<div align="center">

BSC – HGP - Assignment 01
Stock Trade Profit Calculator
UI Design Document

</div>

Introduction

This application is designed to buy stock and to measure benefit, this application focuses broadly on two parts, first the code that is PYQT5, and the workstation that I used to make this application is called PyCharm, the second component that we look at is based on the Interface of this application. When we run the application, this window will pop up with the features I have added to the application. On Stock Trade Profit Calculator Name of the stock, quantity of the stock, date of sale and the date of purchase is modified by the user. The application calculates the total purchase, the total sales on the specific dates chosen by the user, and the profit between the two days is calculated. The labels are placed on the left-hand-side of the application as they provide a correct indication of the context on the right which must be modified by the user.

Muhammad khan_2974976_Assignment1   ?   ✕

| Stock Purchase | A |
| Quantity Purchase | 0.00 |

Purchase Date

← **January, 2018** →

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	31	1	2	3	4	5	6
2	7	8	9	10	11	12	13
3	14	15	16	17	18	19	20
4	21	22	23	24	25	26	27
5	28	29	30	31	1	2	3
6	4	5	6	7	8	9	10

Total Stock Purchase   0.00

Sell Date

← **January, 2018** →

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	31	1	2	3	4	5	6
2	7	8	9	10	11	12	13
3	14	15	16	17	18	19	20
4	21	22	23	24	25	26	27
5	28	29	30	31	1	2	3
6	4	5	6	7	8	9	10

Total Stock Sell   0.00
Total Stock Profit   0.00

Stock Purchase

Stock buying is designed for a combo box containing a list of products. The Combo Box is positioned on the right side of the stock purchasing mark.
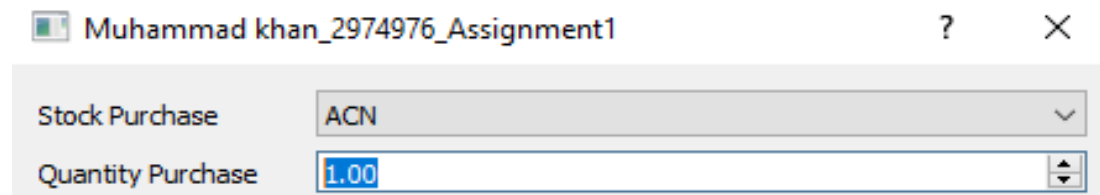
In code: I used this for stock purchase (stock purchase = QLabel)
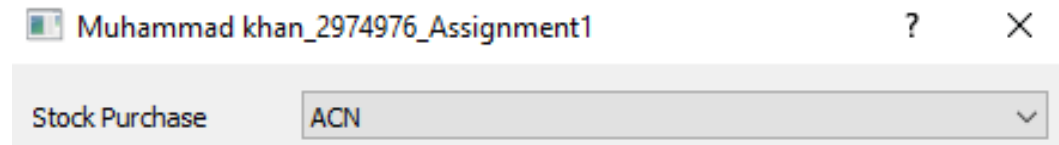
Quantity Purchases

To obtain the quantities, I used Spin Box   to maximize and reduce the quantity. it must be more than zero.

In code : I used this for Quantity purchase (total_stock_purchase = QLabel)

- **Arrow Button**

    To increase the Quantity of the stock I have added the button to select the Quantity in this case I have selected 2 quantity if the user hit go up arrow button it will increase the Quantity of the stock he wants to buy, and if he wants to buy more then 0 he simply clicks go down arrow it will decrease the Quantity of the Stock.

