

## 1. Decomposition and 2. Pattern Recognition

This program reads data for two people and computes their body mass index (BMI).

## 3. Abstraction

intro()  
Input: none  
Returns: nothing

Enter next person's information:  
height (in inches)? 70.0  
weight (in pounds)? 194.25

getBMI()  
Input: none  
Returns: BMI value

Enter next person's information:  
height (in inches)? 62.5  
weight (in pounds)? 130.5

Person 1 BMI = 27.868928571428572  
overweight

Person 2 BMI = 23.485824  
normal

reportBMI()  
Input: person #  
BMI value  
Returns: nothing

Difference = 4.3831045714285715

reportDiffs()  
Input: both BMI values  
Returns: nothing

# Computational Thinking

1. Decomposition
2. Pattern Recognition
3. Abstraction
4. Algorithm

## 4. Algorithm

```
main()
• Set up scanner (as a field?)
• intro()
• getBMI() for BMI 1
• getBMI () for BMI 2
• reportBMI () for BMI 1
• reportBMI () for BMI 2
• reportDiffs
```

```
getBMI()
• "Enter <#> person's..."
• get height
• get weight
• calc and return bmiValue
```

```
reportBMI()
• "Person # BMI =" + bmiValue
• categorize ... if/else if/else
```

```
reportDiffs()
• bmi1 - bmi2
```