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| **Algorithm** | **Java code** |
| 1. Create a variable container named inches which can hold integers. 2. Create a variable container named centimeters which can hold decimal numbers. 3. Create a constant container named CENT\_TO\_INCHES which can hold decimal numbers. 4. Set the constant value of CENT\_TO\_INCHES to 2.54. 5. Ask the user for the number of inches and store their answer in the container named inches. 6. Multiply the value in inches by the value in CENT\_TO\_INCHES and store in centimeters. 7. Output the string formed by joining: inches to “ inches = " 8. Output the string formed by joining: centimeters to " centimeters.". | import java.util.Scanner;  /\*\*Calculate Miles Per Gallon \* \* @author Nancy Harris \* @version V1 - 09/05/2012 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  public class ConvertInches {  /\*\* main method entry point to the program  \* @param args command line arguments - unused  public static void main (String args[])  {  // declare the containers  int inches;  double centimeters;  final double CENT\_TO\_INCHES;  // initialize the constant  CENT\_TO\_INCHES = 2.54;   // get the input  // prepare the input device  Scanner keyboard;  keyboard = new Scanner(System.in);  // prompt the user and get the value  System.out.print("Enter the inches: ");  inches = keyboard.nextInt();  // manipulate the data  centimeters = inches \* CENT\_TO\_INCHES;  // output the result  System.out.print(inches + " inches = ");  System.out.print(centimeters + " centimeters. ");  }  } |