Assessment Instructions

1. Create a folder called **Assessment** in your Unit 5 assessments folder.

2. Create an interface named **Product** .

   a. Add a method called **getName()** that returns a string.
   b. Add a method called **getCost()** that returns a double.

3. Create abstract class **Vehicle** that implements **Product**.

   a. It should have string variable **name** and double **cost**, that are initialized in the constructor.
   b. Add appropriate **getName()** and **getCost()** methods

4. Create classes **Car** and **Truck** that extend **Vehicle**.

   a. No other methods are needed.

5. Create class Tool that implements **Product** and **Comparable<T>** .

   a. It should have string variable **name** and double **cost** that are initialized in the constructor.
   b. Add appropriate **getName()** and **getCost()** methods.
   c. Add a **compareTo()** method that compares tools based upon cost .

6. Create class InventoryDemo.

   a. Test your classes by using ArrayList **products** of following products (Remember to declare it properly using List):

Name	Cost
Jaguar	1000000.00
Neon	17000.00
JigSaw	149.18
Jaguar	110000.00
Neon	17500.00
Neon	17875.32
RAM	35700.00
CircularSaw	200.00
CircularSaw	150.00

   b. Create a static method **takeInventory** that, when passed the **name** of a product, will go through the list and print out <item name>: Quantity = <quantity>, Total cost = <totalcost>. <item name> is the **name** of the product, <quantity> and <totalcost> are the values you calculate by going through the list for the product with name that was passed to **takeInventory**.

c. To test the **compareTo()** method, create two Tools, **saw1** , and **saw2** . Give them different prices and then test the **compareTo()** method you made, by displaying which one is more expensive.

Your output should be similar to: