TASK 01

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

using namespace std;

class Car {
    string b;
    string m;
    double p;
    bool a;
public:
    Car() : b("Unknown"), m("Generic"), p(0.0), a(true) {}
    string getB() const { return b; }
    string getM() const { return m; }
    double getP() const { return p; }
    bool isA() const { return a; }
    void setB(const string& brand) { b = brand; }
    void setM(const string& model) { m = model; }
    void setP(double price) { p = price; }
    void setA(bool availability) { a = availability; }
    bool rent() {
        if (a) {
            a = false;
            cout << "Car rented successfully." << endl;
            return true;
        } else {
            cout << "Car is not available." << endl;
            return false;
        }
    }
};

int main() {
    Car c;
    cout << "Brand: " << c.getB() << endl;
    cout << "Model: " << c.getM() << endl;
    cout << "Price: " << c.getP() << endl;
```

```cpp
    cout << "Available: " << (c.isA() ? "Yes" : "No") << endl;
    c.rent();
    cout << "Available: " << (c.isA() ? "Yes" : "No") << endl;
    return 0;
}
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   PORTS   TERM

```
cd "/Users/kabir/Desktop/kabir/OOP 2nd sem/extra/we
"task1
● kabir@kabirs-MacBook-Pro OOP 2nd sem % cd "/Users/k
/Desktop/kabir/OOP 2nd sem/extra/weak4/"task1
Brand: Unknown
Model: Generic
Price: 0
Available: Yes
Car rented successfully.
Available: No
○ kabir@kabirs-MacBook-Pro weak4 %
```

TASK 02

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

using namespace std;

class Car {
    string b;
    string m;
    double p;
    bool a;
public:
    Car() : b("Unknown"), m("Generic"), p(0.0), a(true) {}
    Car(const string& brand, const string& model, double price, bool availability) :
b(brand), m(model), p(price), a(availability) {}
    string getB() const { return b; }
    string getM() const { return m; }
    double getP() const { return p; }
    bool isA() const { return a; }
    void setB(const string& brand) { b = brand; }
    void setM(const string& model) { m = model; }
    void setP(double price) { p = price; }
    void setA(bool availability) { a = availability; }
    bool rent() {
        if (a) {
            a = false;
            cout << "Rented." << endl;
            return true;
        } else {
            cout << "Unavailable." << endl;
            return false;
        }
    }
    double discount(int d) {
        if (!a) return 0;
        double dis = 0.0;
        if (d > 5) dis = 0.05;
        if (d > 10) dis = 0.10;
        return p * (1 - dis);
```

```cpp
    }
};

int main() {
    Car c("Toyota", "Camry", 50.0, true);
    cout << "Brand: " << c.getB() << endl;
    cout << "Model: " << c.getM() << endl;
    cout << "Price: " << c.getP() << endl;
    cout << "Available: " << (c.isA() ? "Yes" : "No") << endl;
    cout << "Discounted Price (12 days): " << c.discount(12) << endl;
    c.rent();
    cout << "Available: " << (c.isA() ? "Yes" : "No") << endl;
    return 0;
}
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   PORTS   TERM

```
cd "/Users/kabir/Desktop/kabir/OOP 2nd sem/extra/we
"task2
● kabir@kabirs-MacBook-Pro OOP 2nd sem % cd "/Users/k
/Desktop/kabir/OOP 2nd sem/extra/weak4/"task2
Brand: Toyota
Model: Camry
Price: 50
Available: Yes
Discounted Price (12 days): 45
Rented.
Available: No
○ kabir@kabirs-MacBook-Pro weak4 %
```

TASK 03

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

using namespace std;

class Car {
    string b;
    string m;
    double p;
    bool a;
public:
    Car() : b("Unknown"), m("Generic"), p(0.0), a(true) {}
    Car(const string& brand, const string& model, double price, bool availability) :
b(brand), m(model), p(price), a(availability) {}
    Car(const Car& other) : b(other.b), m(other.m), p(other.p), a(other.a) {
        cout << "Car copy created." << endl;
    }
    ~Car() {
        cout << "Car destroyed." << endl;
    }
    string getB() const { return b; }
    string getM() const { return m; }
    double getP() const { return p; }
    bool isA() const { return a; }
    void setB(const string& brand) { b = brand; }
    void setM(const string& model) { m = model; }
    void setP(double price) { p = price; }
    void setA(bool availability) { a = availability; }
    bool rent() {
        if (a) {
            a = false;
            cout << "Rented." << endl;
            return true;
        } else {
            cout << "Unavailable." << endl;
            return false;
        }
    }
    double discount(int d) {
```

