ASIA PACIFIC INSTITUTE OF

INFORMATION TECHNOLOGY

Level 4

Group C (Group 4)

COMP40002

Software Development and Application Modelling - II
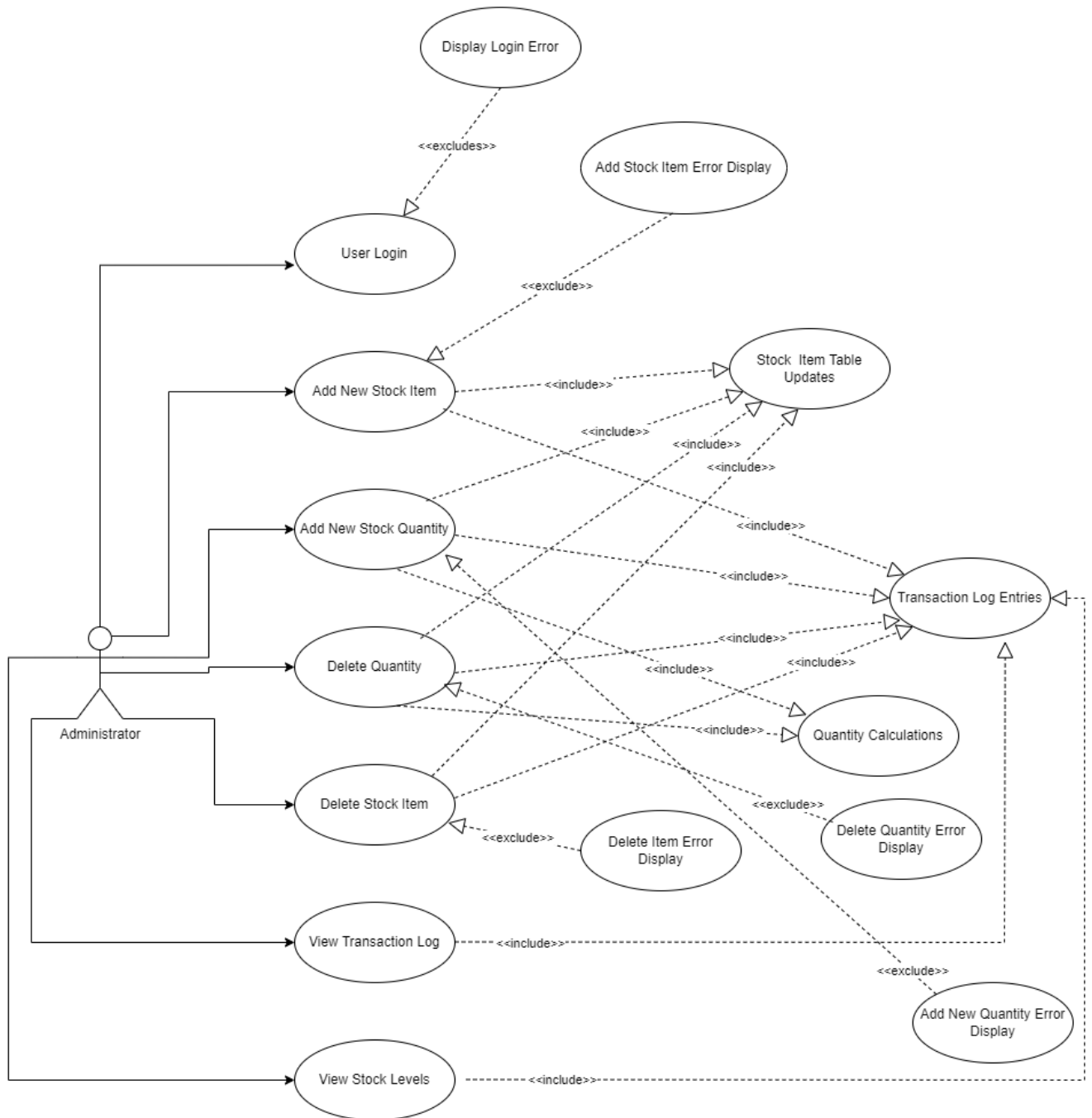
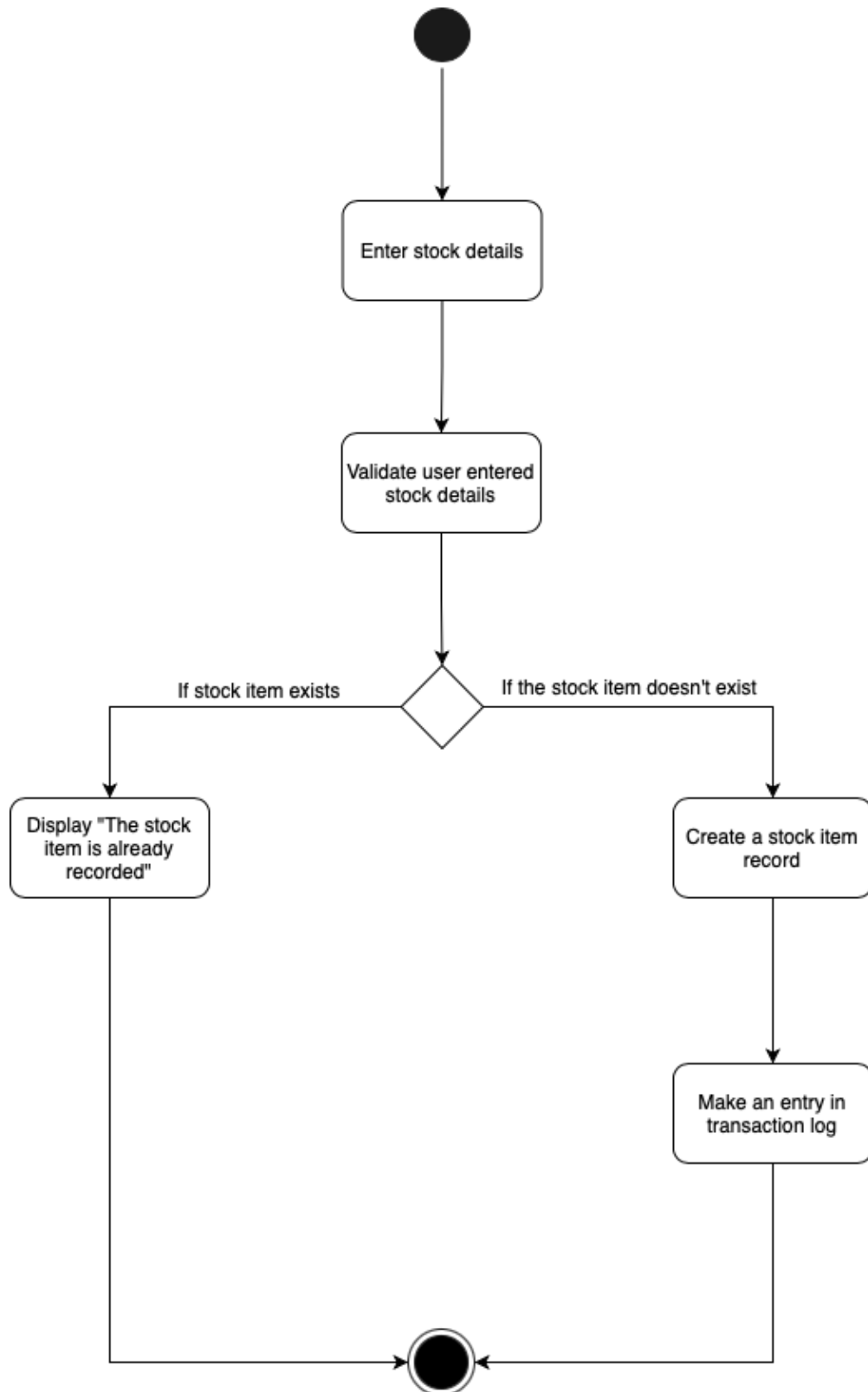Individual Assignment

