

Input	Expected Output	Actual Output	Pass?
Selection=1 weight=150	150.00 lbs = 67.50 kg	150.00 lbs = 67.50 kg	Yes
Selection=2 height=70.0	70.00 inches = 177.80 cm	70.00 inches = 177.80 cm	Yes
Selection=3 weight=80.6 height=94	BMI=91.22 Category=Obese	BMI=91.22 Category=Obese	Yes
Selection=9	Thank you for using the program. Goodbye!	Thank you for using the program. Goodbye!	Yes

Test Case 1

```

1  /**
2   * File: MillerRaymone_Asgn5.java
3   * Author: Miller, Raymone
4   * Class: CMIS 141 - Assignment 5
5   * Creation Date: (24MAR21)
6   * Description: Uses methods to either convert pounds to kilograms,
7   *             inches to meters, or determine BMI display category
8   *             based on user input.
9   */
10
11 package com.miller.millerraymone_asgn5;
12
13 import java.util.InputMismatchException;
14 import java.util.Scanner;
15
16 public class MillerRaymone_Asgn5 {
17     // define constants for program
18     static final String HEIGHT = "1";
19     static final String HEIGHT = "2";
20     static final String BMI = "3";
21     static final String QUIT = "9";
22     static final double HEIGHT_CONVERSION = 0.45;
23     static final double HEIGHT_CONVERSION = 2.54;
24     static final int BMI_CONVERSION = 10_000;
25
26     public static void main(String[] args) {
27         // define variables used in main method
28         Scanner sc = new Scanner(System.in);
29         String choice;
30         double pounds;
31         double kilos;
32         double inches;
33         double centi;
34         double bmi;
35         // do..while loop to drive main program
36         do {
37             choice = displayMenu(sc); // get user menu choice
38             switch(choice) { // Choose an option based on user input
39                 case HEIGHT: // convert pounds to kilos
40                     System.out.print("\nEnter weight in pounds : ");
41                     pounds = getDouble(sc); // get user input for pounds
42                     kilos = poundsToKilograms(pounds); // convert
43                     System.out.printf("\t%.2f lbs = %.2f kg\n", pounds, kilos);

```

Test Case 2



college-courses - Replit

replit.com/@blackbluue/college-courses#cmis141/Week5/MillerRaymone_Asgn5.java

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 - Week6
 - .gitattributes
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 - .replit
 - main.java

