

Write a program that calculates and displays the body mass index of a person. The body mass index is found by using $BMI = \text{weight} * (703 / \text{height}^2)$

Display a message telling if the person is considered to be optimal weight, overweight or underweight.

If the BMI is under 18.5 the person is considered underweight, if their BMI is between 18.5 and 25, the person is considered to be optimal wait. If the person is above 25 BMI, they are considered to be overweight.

Main.cpp

```
#include "bmi.h"

int main()
{
    bodyMassIndex bmi;

    bmi.calculateBMI();

    return 0;
};
```

Bmi.h

```
class bodyMassIndex
{
private:
    double weight;
    double height;

public:
    void calculateBMI();
};
```

bmi.cpp

```
#include "bmi.h"
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;

void bodyMassIndex::calculateBMI()
{
    double calculatedBMI;

    cout << "Please input a weight in pounds: ";
    cin >> weight;
    cout << "Please input a height in inches: ";
    cin >> height;

    calculatedBMI = weight * (703 / pow(height, 2));

    cout << setprecision(4) << "The calculated BMI is: " <<
calculatedBMI << endl;

    if (calculatedBMI > 25)
        cout << "This BMI considers a person to be overweight."
<< endl;

    if (calculatedBMI >= 18.5 && calculatedBMI <= 25)
        cout << "This BMI considers a person to be optimal
weight." << endl;

    if (calculatedBMI < 18.5)
```

```
        cout << "This BMI consideres a person to be underweight."
<< endl;
};
```

```
Please input a weight in pounds: 155
Please input a height in inches: 73
The calculated BMI is: 20.45
This BMI consideres a person to be optimal weight.
```