Komuthu Mabulage – CB010187

Contents

1. Use Case Diagrams

2. Activity Diagrams
2.1. Add New Stock

```
                        ●

                  Enter stock details

                  Validate user entered
                  stock details

  If stock item exists      ◇      If the stock item doesn't exist

  Display "The stock                 Create a stock item
  item is already                    record
  recorded"
                                      Make an entry in
                                      transaction log

                        ◉
```

2.2. Add New Quantity


```
                    ●
                    |
                    ▼
         ┌─────────────────────┐
         │   Add New Quantity  │
         └─────────────────────┘
                    |
    ┌───────────────▼─────────┐
    │     Input Stock Details │
    └─────────────────────────┘
                    |
                    ▼
         ┌─────────────────────┐
         │ Validate Stock Details│
         └─────────────────────┘
                    |
                    ▼
                  ◇  Check if Stock is Exist
       Does Not Exist
    ┌──────────────────┐
    │ Stock Does Not   │
    │ Exist            │
    └──────────────────┘
                    | Stock Exist
                    ▼
         ┌─────────────────────┐
         │  Enter New Quantity │
         └─────────────────────┘
                    |
                    ▼
         ┌─────────────────────┐
         │  Quantity Update    │
         │  Successfully       │
         └─────────────────────┘
                    |
                    ▼
         ┌─────────────────────┐
         │  Update Database    │
         └─────────────────────┘
                    |
                    ▼
                    ◉
```
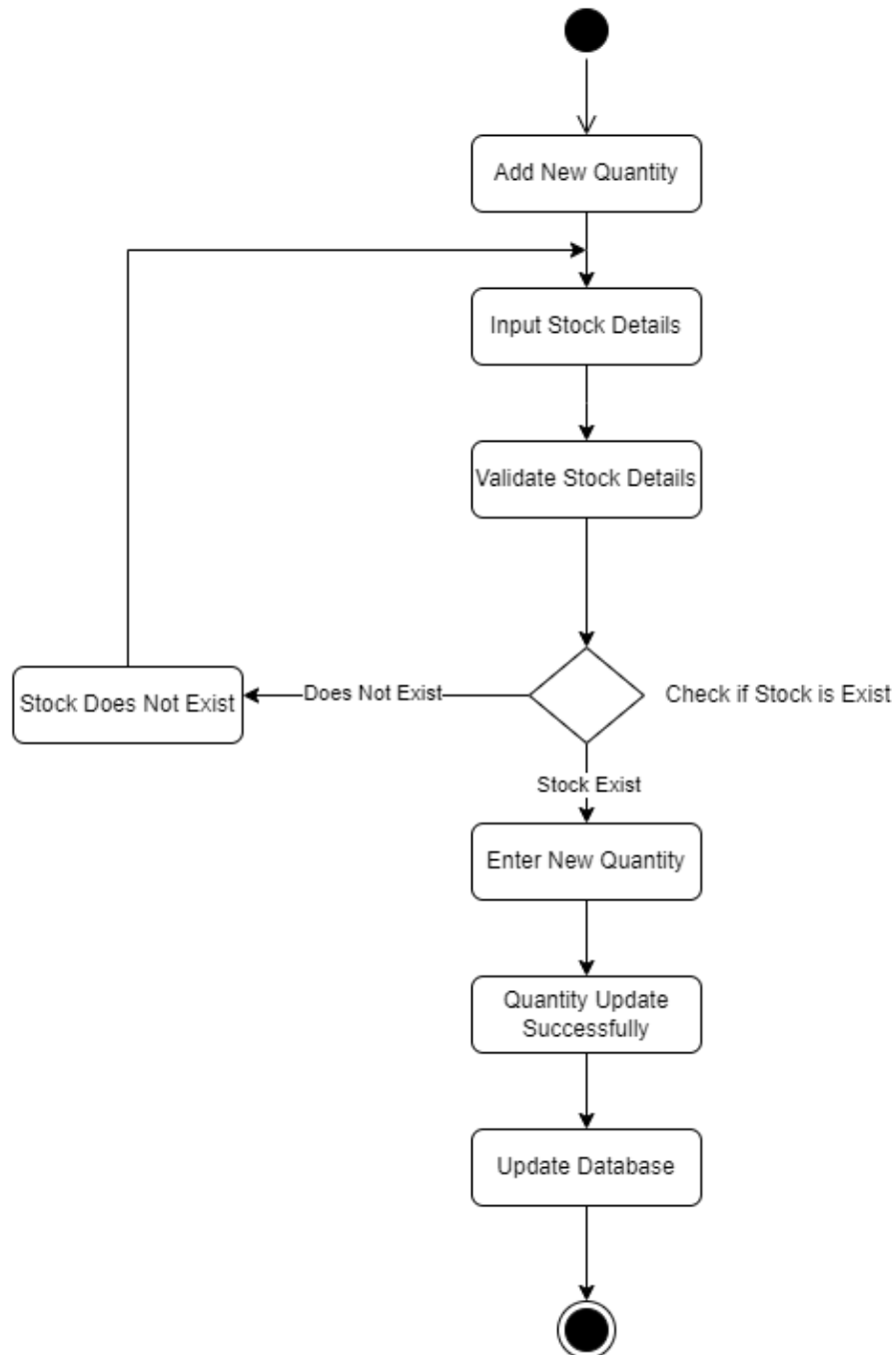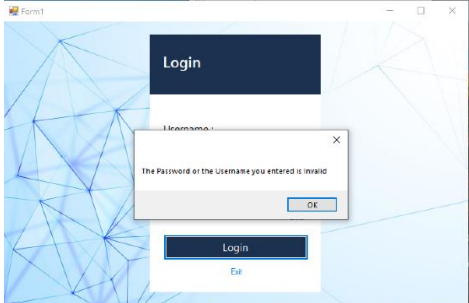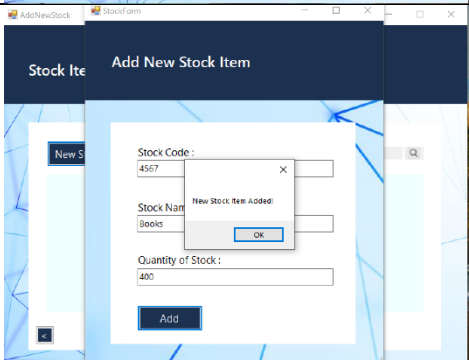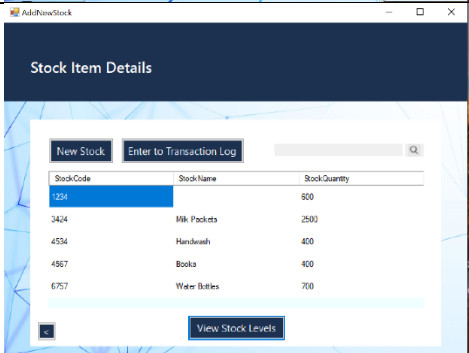
3. Sequences Diagrams
3.1. Add New Stock

