



AACS1084

Programming Concepts & Design II

Assignment

2022/2023

Programme : DCS Y1 S3

Tutorial Group : Group 3

Date Submitted to Tutor : 30/4/2023

Team Members:





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No .	Team Member	Task(s) Allocated	Overall Contribution (%)
1.	Oon Xiang Yu	Stock Information Module	28%
2.	Loke Kevin	Sales Information Module	24%
3.	Jerome Lu Zheng yao	Staff information Module	24%
4.	Goo Yong Kang	Member Information Module	24%

Coursework Declaration

We confirm that we have read and shall comply with all the terms and conditions of TAR University College's plagiarism policy.

We declare that this assignment is free from all forms of plagiarism and for all intents and purposes is our own properly derived work.

Signature	:	oxy	LK	jl	<i>yk</i>
Name	:	Oon Xiang Yu	Loke Kevin	Jerome Lu Zheng Yao	Goo Yong Kang
Photo	:				
Date	:	27/4/2023	27/4/2023	27/4/2023	27/4/2023

Assignment Evaluation Form

Student Name	Oon Xiang Yu	Loke Kevin	Goo Yong Kang	Jerome Lu Zheng Yao	
Module handled	Stock Module	Sales Module	Member Module	Staff Module	
Assessment Criteria	Marks Awarded				
Application of Programming Knowledge					
<u>Structures</u> • Basic + extra fields, • Use of nesting & arrays • Appropriate usage	12				
<u>File Processing</u> • successful processing • Validation of data • Appropriate usage	12				
<u>Functions</u> • 4 Basic file fns, • Extra file fns, useful/correct • Approp. menu design & process	12				
<u>Others</u> • Use of parameters; correct usage • Subsidiary working functions • Minimized global variables	12				
<u>Teamwork</u> • Main menu, logo etc • System/module integration • Report integration/content • Sharing of files, functions • Communication, cooperation	12				
<u>Program originality, efficiency and readability</u> • Innovation, uniqueness • Approp. logic structures • Code Readability	10				
<u>Report (indiv. section)</u> • Clarity of description • Narrated Screens for all processes (basic + extra)	20				
<u>Penalty - Late Submission</u> • 1-3 days late □ -10 • 4-7 days late □ -20 >7 days late => Total mark = 0					
Subtotal (i)					
<u>Presentation</u> • Organization, explanation • Enthusiasm, preparedness, attitude, understanding	10				

• Q&A handling	Subtotal (ii)						
	TOTAL MARK						

Note: In addition to the late penalty, marks will also be deducted under the different categories for other reasons, eg. bad programming practices, uncooperativeness, etc.

