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1. INPUT/ Get Crate Dimensions

(length, width, height)

2. CALCULATE/ Volume, Cost, Customer Charge, and Profit

3. Display calculations

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// This program is used by General Crates, Inc. to calculate

// the volume, cost, customer charge, and profit of a crate

// of any size. It calculates this data from user input, which

// consists of the dimensions of the crate.

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

// Constants for cost and amount charged

const double COST\_PER\_CUBIC\_FOOT = 0.23;

const double CHARGE\_PER\_CUBIC\_FOOT = 0.5;

// Variables

double length, // The crate's length

width, // The crate's width

height, // The crate's height

volume, // The volume of the crate

cost, // The cost to build the crate

charge, // The customer charge for the crate

profit; // The profit made on the crate

// Set the desired output formatting for numbers.

cout << setprecision(2) << fixed << showpoint;

// Prompt the user for the crate's length, width, and height.

cout << "Enter the dimensions of the crate (in feet):\n";

cout << "Length: ";

cin >> length;

cout << "Width: ";

cin >> width;

cout << "Height: ";

cin >> height;

// Calculate the crate's volume, the cost to produce it,

// the charge to the customer, and the profit.

volume = length \* width \* height;

cost = volume \* COST\_PER\_CUBIC\_FOOT;

charge = volume \* CHARGE\_PER\_CUBIC\_FOOT;

profit = charge - cost;

// Display the calculated data.

cout << "The volume of the crate is ";

cout << volume << " cubic feet.\n";

cout << "Cost to build: $" << cost << endl;

cout << "Charge to customer: $" << charge << endl;

cout << "Profit: $" << profit << endl;

system("pause");

return 0;

}