Administrator   :StockItem   Database   :TransactionLog   Database

Enter stock item details
Stock Details - StockName,
StockCode,StockQuantity

Validate Stock item details

option   [If Item Stock already exist]

StockCode Exist

Error: Exceptional error

[If Item Stock does not exist]

StockCode Doesn't Exist

Store Stock Item Details

New Stock Added

Make an entry of the new stock item added. Entry Details: StockCode, StockName, StockQuantity, AddedDate

Store entry in transaction log database

Transaction Entry Added Successfully
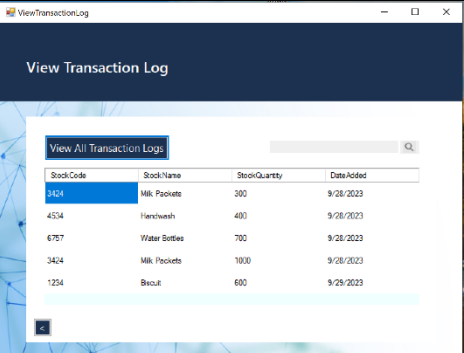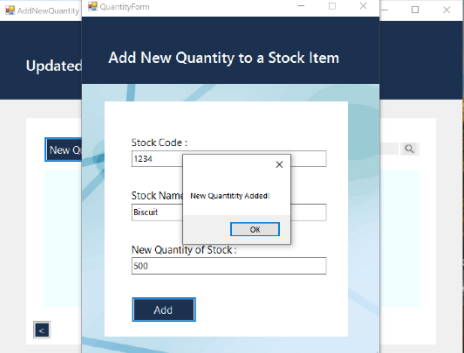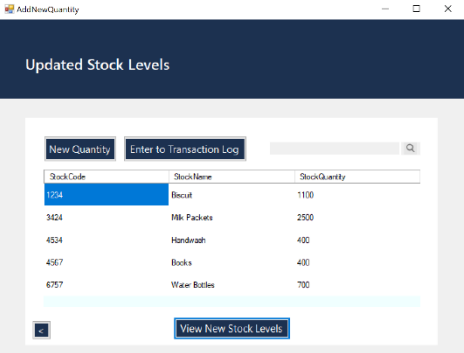
3.2. Add New Quantity