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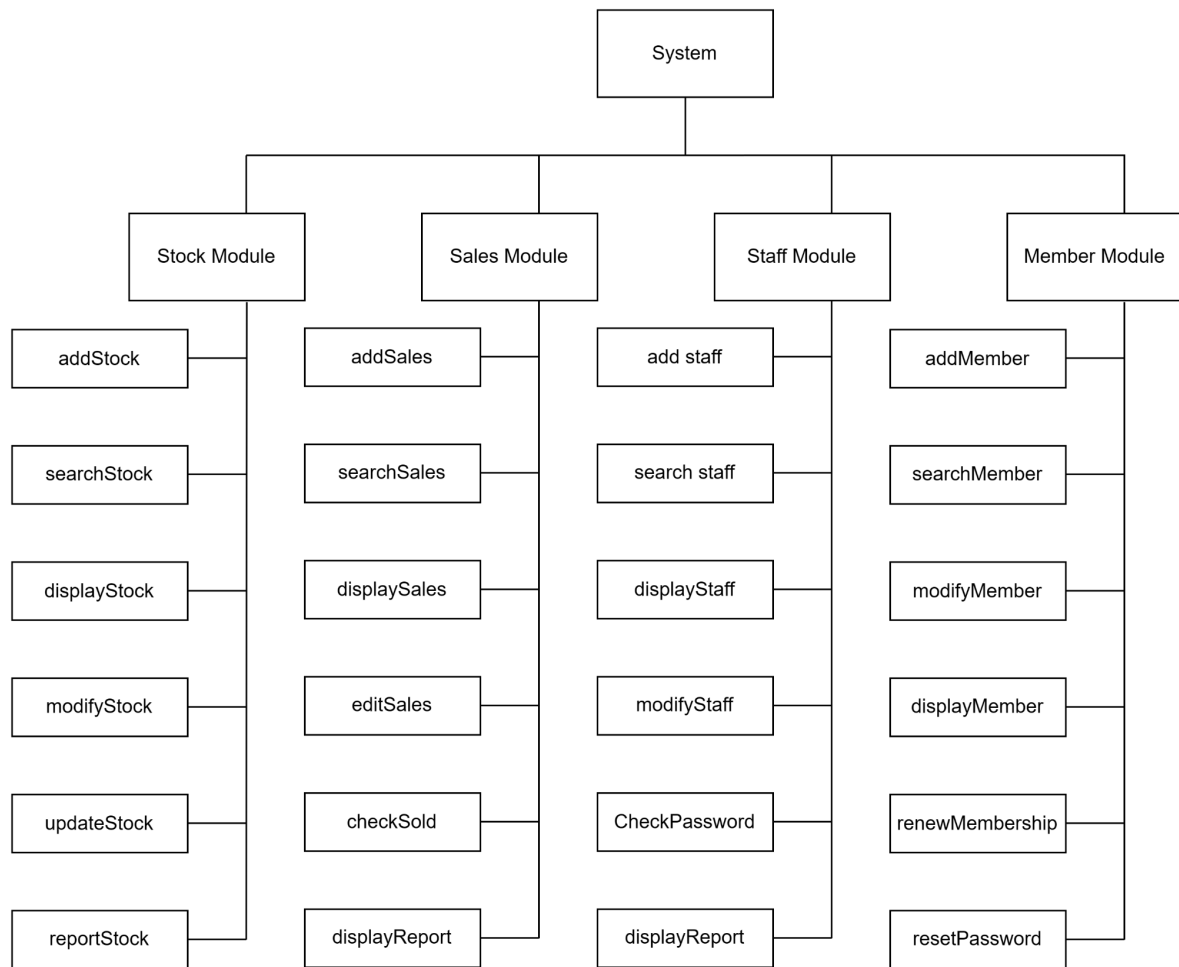
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1.0 Introduction

