

Key point: You can use nested **if** statements to write a program that interprets body mass index.

Body mass index (BMI) is a measure of health based on height and weight. It can be calculated by taking your weight in kilograms and dividing it by the square of your height in meters.

BMI	Interpretation
BMI < 18.5	Underweight
18.5 ≤ BMI < 25.0	Normal
25.0 ≤ BMI < 30.0	Overweight
30.0 ≤ BMI	Obese

Listing 3.4 ComputeAndInterpretBMI.java

```

1  import java.util.Scanner;
2
3  public class ComputeAndInterpretBMI {
4      public static void main(String[] args) {
5          Scanner input = new Scanner(System.in);
6
7          // Prompt the user to enter weight in pounds
8          System.out.print("Enter weight in pounds: ");
9          double weight = input.nextDouble();
10
11         // Prompt the user to enter height in inches
12         System.out.print("Enter height in inches: ");
13         double height = input.nextDouble();
14
15         final double KILOGRAMS_PER_POUND = 0.45359237; //Constant
16         final double METERS_PER_INCH = 0.0254; //Constant
17
18         // Compute BMI
19         double weightInKilograms = weight * KILOGRAMS_PER_POUND;
20         double heightInMeters = height * METERS_PER_INCH;
21         double bmi = weightInKilograms /
22             (heightInMeters * heightInMeters);
23
24         // Display result
25         System.out.println("BMI is " + bmi);
26         if (bmi < 18.5)
27             System.out.println("Underweight");
28         else if (bmi < 25)
29             System.out.println("Normal");
30         else if (bmi < 30)
31             System.out.println("Overweight");
32         else
33             System.out.println("Obese");
34     }
35 }
```

```
run:  
Enter weight in pounds: 146  
Enter height in inches: 70  
BMI is 20.948603801493316  
Normal  
BUILD SUCCESSFUL (total time: 18 seconds)
```