4. Class Diagrams
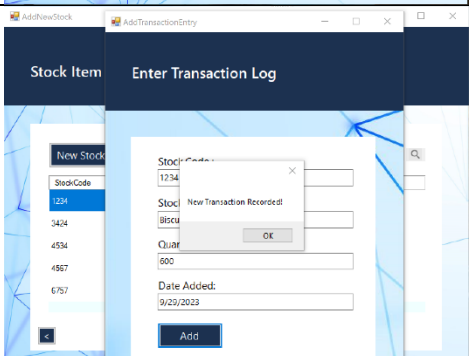
- Both the use cases are represented in a single Class Diagram
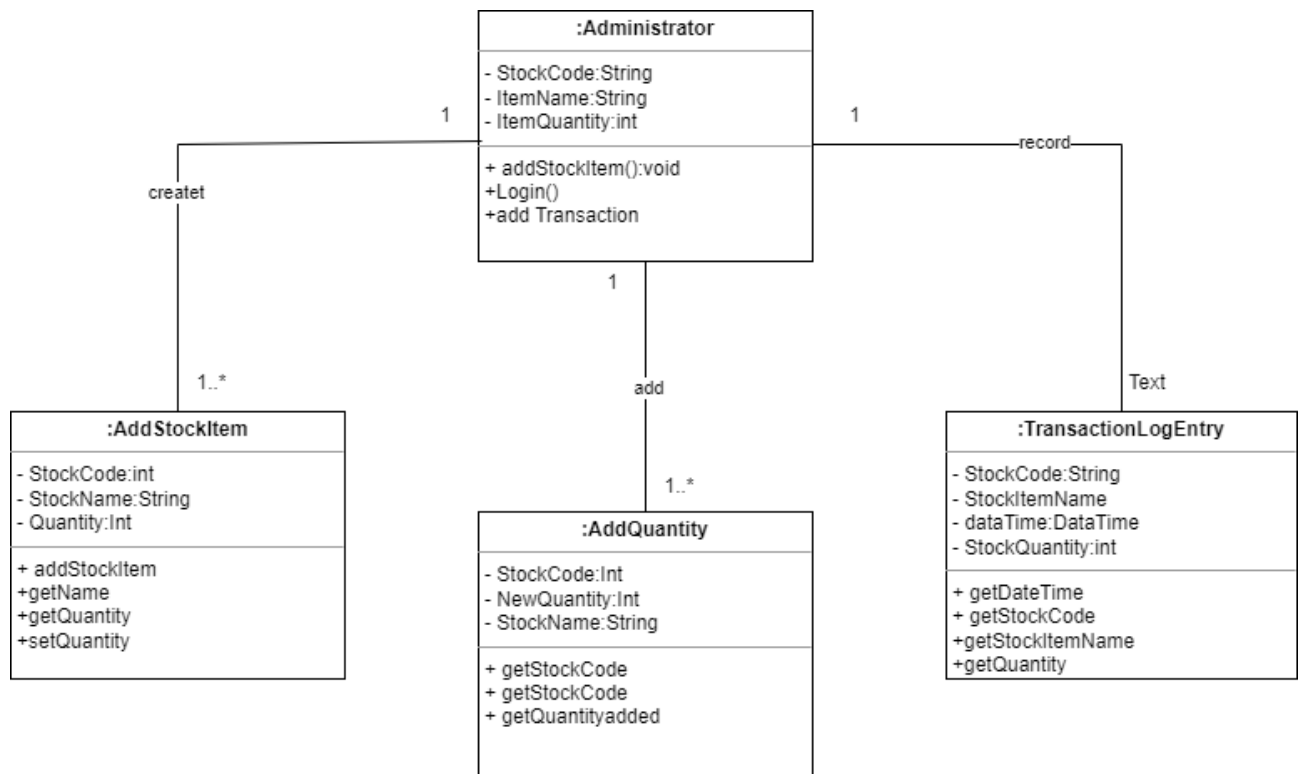
5. Test Cases