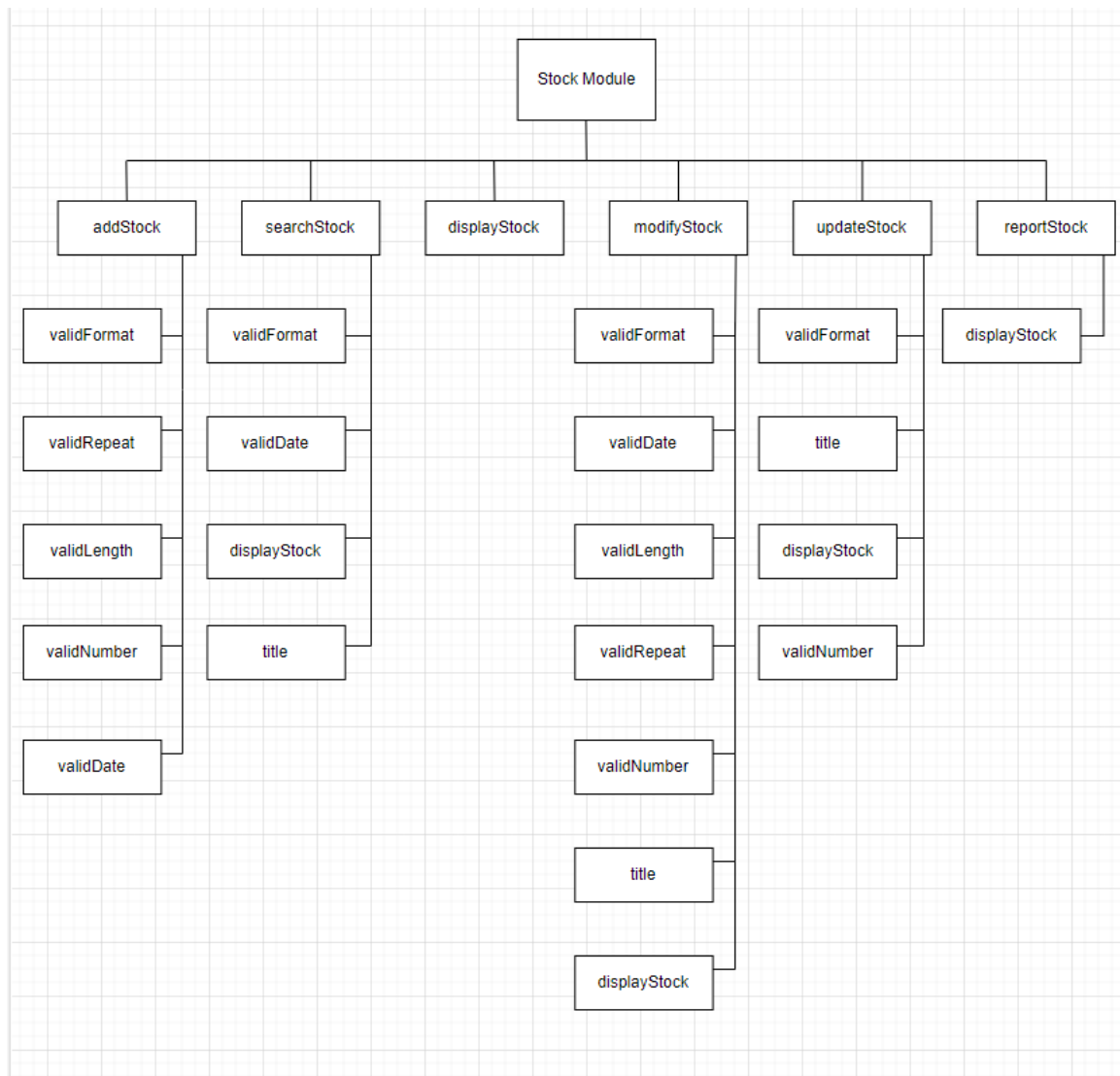
This system is designed to help our company, YY, operate better. Our system can record many types of records, such as stock records, member records, employee records, and transaction records. Our company has everything from electronics to food. This is the basic function of our company's system.

Our system is built by four basic modules, Sales information module, Staff information module, Member information module and Stock information module. Every module has different functions and they can manage different information in order to maintain the operation of the company.

