

```

1 #include "Package.h"
2 #include "TwoDay.h"
3 #include "Overnight.h"
4 #include <iostream>
5 using namespace std;
6
7 int main()
8 {
9     // Create a Package object
10    Package package("John Doe", "123 Main St", "Anytown", "CA", "12345",
11                    "Jane Smith", "456 Elm St", "Othertown", "NY", "54321",
12                    10, 0.5);
13    cout << "Package shipping cost: $" << package.calculateCost() << endl;
14
15    // Create a TwoDayPackage object
16    TwoDayPackage twoDayPackage("John Doe", "123 Main St", "Anytown", "CA", "12345", "Jane Smith", "456 Elm St", "Othertown", "NY", "54321", 10, 0.5, 5);
17    cout << "Two-day package shipping cost: $" << twoDayPackage.calculateCost() << endl;
18
19    // Create an OvernightPackage object
20    OvernightPackage overnightPackage("John Doe", "123 Main St", "Anytown", "CA", "12345", "Jane Smith", "456 Elm St", "Othertown", "NY", "54321", 10, 0.5, 2);
21    cout << "Overnight package shipping cost: $" << overnightPackage.calculateCost() << endl;
22
23    return 0;
24 }
25
26

```

```

1 #ifndef PACKAGE_H
2 #define PACKAGE_H
3
4 #include <iostream>
5 #include <string>
6 using namespace std;
7
8 class Package{
9     public:
10    Package(string, string, string, string, string, string,
11            string, string, string, string, string, int, double);
12
13    double calculateCost() const;
14
15    const double weight;
16    const double cost;
17
18    private:
19    string s_name;
20    string s_address;
21    string s_city;
22    string s_state;
23    string s_ZIP_code;
24
25    string r_name;
26    string r_address;
27    string r_city;
28    string r_state;
29    string r_ZIP_code;
30
31 };
32
33 #endif

```

```

1 #include "Package.h"
2 #include <iostream>
3 using namespace std;
4
5 Package::Package(string s_NAME, string s_ADDRESS, string s_CITY, string s_STATE, string s_ZIP,
6                 string r_NAME, string r_ADDRESS, string r_CITY, string r_STATE, string r_ZIP,
7                 int WEIGHT, double COST)
8     : s_name(s_NAME), s_address(s_ADDRESS), s_city(s_CITY), s_state(s_STATE), s_ZIP_code(s_ZIP),
9       r_name(r_NAME), r_address(r_ADDRESS), r_city(r_CITY), r_state(r_STATE), r_ZIP_code(r_ZIP),
10      weight(WEIGHT), cost(COST)
11 {
12
13     if (weight < 0)
14         cout << "The weight should be positive." << endl;
15     if (cost < 0)
16         cout << "The cost should be positive." << endl;
17
18 }
19
20 double Package::calculateCost() const{
21     return weight * cost;
22 }
23
24

```

```

1 #ifndef TWODAY_H
2 #define TWODAY_H
3
4 #include "Package.h"
5 #include <string>
6 using namespace std;
7
8 class TwoDayPackage : public Package{
9     public:
10         TwoDayPackage(string, string, string, string, string,
11                       string, string, string, string, string,
12                       int, double, int);
13
14         double calculateCost() const;
15
16     private:
17         double flat_fee;
18
19 };
20
21 #endif

```

```

1 #include "TwoDay.h"
2 #include <iostream>
3 using namespace std;
4
5 TwoDayPackage::TwoDayPackage(string s_NAME, string s_ADDRESS, string s_CITY, string s_STATE, string s_ZIP,
6                               string r_NAME, string r_ADDRESS, string r_CITY, string r_STATE, string r_ZIP,
7                               int WEIGHT, double COST, int FEE)
8     : Package(s_NAME, s_ADDRESS, s_CITY, s_STATE, s_ZIP,
9               r_NAME, r_ADDRESS, r_CITY, r_STATE, r_ZIP,
10               WEIGHT, COST), flat_fee(FEE)
11 {
12     flat_fee = FEE;
13 }
14
15 double TwoDayPackage::calculateCost() const{
16     return (Package::calculateCost() + flat_fee);
17 }

```

```

1  #ifndef OVERNIGHT_H
2  #define OVERNIGHT_H
3
4  #include "Package.h"
5  #include <string>
6  using namespace std;
7
8  class OvernightPackage : public Package{
9      public:
10         OvernightPackage(string, string, string, string, string,
11                         string, string, string, string, string,
12                         int, double, int);
13
14         double calculateCost() const;
15
16     private:
17         double add_fee;
18 };
19
20 #endif

```

```

1  #include "Overnight.h"
2  #include <iostream>
3  using namespace std;
4
5  OvernightPackage::OvernightPackage(string s_NAME, string s_ADDRESS, string s_CITY, string s_STATE, string s_ZIP,
6                                     string r_NAME, string r_ADDRESS, string r_CITY, string r_STATE, string r_ZIP,
7                                     int WEIGHT, double COST, int FEE)
8      : Package(s_NAME, s_ADDRESS, s_CITY, s_STATE, s_ZIP,
9               r_NAME, r_ADDRESS, r_CITY, r_STATE, r_ZIP,
10               WEIGHT, COST), add_fee(FEE)
11 {
12     add_fee = FEE;
13 }
14
15 double OvernightPackage::calculateCost() const{
16     return (Package::weight * (Package::cost + add_fee) );
17 }

```

```

Package shipping cost: $5
Two-day package shipping cost: $10
Overnight package shipping cost: $25

```