Main.cpp

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//Demo at 5:37

#include "Distance.h"

#include <iostream>

using namespace std;

int main() {

Distance dist1, dist3, dist4; // define distances

cin >> dist1;

Distance dist2(11, 6.25); // define, initialize dist2

dist3 = dist1 + dist2; // single '+' operator

dist4 = dist1 - dist2; // friend '-' operators

// display all lengths

cout << "dist1 = ";

cout << dist1 << endl;

cout << "dist2 = ";

cout << dist2 << endl;

cout << "dist3 = ";

cout << dist3 << endl;

cout << "dist4 = ";

cout << dist4 << endl;

return 0;

}

Distance.h

#include <iostream>

#include <string>

using namespace std;

class Distance // English Distance class

{

private:

int feet;

float inches;

public:

// constructor (no args)

Distance() : feet(0), inches(0.0) {}

// constructor (two args)

Distance(int ft, float in) : feet(ft), inches(in) {}

friend Distance operator+(Distance, Distance);

friend Distance operator-(Distance, Distance);

friend ostream &operator<<(ostream &output, const Distance &dt);

friend istream &operator>>(istream &input, Distance &dt);

};

Distance.cpp

#include "Distance.h"

using namespace std;

ostream &operator<<(ostream &output, const Distance &dt) {

output << "Feet: " << dt.feet << " Inch: " << dt.inches;

return output;

}

istream &operator>>(istream &input, Distance &dt) {

cout << "Enter the feet: ";

input >> dt.feet;

cout << "Enter the inches: ";

input >> dt.inches;

return input;

}

Distance operator-(Distance left, Distance right) {

Distance temp\_dt;

temp\_dt.feet = left.feet - right.feet;

temp\_dt.inches = left.inches - right.inches;

while (temp\_dt.inches < 0) {

temp\_dt.inches =temp\_dt.inches + 12;

temp\_dt.feet = temp\_dt.feet - 1;

}

return temp\_dt;

}

Distance operator+(Distance left, Distance right) {

Distance temp\_dt;

temp\_dt.feet = left.feet + right.feet;

temp\_dt.inches = left.inches + right.inches;

while (temp\_dt.inches > 12) {

temp\_dt.inches =temp\_dt.inches - 12;

temp\_dt.feet = temp\_dt.feet + 1;

}

return temp\_dt;

}

Text

Description automatically generated