Test #	Test Case Description	Test Data	Assumed Result	Actual Result	Pass/Fail
#1	Login fail when the username or the password entered is incorrect.	Username: komuthu Password: komuthu123	An error message should appear when the entered username or password is incorrect.		Pass
#2	Add a New Stock Item	Stock Code: 4567 StockName: Books Quantity of Stock: 400	If the new record is added successfully a message is displayed saying "New Stock Item Added!"		Pass
#3	View the Added Stock Item	Click on the View Stock Levels button	When the button is clicked it displays all the items recorded in the database		Pass
#4	Add Transaction log Entry	Stock Code: 4567 StockName: Books Quantity of Stock: 400 Date Added: 9/29/2023	If the new entry is added successfully a message is displayed saying "New Transaction Recorded!"		Pass

#5	View Transaction Log	Click on the View All Transaction Logs button	When the button is clicked it displays all the items recorded in the database of Transaction Log.		Pass
#6	Add New Quantity	Stock Code: 4567 StockName: Books Quantity of Stock: 500	If the new quantity is added successfully a message is displayed saying "New Quantity Added!"		Pass
#7	View Updated Quantity	Click on the View New Stock Levels button	When the button is clicked it displays all the items recorded in the database and the updated quantities of stock.	The stock of Biscuit – 1234 is updated with 500 more so now the stock quantity is 1100.	Pass

6. Database Tables

SQLQuery3.sql - H...thu Mabulage (71))   SQLQuery2.sql - H...thu Mabulage (75))   **SQLQuery1.sql - H...thu Mabulage (72))**   HOME-PC.stockDetails - dbo.StockTable

```sql
SELECT TOP (1000) [StockCode]
      ,[StockName]
      ,[StockQuantity]
  FROM [stockDetails].[dbo].[StockTable]
```

100 %

Results | Messages

	StockCode	StockName	StockQuantity
1	1234	Biscuit	1100
2	3424	Milk Packets	2500
3	4534	Handwash	400
4	4567	Books	400
5	6757	Water Bottles	700

Query executed successfully.   HOME-PC (16.0 RTM)   HOME-PC\Komuthu Mabula...   stockDetails   00:00:00   5 rows

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SQLQuery3.sql - H...thu Mabulage (71))   **SQLQuery2.sql - H...thu Mabulage (75))**   SQLQuery1.sql - H...thu Mabulage (72))   HOME-PC.stockDetails - dbo.StockTable

```sql
SELECT TOP (1000) [StockCode]
      ,[StockName]
      ,[StockQuantity]
      ,[DateAdded]
  FROM [stockDetails].[dbo].[TransactionLog]
```

100 %

Results | Messages

	StockCode	StockName	StockQuantity	DateAdded
1	3424	Milk Packets	300	2023-09-28 00:00:00.000
2	4534	Handwash	400	2023-09-28 00:00:00.000
3	6757	Water Bottles	700	2023-09-28 00:00:00.000
4	3424	Milk Packets	1000	2023-09-28 00:00:00.000
5	1234	Biscuit	600	2023-09-29 00:00:00.000

Query executed successfully.   HOME-PC (16.0 RTM)   HOME-PC\Komuthu Mabula...   stockDetails   00:00:00   5 rows

```sql
SELECT TOP (1000) [StockCode]
      ,[StockName]
      ,[StockQuantity]
  FROM [stockDetails].[dbo].[StockTable]
```

100 %

▦ Results 🗊 Messages

	StockCode	StockName	StockQuantity
1	1234	Biscuit	1100
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