➢ As you can clearly see that after hitting the go-up arrow button the quantity of the stock has increased
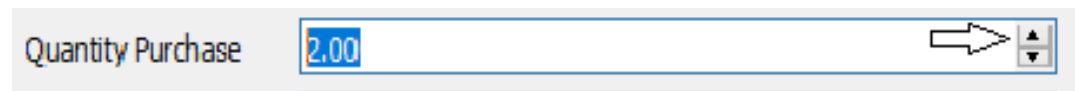

➢ As you can see in the second picture user clicked on the go-down arrow button the quantity of the stock has decreased
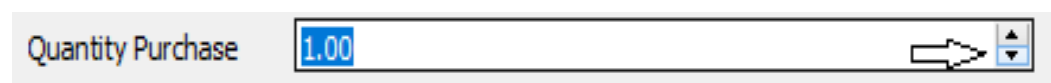
➢ **Selecting Stock**

So when the user decided but stock and how much quantity of the stock he wants to buy and he needs to make selection which I have did in on this application through hover affect which appears to be in blue by default ,If user drag his mouse to any stock in drop down menu, he need to put his mouse widget on that stock which will turn into blue, by doing this user will know that following stock I'm buying and this is my stock
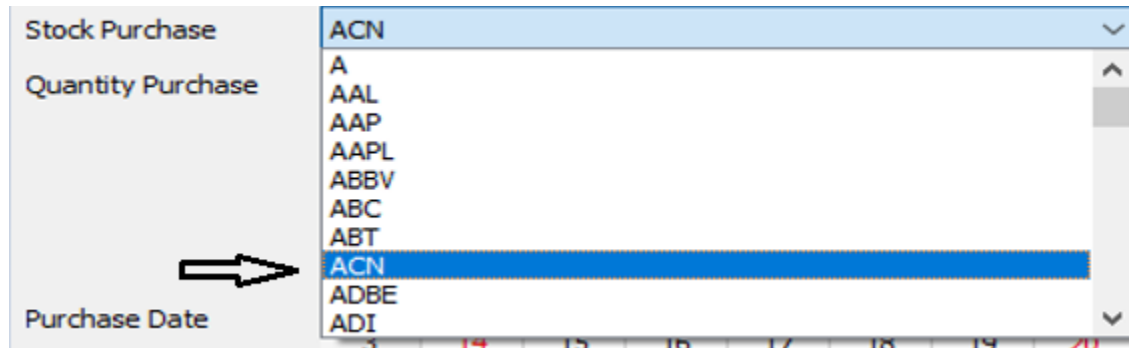
Purchase and sell date

Purchase date and sell date they both are using the Q widget calendar, they are placed on the right of their respective labels to show specifically both,
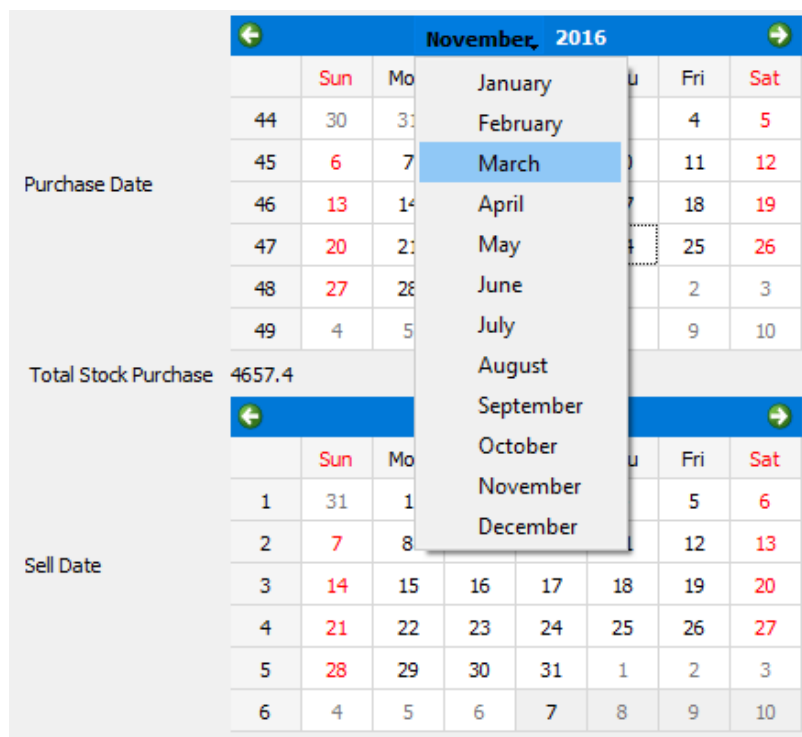
➢ **Drop-Down menu Selection**

In the Both of the calendar mentioned above I have used Q widget for calendar along with I have added up the green button where you can go back to the following month or user can use the drop down menu to select the specific month along with arrow button which helps the user to change the year .when user will use the drop down menu to select the month it will be highlighted as light blue which will help user to understand that he is selecting the following month and it works for both Purchase. Which will help user to understand that he is selecting the following month and it works for both Purchase and sell date calendar.

