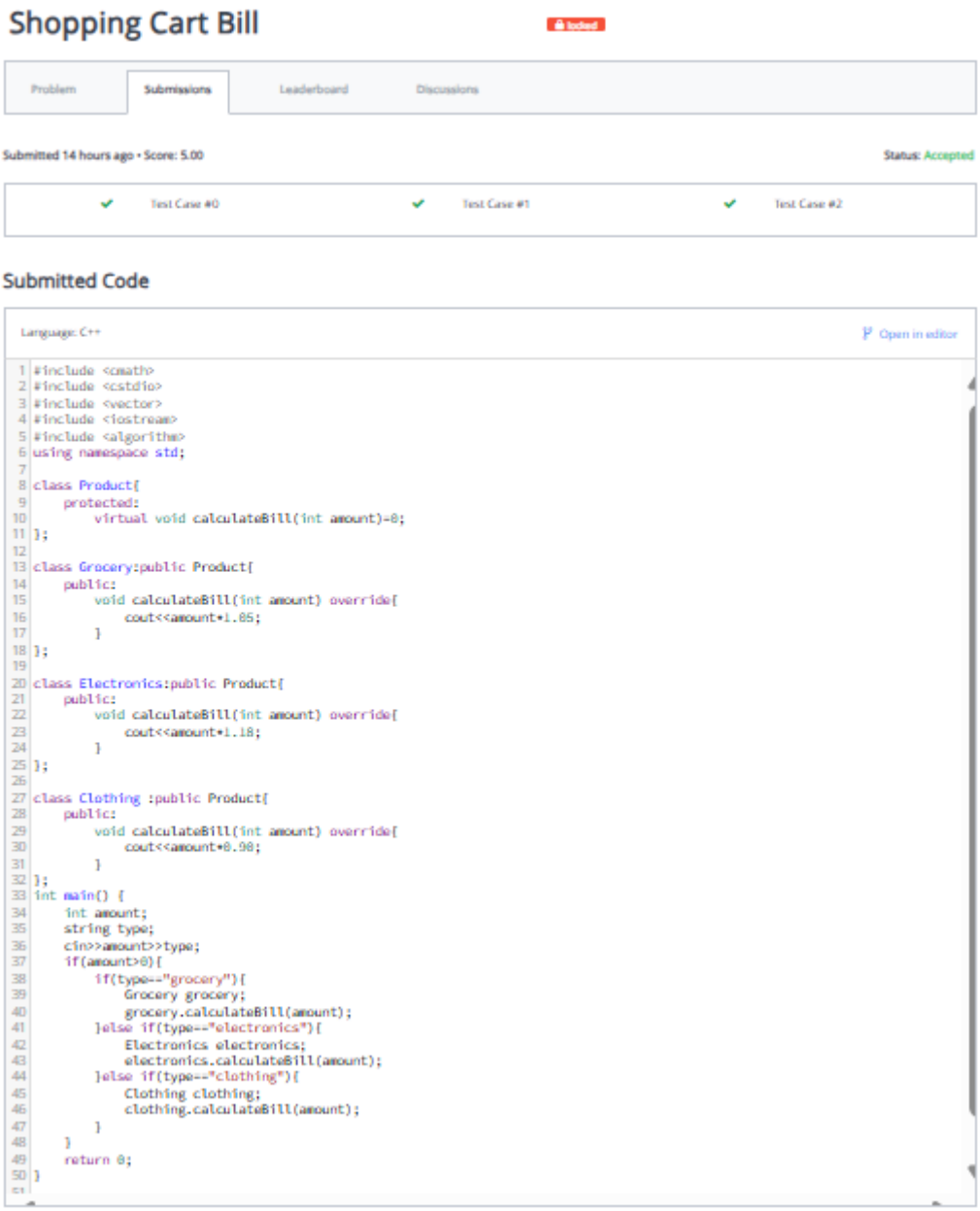
Week 7

5. Shopping Cart Bill



Shopping Cart Bill

Problem | Submissions | Leaderboard | Discussions

Submitted 14 hours ago • Score: 5.00 Status: Accepted

Test Case #0 Test Case #1 Test Case #2

Submitted Code

Language: C++ Open in editor

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;

class Product{
    protected:
        virtual void calculateBill(int amount)=0;
};

class Grocery:public Product{
    public:
        void calculateBill(int amount) override{
            cout<<amount*1.05;
        }
};

class Electronics:public Product{
    public:
        void calculateBill(int amount) override{
            cout<<amount*1.18;
        }
};

class Clothing :public Product{
    public:
        void calculateBill(int amount) override{
            cout<<amount*0.90;
        }
};
int main() {
    int amount;
    string type;
    cin>>amount>>type;
    if(amount>0){
        if(type=="grocery"){
            Grocery grocery;
            grocery.calculateBill(amount);
        }else if(type=="electronics"){
            Electronics electronics;
            electronics.calculateBill(amount);
        }else if(type=="clothing"){
            Clothing clothing;
            clothing.calculateBill(amount);
        }
    }
    return 0;
}
```

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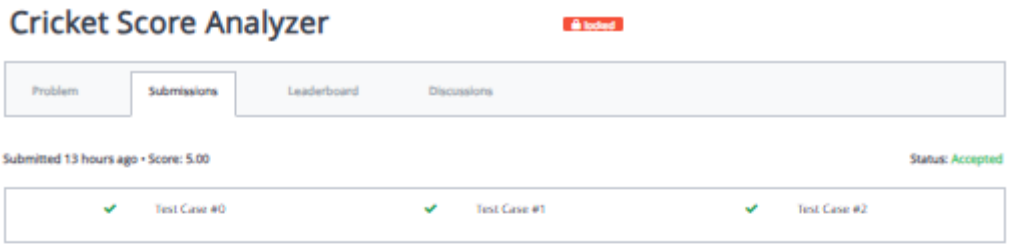
Week 7

6. Cricket Score Analyzer



Submitted Code

Language: C++ Open in editor

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
#include <iomanip>
using namespace std;

class CricketPlayer{
    protected:
        virtual void analyzePerformance(int runs, int balls)=0;
};

class TestPlayer:public CricketPlayer{
    public:
        void analyzePerformance(int runs, int balls){
           cout<<fixed<<setprecision(2)<<static_cast<double>(runs/2.0);
        }
};

class ODIPlayer:public CricketPlayer{
    public:
        void analyzePerformance(int runs, int balls){
           cout<<fixed<<setprecision(2)<<((double)runs/(double)balls)*100;
        }
};

class T20Player:public CricketPlayer{
    public:
        void analyzePerformance(int runs, int balls){
           cout<<fixed<<setprecision(2)<<static_cast<double>(((double)runs/(double)balls)*120.0);
        }
};
int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    int runs, balls;
    string type;
    cin>>runs>>balls>>type;
    if(runs>=0){
        if(balls>0){
            if(type=="test"){
                TestPlayer test;
                test.analyzePerformance(runs, balls);
            }else if(type=="odi"){
                ODIPlayer odi;
                odi.analyzePerformance(runs, balls);
            }else if(type=="t20"){
                T20Player t20;
                t20.analyzePerformance(runs, balls);
            }
        }
    }
    return 0;
}
```