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Assignment: HW4.6

This program prompts the user for two units and then a number.

It then converts said number from the first unit provided to the

second.

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#include <iostream>

#include <string>

using namespace std;

int main()

{

bool done = false;

string unit1 = "";

string unit2 = "";

double factor1 = 0; // conversion factor from first unit to cm

double factor2 = 0; // conversion factor from cm to second unit

while (!done)

{

bool again = false; // true to repeat the same conversion

cout << "From unit (in, cm, m, again, quit): " << endl;

string command;

cin >> command;

if (command == "in")

{

factor1 = 2.54;

unit1 = command;

}

else if (command == "cm")

{

factor1 = 1;

unit1 = command;

}

else if (command == "m")

{

factor1 = 100;

unit1 = command;

}

else if (command == "again")

{

again = true;

}

else if (command == "quit")

{

done = true;

}

else

{

cout << "Sorry, unknown unit." << endl;

}

if (factor1 != 0 && !again && !done)

{

cout << "To unit: " << endl;

cin >> unit2;

if (unit2 == "in")

{

factor2 = 1.0 / 2.54;

}

else if (unit2 == "cm")

{

factor2 = 1;

}

else if (unit2 == "m")

{

factor2 = 1.0 / 100;

}

else

{

cout << "Sorry, unknown unit." << endl;

}

}

if (factor1 != 0 && factor2 != 0 && !done) {

//cout << "Please input the number you want converted: ";

double input = 0;

cin >> input;

double converted = 0;

converted = input \* factor1;

converted \*= factor2;

cout << input << " " << unit1 << " = " << converted << " " << unit2 << endl;

}

}

return 0;

}