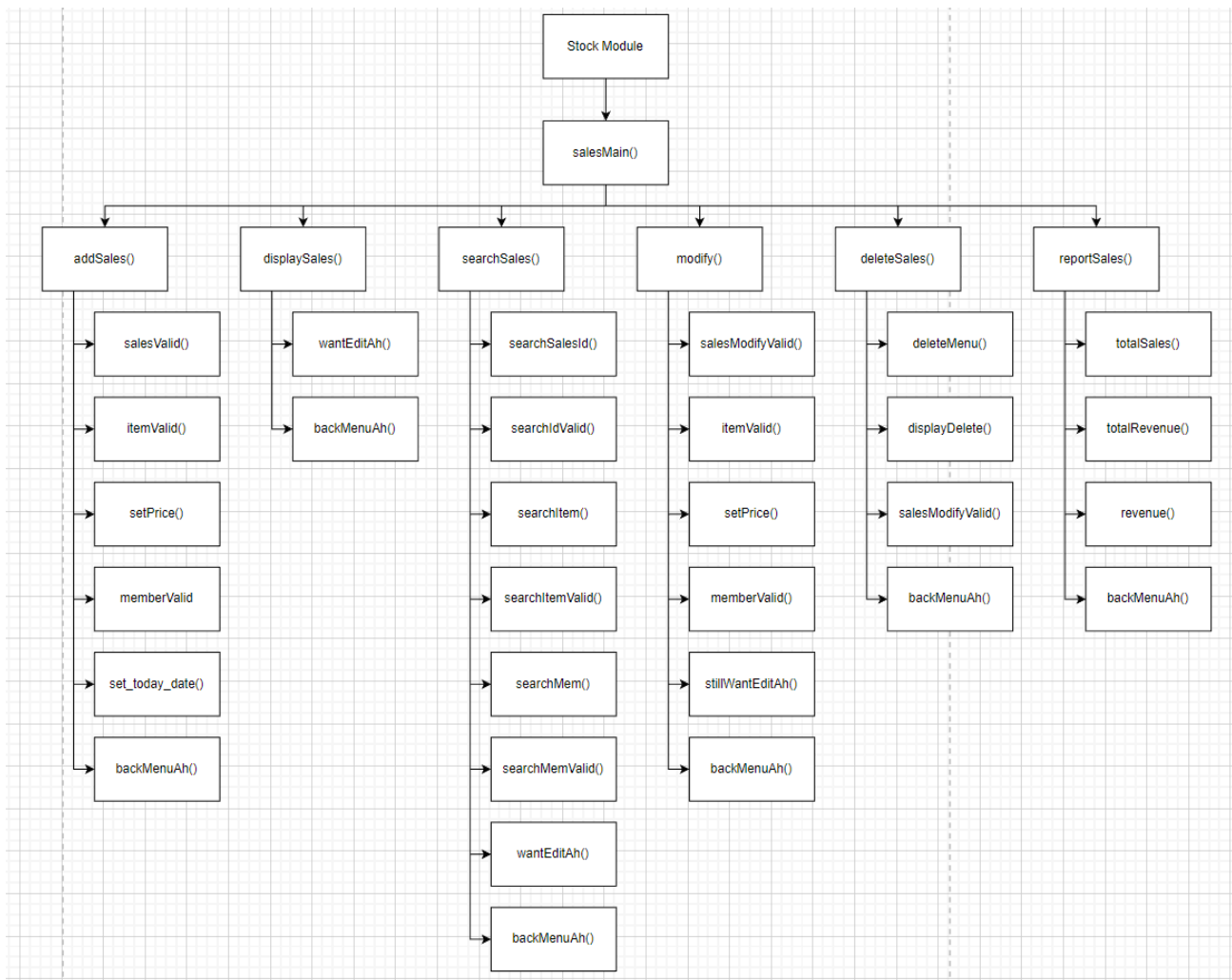
2.0 Overall System - Module Structure chart



2.1 Stock Module Structure Chart

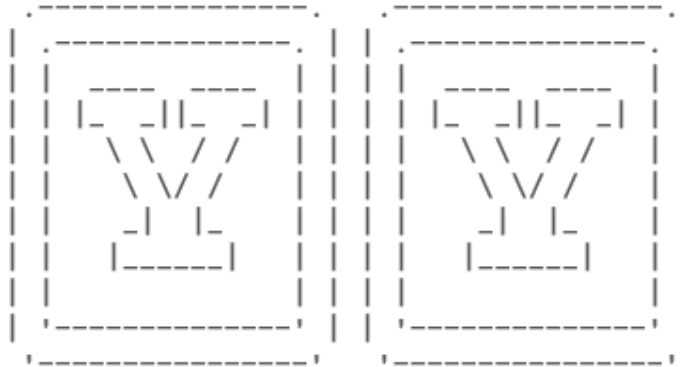


2.2 Sales Module Structure Chart



3.0 Main Screen Design

This is our home page, the huge YY is our company name and our logo. Users can select 4 modules from our system menu



1. Member Module
2. Sales Module
3. Staff Module
4. Stock Module
5. Exit

Please enter your option > |

4.0 System Modules

4.1 Stock Module by Oon Xiang Yu

4.1.1 Brief Description

4.1.1.1 addStock

The main purpose of this function is to add a new record to a binary file. Record will pass through many validations such as, valid the format of code, valid the length of name, valid if the number less than 0 and valid the date for leap year and non leap year. Besides that, the user can't add a new id if the id is the same with the existing id in the binary file.

