

CST 183 Java Programming Programming Assignment 1 (30 pts)

Purpose To become familiar with the Java programming environment. To learn basic code elements and use them to accomplish a simple task.



Requirements People love Big Macs and French fries. You are going to create and modify a program that calculates the miles someone needs to walk to work off their Big Macs and fries.

Step 1:

Using your IDE, Create a new Java program called BurnItOff.java. Type in the following source code as accurately as you can: (Do not type the line numbers!)

```
1  import java.util.Scanner;
2
3  public class BurnItOff
4  {
5      public static void main(String[] args)
6      {
7
8          // Declare variables
9          double bigMacs = 0;
10         double caloriesConsumed = 0;
11         double milesToWalk = 0;
12
13         // Create a Scanner object
14         Scanner keyboard = new Scanner(System.in);
15
16         // Get the number of Big Macs eaten
17         System.out.print("How many Big Macs did you eat? ");
18         bigMacs = keyboard.nextDouble();
19
20         // Calculate the calories consumed and the miles to burn it off
21         caloriesConsumed = bigMacs * 590;
22         milesToWalk = caloriesConsumed / 93.5;
23
24         // Display the results
25         System.out.println("Wow, you consumed " + caloriesConsumed + " calories");
26         System.out.println("You need to walk " + milesToWalk + " miles");
27     }
28 }
```

Compile your program and fix any compiler errors you encounter.

Run your program several times and test it with 1 Big Mac, 3 Big Macs, and 9 Big Macs.

Step 2:

Modify the program as follows:

Now, modify the program to also request the number of fries ordered (one medium McDonald fries order equals 384 calories) and calculate the additional calories consumed.

Compile your program and run with the following test cases:

Big Macs Eaten	Medium French Fries Eaten	Calories Consumed	Miles to Walk It Off
0	0		
0	1		
1	2		
9	7		

Sample Output:

```
How many Big Macs did you eat? 4
How many medium french fries did you eat? 5
Wow, you consumed 4280.0 calories
You need to walk 45.775401069518715 miles
```

Use a hand calculator to test your program for “correctness.”

Deliverables Submit the Java source code file (the .java file you completed after modifying) to the **Program 1 Dropbox** within the Delta eLearning System.

Create a hardcopy for turn-in and grading containing the following:

- a) Title Page
- b) Flow chart for program (If you don’t remember flow-charting, google it.)
- c) Source Code (copy and paste from your IDE)
- d) Output (copy and paste from your IDE).
- e) Upload source code (e.g. .java file) to the Program 1 dropbox in D2L.