

Assessed Exercise 1 Report

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Summary

The program fully matches the specification of the assignment. Specifically:

- It requests the customer name and balance and then prints out a summary.
 - Customer balance is stored as pence but displayed in the appropriate pound format (with 2 decimal places and the £ symbol).
 - The program checks if the input for customer balance is appropriate. If it is not, it asks the user to enter a new input.
- There is an infinite loop in which wine name, bottles and bottle price are added and after the end of each transaction a summary is printed.
 - If wine name is left empty, the program finishes/quits.
 - If the number of bottles is negative, then the program calculates 80% of the price when buying said wine, as specified.
 - The program checks if the input for bottle price and bottle number is appropriate. If it is not, it asks the user to enter a new input.
- Upon exit, the program produces a 'statement.txt' file that contains the customer information (name, initial balance) on the first file and summarises each transaction in subsequent lines.
 - Appropriate exception handling has been implemented.

Assumptions & Deficiencies

The main method (AssEx1) is slightly large (~40 lines of code). Ideally, we would try to minimise the code to less than 20 lines; however; the specifications of this assignment make it difficult to further reduce code size, especially considering that a large part of the code handles user input. If the aim was to reduce the size of the main method, the code could be separated into methods in the main class that handle user input when it comes to creating customer account and wine objects, in a similar manner as the Statement class has been implemented.

As it is assumed that inputted values for balance and prices will contain only 2 decimal places, it did not account for rounding up/down transaction errors. When retuning very small amounts, balances may not be calculated or displayed correctly, and discrepancies may occur between price and final balance due to rounding up/down. Practically, that should not be an issue as pounds by default only have 2 decimal points and in such cases shops usually round up or down to the closest digit. However, in case we do want to account for more than 2 decimal points, the following can be made so that when converting from pounds to pence, set it up so the pounds are multiplied by 10^n where n is the number of their decimal points (e.g. 2 in 2.33).

```

Welcome A. Your balance is £111.00
Please enter the name of the wine:
(To exit, simply leave the name blank)
Wine Price should be 0.024
Please enter the number of bottles: (-ve for returns)
-1
Please enter price per bottle:
0.03
Transaction Complete.
Wine Name: Wine Price should be 0.024
Wine Bottles: -1
Cost per Bottle: £0.03
Total Cost: -£0.02
A, your new balance is: £110.98
Please enter the name of the wine:
(To exit, simply leave the name blank)

```

```

Welcome A. Your balance is £1.00
Please enter the name of the wine:
(To exit, simply leave the name blank)
Wine Price should be 0.056
Please enter the number of bottles: (-ve for returns)
-1
Please enter price per bottle:
0.07
Transaction Complete.
Wine Name: Wine Price should be 0.056
Wine Bottles: -1
Cost per Bottle: £0.07
Total Cost: -£0.06
A, your new balance is: £0.95
Please enter the name of the wine:
(To exit, simply leave the name blank)

```

Testing

Adding customer information (inputting Positive vs Negative Balance):

<pre> Hello. Please enter you name: Annita Chalka Please enter your balance: 123.33 Welcome Annita Chalka. Your balance is £123.33 Please enter the name of the wine: </pre>	<pre> Hello. Please enter you name: Antonia Please enter your balance: -99.2 Welcome Antonia. Your balance is -£99.20 Please enter the name of the wine: </pre>
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Buying wine vs Returning Wine :

```

Welcome Antonia. Your balance is -£99.20
Please enter the name of the wine:
(To exit, simply leave the name blank)
BuyWineTest
Please enter the number of bottles: (-ve for returns)
19
Please enter price per bottle:
23.9
Transaction Complete.
Wine Name: BuyWineTest
Wine Bottles: 19
Cost per Bottle: £23.90
Total Cost: £454.10
Antonia, your new balance is: £354.90
Please enter the name of the wine:

```

```

Antonia, your new balance is: £354.90
Please enter the name of the wine:
(To exit, simply leave the name blank)
Return Wine Test
Please enter the number of bottles: (-ve for returns)
-7
Please enter price per bottle:
12
Transaction Complete.
Wine Name: Return Wine Test
Wine Bottles: -7
Cost per Bottle: £12.00
Total Cost: -£84.00
Antonia, your new balance is: £270.90
Please enter the name of the wine:
(To exit, simply leave the name blank)

```

Ending wine transactions:

```

Welcome Annita Chalka. Your balance is £123.33
Please enter the name of the wine:
(To exit, simply leave the name blank)

Goodbye.

```

If the user inputs the wrong type of variable:

- Customer information input:

Annita

Please enter your balance:

woops

Could not find number. Please try again:

woops2

Could not find number. Please try again:

- Transaction input:

Please enter the name of the wine:

(To exit, simply leave the name blank)

WineTest

Please enter the number of bottles: (-ve for returns)

1.5

Could not find integer. Please try again:

-0.9

Could not find integer. Please try again:

1

Please enter price per bottle:

don'tknow

Could not find number. Please try again:

free

Could not find number. Please try again:

An overall example (with input used in example exercise + own addition):

Hello. Please enter you name:

Simon Rogers

Please enter your balance:

-45.87

Welcome Simon Rogers. Your balance is -£45.87

Please enter the name of the wine:

(To exit, simply leave the name blank)

Cheap Malbec

Please enter the number of bottles: (-ve for returns)

145

Please enter price per bottle:

3.99

Transaction Complete.

Wine Name: Cheap Malbec

Wine Bottles: 145

Cost per Bottle: £3.99

Total Cost: £578.55

Simon Rogers, your new balance is: £532.68

Please enter the name of the wine:

(To exit, simply leave the name blank)

Expensive Chablis

Please enter the number of bottles: (-ve for returns)

12

Please enter price per bottle:

12.99

Transaction Complete.

Wine Name: Expensive Chablis

Wine Bottles: 12

Cost per Bottle: £12.99

Total Cost: £155.88

```
Simon Rogers, your new balance is: £688.56
Please enter the name of the wine:
(To exit, simply leave the name blank)
Port
Please enter the number of bottles: (-ve for returns)
1
Please enter price per bottle:
34.56
Transaction Complete.
Wine Name: Port
Wine Bottles: 1
Cost per Bottle: £34.56
Total Cost: £34.56
Simon Rogers, your new balance is: £723.12
Please enter the name of the wine:
(To exit, simply leave the name blank)
Bad Vodka
Please enter the number of bottles: (-ve for returns)
-2
Please enter price per bottle:
9.99
Transaction Complete.
Wine Name: Bad Vodka
Wine Bottles: -2
Cost per Bottle: £9.99
Total Cost: -£15.98
Simon Rogers, your new balance is: £707.14
Please enter the name of the wine:
(To exit, simply leave the name blank)

Goodbye. |_____
```

The resulting statement file contains:

```
Simon Rogers, your balance is -£45.87
Cheap Malbec(£3.99), 145 unit(s), total cost = £578.55, new balance = £532.68
Expensive Chablis(£12.99), 12 unit(s), total cost = £155.88, new balance = £688.56
Port(£34.56), 1 unit(s), total cost = £34.56, new balance = £723.12
Bad Vodka(£9.99), -2 unit(s), total cost = -£15.98, new balance = £707.14
```