VERDADERO, VINCE (19009246)
BERNARDO, LEAN GERARD (18017803)
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**TESTING: TASK 1.2**

| TEST CASE | PURPOSE | EXPECTED RESULT |
|---|---|---|
| **Initiation of Stock with Parameters: ("String stockCode, int quantity, double price")** | Initiating a new stock:<br>*"StockItem stock = new StockItem("W101", 10, 99.99)"*<br><br>Checks that the parameters given are printing correctly. | **Printing item stock information:**<br>Stock Type: Unknown Stock Name<br>Stock Description: Unknown Stock Description<br>Stock Code: W101<br>Price (excl. VAT): £99.99<br>Price (inc. VAT): £117.48825<br>Total Units In Stock: 10 |
| **Add > 100 Units of Stock** | Checks for valid input of adding stock. You should not be able to add more than 100 units of stock or an error will be given.<br><br>*else if (addStock > 100) {*<br>*System.out.println("Error: Cannot Add Less Than 1 Unit of Stock")* | **Printing item stock information:**<br>. . .<br><br>Units of Stock To Add: 101<br>Increasing Stock By 101 Units<br>Error: Cannot Add More Than 100 Units of Stock |
| **Add < 1 Unit of Stock** | Checks for valid input of adding stock. You should not be able to add less than 1 unit of stock or an error will be given.<br><br>*if (addStock < 1) {*<br>*System.out.println("Error: Cannot Add Less Than 1 Unit of Stock")* | **Printing item stock information:**<br>. . .<br><br>Units of Stock To Add: 0<br>Increasing Stock By 0 Units<br>Error: Cannot Add Less Than 1 Unit of Stock |
| **Add Between 1 and 100 Units of Stock** | Checks for valid input of adding stock. The units added should be between 1 and 100 inclusive therefore the lower bounds of 1 and the upper bounds of 100 should be tested as well as numbers in-between.<br><br>There should not be any errors returned and the new stock information should add the input to the "Total Units In Stock" | **Printing item stock information:**<br>. . .<br>Total Units In Stock: 10<br><br>Units of Stock To Add: 1<br>Increasing Stock By 1 Units<br><br>Printing item stock information:<br>. . .<br>Total Units In Stock: 11<br><br>**Printing item stock information:**<br>. . .<br>Total Units In Stock: 10<br><br>Units of Stock To Add: 100<br>Increasing Stock By 100 Units<br><br>Printing item stock information:<br>. . .<br>Total Units In Stock: 110<br><br>**Printing item stock information:**<br>. . .<br>Total Units In Stock: 10<br><br>Units of Stock To Add: 50<br>Increasing Stock By 50 Units |

| | | |
|---|---|---|
| | | Printing item stock information:<br>. . .<br>Total Units In Stock: 60 |
| **Sell Stock < 1 Units** | Checks for valid input of selling stock. The units sold cannot be less than 1 unit of stock.<br><br>if (sellStock < 1) {<br>System.out.println("Error: Cannot Sell Less Than 1 Unit of Stock") | **Printing item stock information:**<br>. . .<br><br>Units of Stock Sold: 0<br>Sold 0 Units of Stock<br>Error: Cannot Sell Less Than 1 Unit of Stock |
| **Sell Stock Should Not Exceed Available Units of Stock** | Checks for valid input of selling stock. The units sold cannot exceed the available units of stock available. | **Printing item stock information:**<br>. . .<br>Total Units In Stock: 10<br><br>Units of Stock Sold: 11<br>Sold 11 Units of Stock<br>Error: Cannot Sell More Than Available Units of Stock |
| **VAT is 17.5% (double vat = 17.5)** | Calculates the price of the price inclusive of the VAT at the set percentage of 17.5 which is 1.175x price excluding VAT shown in the code below.<br><br>getPrice() * (1 + (getVAT() / 100) | Price (excl. VAT): £99.99<br>Price (inc. VAT): £117.48825 |
| **toString() method** | Returns string giving stock code, stock name, description, quantity, price before VAT, price after VAT. | **Printing item stock information:**<br>Stock Type: Unknown Stock Name<br>Stock Description: Unknown Stock Description<br>Stock Code: W101<br>Price (excl. VAT): £99.99<br>Price (inc. VAT): £117.48825<br>Total Units In Stock: 10 |

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**TASK 2.2**

| TEST CASE | PURPOSE | EXPECTED RESULTS |
|---|---|---|
| **Initiation of Stock with Parameters: (“String stockCode, int quantity, double price”)**<br><br>**Override the instance methods** | Initiating a new stock:<br>StockItem stock = new NavSys("NS102", 10, 124.99);<br><br>The instance methods in StockItem will be overridden with the NavSys classes getStockName() and getStockDescription() | **Printing item stock information:**<br>Stock Type: Navigation System<br>Stock Description: GeoVision Sat Nav<br>Stock Code: NS102<br>Price (excl. VAT): £124.99<br>Price (inc. VAT): £146.86325<br>Total Units In Stock: 10 |

**TASK 3.2**

| TEST CASE | PURPOSE | EXPECTED RESULT |
|---|---|---|
| **Test Polymorphism** | Build an array containing one instance of each of the subclasses of StockItem given the parameter.<br><br>The program should run through the array and call the class methods to test each instance.<br><br>*s[0] = new NavSys("NS102", 10, 99.99);*<br>*s[1] = new DashCam("DC302", 15, 150);*<br>*s[2] = new CarStereo("CS105", 5, 50);*<br>*s[3] = new WiperBlades("WB203", 20, 30);* | **Printing item stock information:**<br>Stock Type: Navigation System<br>Stock Description: GeoVision Sat Nav<br>Stock Code: NS102<br>Price (excl. VAT): £99.99<br>Price (inc. VAT): £117.48825<br>Total Units In Stock: 10<br>. . .<br><br>**Printing item stock information:**<br>Stock Type: Dash Cam<br>Stock Description: Nextbase Dash Cam<br>Stock Code: DC302<br>Price (excl. VAT): £150.0<br>Price (inc. VAT): £176.25<br>Total Units In Stock: 15<br>. . .<br><br>**Printing item stock information:**<br>Stock Type: Car Stereo<br>Stock Description: JVC Car Stereo<br>Stock Code: CS105<br>Price (excl. VAT): £50.0<br>Price (inc. VAT): £58.75<br>Total Units In Stock: 5<br>. . .<br><br>**Printing item stock information:**<br>Stock Type: Wiper Blades<br>Stock Description: Bosch Wiper Blades<br>Stock Code: WB203<br>Price (excl. VAT): £30.0<br>Price (inc. VAT): £35.25<br>Total Units In Stock: 20<br>. . . |