4.1.1.2 searchStock

The main purpose of the search function is to find out the existing record in the binary file. Users can search the records by stock id, stock date and stock price. Example, the user can search the range of the stock then the system will show the stock record between this range.

4.1.1.3 displayStock

The main purpose of the display function is to display the record in a binary file. Users can see the record in alignment.

4.1.1.4 modifyStock

The main purpose of the modify function is to edit the record. Users can edit all the data except, stock id, quantity and status.

4.1.1.5 updateStock

The main purpose of the update stock is to update the status and quantity. Users can reorder or minus the quantity record. Besides that, users also can update the status to unavailable or available.

4.1.1.6 reportStock

The main purpose of the report function is to display the record in format and category all the records. Other than that, the report will calculate the total amount of records and show the time of the report generated.

4.1.2 Output & File Contents

4.1.2.1 stockMain

[illegible]

1. Add Record
2. Search Record
3. Modify Record
4. Display Record
5. Update Status
6. Report
7. Exit

```
Please enter your option :|
```

First this is the menu page of the stock module. Users can select 1-7 to go to the function he or she wants. If the user enters an unacceptable answer, the system will loop the menu again and send an error message.

4.1.2.2 addStock

```
=====
||                      ADD                      ||
=====
```

Please enter stock code (A0001):a0001

Stock Code is exist

Please enter stock code (A0001):1

Invalid format

Please enter stock code (A0001):a

Invalid format

Please enter stock code (A0001):a1234

Stock Code valid

Please enter stock name :

So,if you select 1 from the menu, you will come to the add function,the first part of the add function is adding the stock code, users can only add the code in correct format and the code doesn't exist

```
=====
||                      ADD                      ||
=====
```

Please enter stock code (A0001):a0001

Stock Code is exist

Please enter stock code (A0001):1

Invalid format

Please enter stock code (A0001):a

Invalid format

Please enter stock code (A0001):a1234

After that, users need to enter a stock name, users can only enter a name with only 20 spaces and a name does not exist in the file.

```
Please enter stock code (A0001):1
```

Invalid format

```
Please enter stock code (A0001):a
```

Invalid format

```
Please enter stock code (A0001):a1234
```

Stock Code valid

```
Please enter stock name :bread
```

Stock Name is exist

```
Please enter stock name :1234567789009877grdcvgt
```

Only 20 spaces are allow

```
Please enter stock name :coconut
```

Stock Name valid

```
Please enter stock quantity order :a
```

Alphabet and Symbol are not allow

```
Please enter stock quantity order :-1
```

Quantity must greater than 0

```
Please enter stock quantity order :1
```

Valid answer

```
Please enter stock quantity minimum level to reorder :a
```

Alphabet and Symbol are not allow

```
Please enter stock quantity minimum level to reorder :-1
```

Quantity must greater than 0

```
Please enter stock quantity minimum level to reorder :1
```

Valid answer

```
Please enter reorder stock quantity :2
```

Valid answer

```
Please enter stock price :we
```

Next is to enter the quantity order, minimum level and quantity reorder. Three validation is the same, the system is only allowed a number with greater than 0.

```
Please enter stock price :a
Price = 0.00
Are you sure? (y/n) >n

Price not added
Please enter stock price :-1
Price = -1.00
Are you sure? (y/n) >y

Price must greater than 0
Please enter stock price :1a
Price = 1.00
Are you sure? (y/n) >n

Price not added
Please enter stock price :10
Price = 10.00
Are you sure? (y/n) >y

Price is added
Please enter the date added or update record(dd/mm/yyyy) :|
```