cmis141/Week5/MillerRaymone_Asgn5.java

```
1  /**
2   * File: MillerRaymone_Asgn5.java
3   * Author: Miller, Raymone
4   * Class: CMIS 141 - Assignment 5
5   * Creation Date: (10/04/21)
6   * Description: Uses methods to either convert pounds to kilograms,
7   *             inches to meters, or determine BMI display category
8   *             based on user input.
9   */
10
11 package com.miller.millerraymone_asgn5;
12
13 import java.util.InputMismatchException;
14 import java.util.Scanner;
15
16 public class MillerRaymone_Asgn5 {
17     // define constants for program
18     static final String HEIGHT = "1";
19     static final String WEIGHT = "2";
20     static final String BMI = "3";
21     static final String QUIT = "0";
22     static final double HEIGHT_CONVERSION = 0.45;
23     static final double WEIGHT_CONVERSION = 2.54;
24     static final int BMI_CONVERSION = 10_000;
25
26     public static void main(String[] args) {
27         // define variables used in main method
28         Scanner sc = new Scanner(System.in);
29         String choice;
30         double pounds;
31         double kilos;
32         double inches;
33         double centi;
34         double bmi;
35         // do..while loop to drive main program
36         do {
37             choice = displayMenu(sc); // get user menu choice
38             switch(choice) { // Choose an option based on user input
39                 case HEIGHT: // convert pounds to kilos
40                     System.out.print("Enter weight in pounds : ");
41                     pounds = getUserDouble(sc); // get user input for pounds
42                     kilos = poundsToKilograms(pounds); // convert
43                     System.out.printf("\tk:2f lbs = %.2f kg\n", pounds, kilos);
44                 case WEIGHT: // convert height in inches to centimeters
45                     System.out.print("Enter height in inches : ");
46                     inches = getUserDouble(sc); // get user input for height
47                     centi = inchesToCentimeters(inches); // convert
48                     System.out.printf("\tc:2f inches = %.2f cm\n", inches, centi);
49                 case BMI: // calculate BMI using weight in kilograms and display category
50                     System.out.print("Enter weight in kilograms and height in centimeters separated by space : ");
51                     String[] input = System.out.nextLine().split(" ");
52                     double kg = Double.parseDouble(input[0]);
53                     double cm = Double.parseDouble(input[1]);
54                     bmi = calculateBMI(kg, cm);
55                     System.out.print("BMI=" + bmi + " Category=" + getBMICategory(bmi));
56                 case QUIT:
57                     System.out.println("Thank you for using the program. Goodbye!");
58                     return;
59             }
60         } while (choice != "0");
61     }
62
63     // display menu
64     static String displayMenu(Scanner sc) {
65         System.out.println("MENU");
66         System.out.println("1: Convert pounds into kilograms");
67         System.out.println("2: Convert height in inches to centimeters");
68         System.out.println("3: Calculate BMI using weight in kilograms and display category");
69         System.out.println("9: Exit program");
70         System.out.print("Enter your selection : ");
71         String choice = sc.nextLine();
72         return choice;
73     }
74
75     // convert pounds to kilograms
76     static double poundsToKilograms(double pounds) {
77         return pounds * 0.45;
78     }
79
80     // convert height in inches to centimeters
81     static double inchesToCentimeters(double inches) {
82         return inches * 2.54;
83     }
84
85     // calculate BMI using weight in kilograms and height in centimeters
86     static double calculateBMI(double kg, double cm) {
87         return kg / (cm * cm) * 10000;
88     }
89
90     // get user input for pounds
91     static double getUserDouble(Scanner sc) {
92         double value;
93         while (true) {
94             value = sc.nextDouble();
95             if (value > 0) {
96                 return value;
97             }
98             System.out.println("Invalid input. Please enter a positive number.");
99         }
100     }
101
102     // get user input for height
103     static double getUserDoubleForHeight(Scanner sc) {
104         double value;
105         while (true) {
106             value = sc.nextDouble();
107             if (value > 0) {
108                 return value;
109             }
110             System.out.println("Invalid input. Please enter a positive number.");
111         }
112     }
113
114     // get user input for BMI
115     static String[] getUserInputForBMI(Scanner sc) {
116         String[] input = new String[2];
117         while (true) {
118             System.out.print("Enter weight in kilograms and height in centimeters separated by space : ");
119             input = System.out.nextLine().split(" ");
120             if (input.length == 2) {
121                 return input;
122             }
123             System.out.println("Invalid input. Please enter two numbers separated by a space.");
124         }
125     }
126
127     // get BMI category
128     static String getBMICategory(double bmi) {
129         if (bmi < 18.5) {
130             return "Underweight";
131         } else if (bmi < 25) {
132             return "Normal weight";
133         } else if (bmi < 30) {
134             return "Overweight";
135         } else {
136             return "Obese";
137         }
138     }
139 }
```

Console

```
> java cmis141/Week5/MillerRaymone_Asgn5.java
MENU
1: Convert pounds into kilograms
2: Convert height in inches to centimeters
3: Calculate BMI using weight in kilograms and display category
9: Exit program
Enter your selection : 1
Enter weight in pounds : 150
150.00 lbs = 67.50 kg
MENU
1: Convert pounds into kilograms
2: Convert height in inches to centimeters
3: Calculate BMI using weight in kilograms and display category
9: Exit program
Enter your selection : 2
Enter height in inches : 70.0
70.00 inches = 177.80 cm
MENU
1: Convert pounds into kilograms
2: Convert height in inches to centimeters
3: Calculate BMI using weight in kilograms and display category
9: Exit program
Enter your selection : 3
Enter weight in kg and height in centimeters separated by space : 80.6 94
BMI=91.22 Category=Obese
MENU
1: Convert pounds into kilograms
2: Convert height in inches to centimeters
3: Calculate BMI using weight in kilograms and display category
9: Exit program
Enter your selection : 9
Thank you for using the program. Goodbye!
```