```cpp
        if (!a) return 0;
        double dis = 0.0;
        if (d > 5) dis = 0.05;
        if (d > 10) dis = 0.10;
        return p * (1 - dis);
    }
};

int main() {
    Car c1("Toyota", "Camry", 50.0, true);
    Car c2 = c1;
    c1.setB("Honda");
    cout << "c1 Brand: " << c1.getB() << endl;
    cout << "c2 Brand: " << c2.getB() << endl;
    return 0;
}
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   PORTS

```
 cd "/Users/kabir/Desktop/kabir/OOP 2nd sem/ex
● kabir@kabirs-MacBook-Pro OOP 2nd sem % cd "/U:
 op/kabir/OOP 2nd sem/extra/"task3
 Car copy created.
 c1 Brand: Honda
 c2 Brand: Toyota
 Car destroyed.
 Car destroyed.
○ kabir@kabirs-MacBook-Pro extra %
```

TASK 04

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

using namespace std;

class Car {
    string b;
    string m;
    double p;
    bool a;
    double r;
public:
    Car() : b("Unknown"), m("Generic"), p(0.0), a(true), r(0.0) {}
    Car(const string& brand, const string& model, double price, bool availability) :
b(brand), m(model), p(price), a(availability), r(0.0) {}
    Car(const Car& other) : b(other.b), m(other.m), p(other.p), a(other.a), r(other.r)
{
        cout << "Copy created." << endl;
    }
    ~Car() {
        cout << "Car gone." << endl;
    }
    string getB() const { return b; }
    string getM() const { return m; }
    double getP() const { return p; }
    bool isA() const { return a; }
    double getR() const { return r; }
    void setB(const string& brand) { b = brand; }
    void setM(const string& model) { m = model; }
    void setP(double price) { p = price; }
    void setA(bool availability) { a = availability; }
    bool rent(int d) {
        if (a) {
            a = false;
            r += p * d;
            cout << "Rented." << endl;
            return true;
        } else {
            cout << "Unavailable." << endl;
```

```cpp
            return false;
        }
    }
    double discount(int d) {
        if (!a) return 0;
        double dis = 0.0;
        if (d > 5) dis = 0.05;
        if (d > 10) dis = 0.10;
        return p * (1 - dis);
    }
};

int main() {
    Car c("Toyota", "Camry", 50.0, true);
    c.rent(7);
    cout << "Revenue: " << c.getR() << endl;
    return 0;
}
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    PORTS    TE

cd "/Users/kabir/Desktop/kabir/OOP 2nd sem/weak1/
● kabir@kabirs-MacBook-Pro OOP 2nd sem % cd "/Users
sem/weak1/"task4
Rented.
Revenue: 350
Car gone.
○ kabir@kabirs-MacBook-Pro weak1 %
```

TASK 05

```cpp
#include <iostream>
#include <string>
#include <iomanip>

using namespace std;

class Car {
    int id;
    string b;
    string m;
    double p;
    bool a;
    double r;
public:
    Car(int i, const string& brand, const string& model, double price, bool
availability) : id(i), b(brand), m(model), p(price), a(availability), r(0.0) {}
    int getId() const { return id; }
    string getB() const { return b; }
    string getM() const { return m; }
    double getP() const { return p; }
    bool isA() const { return a; }
    double getR() const { return r; }
    void setB(const string& brand) { b = brand; }
    void setM(const string& model) { m = model; }
    void setP(double price) { p = price; }
    void setA(bool availability) { a = availability; }
    bool rent(int d) {
        if (a) {
            a = false;
            r += p * d;
            cout << "Rented." << endl;
            return true;
        } else {
            cout << "Unavailable." << endl;
            return false;
        }
    }
    double discount(int d) {
        if (!a) return 0;
```

```cpp
        double dis = 0.0;
        if (d > 5) dis = 0.05;
        if (d > 10) dis = 0.10;
        return p * (1 - dis);
    }
    void display() const {
        cout << "ID: " << id << endl;
        cout << "Brand: " << b << endl;
        cout << "Model: " << m << endl;
        cout << "Price: $" << fixed << setprecision(2) << p << endl;
        cout << "Available: " << (a ? "Yes" : "No") << endl;
        cout << "Revenue: $" << fixed << setprecision(2) << r << endl;
    }
};

int main() {
    Car c(1, "Toyota", "Camry", 50.0, true);
    c.rent(7);
    c.display();
    return 0;
}
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE

cd "/Users/kabir/Desktop/kabir/OOP 2nd
kabir@kabirs-MacBook-Pro OOP 2nd sem %
sem/weak2/"task5
Rented.
ID: 1
Brand: Toyota
Model: Camry
Price: $50.00
Available: No
Revenue: $350.00
kabir@kabirs-MacBook-Pro weak2 %
```