Next is entering the price, the system can help you to filter out the alphabet and the system will only allow prices greater than 0.

```
Price is added
Please enter the date added or update record(dd/mm/yyyy) :1/1/1

Invalid date
Please enter the date added or update record(dd/mm/yyyy) :qwd

Invalid date
Please enter the date added or update record(dd/mm/yyyy) :32/2/2023

Invalid date
Please enter the date added or update record(dd/mm/yyyy) :21/13/2234

Invalid date
Please enter the date added or update record(dd/mm/yyyy) :28/4/2023

Valid date
Do you sure your record added into file (y/n):y
record added
Do you want to continue add record (y/n):n
```


Next is entering the date, the date has its own validation, it will check for invalid answers. The validation will valid the leap year,the month which only has 30 days. It will follow the real date in reality. Next the system will ask you to confirm if you want to add the record in our system, if you do the system will ask you if you want to continue to add,you can type y else you type n. Then you will return to the menu page.

4.1.2.3 searchStock

```
=====
||          SEARCH          ||
=====
```

1. Search by Stock ID
2. Search by Date
3. Search by Price
4. Exit

Please enter your Option :|

This is the search menu, you can choose what you want to search by.

Please enter your Option :1

Please enter stock ID :a1234

Valid code

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
a1234	coconut	1	1	2	10.00	28/04/2023	-

1. Search by Stock ID
2. Search by Date
3. Search by Price
4. Exit

Please enter your Option :2

Please enter the date added record(dd/mm/yyyy) :12/5/6745

Invalid format

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1235	qsdf	30	5	30	123.00	12/05/6745	-

1. Search by Stock ID
2. Search by Date
3. Search by Price
4. Exit

Please enter your Option :3

Please enter the price range

min >0

Price = 0.00

Are you sure? (y/n) >y

Price is added

max >200

Price = 200.00

Are you sure? (y/n) >y

Price is added

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1231	1	1	1	1	1.00	11/11/2111	-
a0001	bread	1	1	1	1.00	11/11/2000	-
a1234	coconut	1	1	2	10.00	28/04/2023	-
a2345	wert	100	20	100	34.00	12/03/2345	-
q1235	qsdf	30	5	30	123.00	12/05/6745	-
a2567	qdct	120	60	120	23.00	14/05/7234	-

1. Search by Stock ID
2. Search by Date
3. Search by Price
4. Exit

Users can search by three methods,these are all the examples.

Please enter stock ID :w1256

Valid code

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
------------	------------	----------	---------	---------	-------	------	--------

No record

1. Search by Stock ID
2. Search by Date
3. Search by Price
4. Exit

Please enter your Option :|

So this is the output of there is no record in the file.

4.1.2.4 modifyStock

```
=====
||          MODIFY          ||
=====

Please enter the stock code (stop) :q1231

STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
      q1231              1              1              1              1              1.00  11/11/2111  available

1. Stock name
2. Stock minimum quantity
3. Stock quantity reorder
4. Stock price
5. Stock date added record
6. Exit
Please select the data you want to modify :
```

Next is the modify function, users need to enter the stock id to check if there are any records in the file. Users are only allowed to modify the record in available status.

Please enter the stock code (stop) :q1231

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1231		1	1	1	1.00	11/11/2111	available

1. Stock name
2. Stock minimum quantity
3. Stock quantity reorder
4. Stock price
5. Stock date added record
6. Exit

Please select the data you want to modify :1
Please enter the new name :apple

Stock Name valid
Are you confirm to modify (y/n) ?y

Record change

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1231	apple	1	1	1	1.00	11/11/2111	available

1. Stock name
2. Stock minimum quantity
3. Stock quantity reorder
4. Stock price
5. Stock date added record
6. Exit

Please select the data you want to modify :2
Please enter new minimum quantity :10