If user click on the green button as it shows it will change the month and for year I have added up the arrow button

In this Snap shot it clearly shows the drop down menu where user is selecting month selecting month is appears to be in light blue.

Purchase and Sell Total

  Total Purchase are measured quantities derived by multiplying the price and quantity together, after multiplying those two values the calculated value user will get on the display will be in point for that I used float to show.

Total Stock Purchase	160.6
Total Stock Sell	155.15

> ### ➤ Profit:

  To get profit i subtracted between two values which is total purchase – total sell then profit is determined by subtraction between the net revenue and the total purchase. To show the Total stock profit I used self. Profit1 = Q Label

Total Stock Profit	-5.45

Operating Application

In this you can see the fully working application snap down below which shows the steps from purchasing to sell the stock along with estimated profit and with dates as well the snap down below highlight that the user has selected different the stock named ABC . the purchase was 24/01/2018 which is buy default in the program therefore the estimated value for ABC is called total purchase and for total sell the default date is 7/02/2018 for that the display item will be called total sell. User can easily see the profit on down below where it says total stock profit which is -10.4 . To show the Total stock profit I used self. Profit1 = Q Label.

➢ **Change of the Quantity**

Let's have a look by changing the Quantity of stock of ABC, in this I have selected the quantity to 4 you will see total purchase and total profit changes the value accordingly to the quantity of the stock

In this you will see quantity of the purchased stock with Total stock price valued displayed

Muhammad khan_2974976_Assignment1							? ✕
Stock Purchase	ABC						⌄
Quantity Purchase	4.00						⬍

Purchase Date

January, 2018							
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	31	1	2	3	4	5	6
2	7	8	9	10	11	12	13
3	14	15	16	17	18	19	20
4	21	22	23	24	25	26	27
5	28	29	30	31	1	2	3
6	4	5	6	7	8	9	10

Total Stock Purchase   418.48

In this picture you will see the sell calendar with total Stock sell along with stock profit Which is -41.6, user can clearly see the profit

Sell Date

February, 2018							
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
5	28	29	30	31	1	2	3
6	4	5	6	7	8	9	10
7	11	12	13	14	15	16	17
8	18	19	20	21	22	23	24
9	25	26	27	28	1	2	3
10	4	5	6	7	8	9	10

Total Stock Sell   376.88
Total Stock Profit   -41.6

➢ **Change the Date of Sell :**

We have seen that changing the quantity will show it difference lets try to change the sell date and the program will execute the value accordingly, Our stock quantity will be the same but we are going to change the sell date.

We can see the clear change in profit

> ➢ **Change the Date of Purchase:**

Let's see the difference by change the purchase date and the program will execute the value accordingly, Our stock quantity will be the same but we are going to change the Purchase date,

| Muhammad khan_2974976_Assignment1 | ? | × |

Stock Purchase   ABC

Quantity Purchase   4.00

January, 2018

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	31	1	2	3	4	5	6
2	7	8	9	10	11	12	13
3	14	15	16	17	18	19	20
4	21	22	23	24	25	26	27
5	28	29	30	31	1	2	3
6	4	5	6	7	8	9	10

Purchase Date (row 3)

Total Stock Purchase   403.44

February, 2018

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
5	28	29	30	31	1	2	3
6	4	5	6	7	8	9	10
7	11	12	13	14	15	16	17
8	18	19	20	21	22	23	24
9	25	26	27	28	1	2	3
10	4	5	6	7	8	9	10

Sell Date

Total Stock Sell   376.88

Total Stock Profit   -26.56

User will have the different net profit due to the change of purchase date

Total Stock Profit   -26.56