# Person Example

## Data Model

```java
public class Person {
  /* Attributes */
  double weight; /* kilograms */
  double height; /* meters */
  /* Constructor */
  Person (double weight, double height) {
    this.weight = weight;
    this.height = height;
  }

  /* Accessor/Getter: Body Mass Index */
  double getBMI() {
    double bmi = this.weight / (this.height * this.height);
    return bmi;
  }

  /* Mutator/Setter: Change of Weight */
  void gainWeight(double amount) {
    this.weight = this.weight + amount;
  }
}
```

## Tester/Application

```java
1  public class PersonTester {
2    public static void main(String[] args) {
3      Person alan = new Person(72, 1.72);
4      Person tom = new Person(65, 1.81);
5      System.out.print("Alan's BMI: ");
6      System.out.printf("%.2f\n", alan.getBMI());
7      System.out.print("Tom's BMI: ");
8      System.out.printf("%.2f\n", tom.getBMI());
9      alan = tom;
10     alan.gainWeight(3);
11     System.out.println("===== After Alan gained 3 kgs =====");
12     System.out.print("Alan's BMI: ");
13     System.out.printf("%.2f\n", alan.getBMI());
14     System.out.print("Tom's BMI: ");
15     System.out.printf("%.2f\n", tom.getBMI());
16   }
17 }
```

## Console Output.

```
Alan's BMI: 24.34
Tom's BMI: 19.84
===== After Alan gained 3 kgs =====
Alan's BMI: 20.76
Tom's BMI: 20.76
```