# White Box Testing

## User story 3

**As a user, I want to view my weekly profit or loss in one line so that at a glance I can see how my shares performed this week.**

White Box Testing for User Story

* Wireless or 3G Connected and Enabled on the device

Loads the stock app

* If the app will not start put it back on the phone via the cable

The system checks the historical data from the previous week

* If the data is not available an error handler will bring up an error message

The system will check the current share values to make sure they are up to date

* If the share values are not up to date the system will perform an update

The system checks to see if the share values are in Pound Sterling

* If they are not in Pound Sterling the system will convert them

The system reads the data from the yahoo finance website

* If no data is available a message will display stating "download unsuccessful".
* The system will revert to whatever previous data was held in the system
* If no data is held then the system will show 0.

The system performs a calculation to show the total profit or loss

* The total profit/loss should be added together

The system displays the total profit/loss on the android phone screen

* The profit should be displayed in green
* The loss should be displayed in red
* If there is over one thousand pounds profit then commas should be included in the display
* The profit/loss should be rounded up to the nearest whole number

**Unit Test ID**

Update

Retrieve Historical Data

Retrieve Current Data

Calculate

Display

**Test ID - Updating Values of Shares**

|  |  |  |
| --- | --- | --- |
| **Description** | **Expected Results** | **Actual Results** |
| **Pre-Conditions**  -Connected to internet  -Yahoo Finance is online  -All shares available  **Variables**  -Stock Symbols 0: BP.L  -Stock Symbols 1: HSBA.L  -Stock Symbols 2: EXPN.L  -Stock Symbols 3: MKS.L  -Stock Symbols 4: SN.L |  |  |
| Application connects to yahoo API and downloads current stock data for the variables | Writes to file | Accesses the Yahoo Finance website and writes data to file |

Description - This is the unit test for updating the current values of the shares from the yahoo finance website.

Test ID - Retrieve Historical data

|  |  |  |
| --- | --- | --- |
| **Description** | **Expected Results** | **Actual Results** |
| **Pre-Conditions**  - Yahoo finance is accessible  **Variables**  -Stock Symbols 0: BP.L  -Stock Symbols 1: HSBA.L  -Stock Symbols 2: EXPN.L  -Stock Symbols 3: MKS.L  -Stock Symbols 4: SN.L |  |  |
| Loops through all companies to download historical data | Loops 5 times | Loops through the data on the website and downloads the data |
| Writes data to double array | Data in array | Writes data to the array |

Description - This unit test takes the historical data off the website and puts it in a double array

**Test ID - Retrieve Current Data**

|  |  |  |
| --- | --- | --- |
| **Description** | **Expected Results** | **Actual Results** |
| **Pre-Conditions**  - All share values are current and up to date  **Variables**  -Stock Symbols 0: BP.L  -Stock Symbols 1: HSBA.L  -Stock Symbols 2: EXPN.L  -Stock Symbols 3: MKS.L  -Stock Symbols 4: SN.L |  |  |
| Loops through all companies to download current data | Loops 5 times | Loops through the data on the website and downloads the data |
| Writes data to double array | Data in array | Writes data to the array |

Description - This unit test takes the current data from the Yahoo finance website and stores it in a double array.

**Test ID - Calculate profit/loss**

|  |  |  |
| --- | --- | --- |
| **Description** | **Expected Results** | **Actual Results** |
| **Pre-Conditions**  - Data is accessible  - All data stores if up to date  **Variables**  -Stock Symbols 0: BP.L  -Stock Symbols 1: HSBA.L  -Stock Symbols 2: EXPN.L  -Stock Symbols 3: MKS.L  -Stock Symbols 4: SN.L |  |  |
| Takes values from the double array | Values accessible from the array | Can take values out of the array |
| Performs the profit/loss calculation | Total profit or loss | Calculates the total profit or loss |

Description - This unit test calculates the total profit and loss for the precious week based on the historical data and current data.

**Test ID - Display**

|  |  |  |
| --- | --- | --- |
| **Description** | **Expected Results** | **Actual Results** |
| **Pre-Conditions**  - All previous tests have passed  **Variables**  -Total profit/loss value |  |  |
| Displays total profit/loss for the previous week on screen | Correct profit/loss value shown | Displays the profit or loss on screen |

Description - Takes all the information given and puts it up on screen so that it is easy for the user to see whether they have made a profit or a loss last week.