Valid answer
Are you confirm to modify (y/n) ?y

Record change

Record change

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1231	apple	1	10	1	1.00	11/11/2111	available

1. Stock name
 2. Stock minimum quantity
 3. Stock quantity reorder
 4. Stock price
 5. Stock date added record
 6. Exit
 Please select the data you want to modify :5
 Please enter lastest date modify reocrd :28/4/2023

Valid date
 Are you confirm to modify (y/n) ?y

Record change

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1231	apple	1	10	1	1.00	28/04/2023	available

1. Stock name
 2. Stock minimum quantity
 3. Stock quantity reorder
 4. Stock price
 5. Stock date added record
 6. Exit
 Please select the data you want to modify :3
 Please enter new reorder quantity :20

Valid answer
 Are you confirm to modify (y/n) ?y

Record change

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1231	apple	1	10	20	1.00	28/04/2023	available

1. Stock name
 2. Stock minimum quantity
 3. Stock quantity reorder
 4. Stock price
 5. Stock date added record
 6. Exit

This is the step to modify the data, users can select which date field he or she wants to modify . System will do a last confirmation to ensure users are confirmed to modify this data.

4.1.2.5 displayStock

```

=====
||          DISPLAY          ||
=====

```

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
q1231	apple	1	10	20	1.00	28/04/2023	available
a0001	bread	1	1	1	1.00	11/11/2000	-
a1234	coconut	1	1	2	10.00	28/04/2023	-
a2345	wert	100	20	100	34.00	12/03/2345	-
q1235	qsdf	30	5	30	123.00	12/05/6745	-
a2567	qdct	120	60	120	23.00	14/05/7234	-
t6709	sxcv	20	4	20	20.00	23/04/2023	-
a1209	qxrb	30	5	30	12.00	06/07/2023	-
q4578	wshj	30	10	30	30.00	30/03/2023	-
w2356	wxct	120	30	120	45.00	23/04/2024	-

This is a display function, it will display all the records in the binary file in alignment.

4.1.2.5 updateStock

```
=====
||          UPDATE          ||
=====

Please enter the stock code (stop):a0001

STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
a0001          bread            1            1            1            1.00      11/11/2000      -

1. Update Status
2. Update Stock Quantity
3. Exit
Please select the data you want to update >1

1. available
2. unavailable
Please update the new status >1

Status change
Are you confirm to update (y/n) ?y

Record change

STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
a0001          bread            1            1            1            1.00      11/11/2000      available

1. Update Status
2. Update Stock Quantity
3. Exit
Please select the data you want to update >
```

This update function. As you can see, users can update the quantity or status. First users need to enter stock code. If the user enters “stop” this function will exit. The picture above is an update of the status.

reorder change

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
a0001	bread	1	1	1	1.00	11/11/2000	available

1. Update Status
2. Update Stock Quantity
3. Exit

Please select the data you want to update >2

1. Stock reorder
2. Stock deducted
3. Exit

please select >1

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
a0001	bread	1	1	1	1.00	11/11/2000	available

Are you confirm to reorder (y/n) >y

Reorder success

1. Stock reorder
2. Stock deducted
3. Exit

please select >2

STOCK CODE	STOCK NAME	QUANTITY	MINIMUM	REORDER	PRICE	DATE	STATUS
a0001	bread	2	1	1	1.00	11/11/2000	available

Please enter the quantity that we have sold >1

Valid answer

Are you confirm to update (y/n) >y

Stock Updated

1. Stock reorder
2. Stock deducted
3. Exit

please select >

Next users can update the quantity, there are 2 options, 1 is reorder and 2 is deducted. users can choose either one. if users choose 1, the quantity will auto reorder the stock. If users select 2, users need to enter a number that passes the validation to be deducted.

4.1.2.6 reportStock

```

=====
||                REPORT                ||
=====

                                LowStock
=====
STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
q1231            apple              1              10             20           1.00    28/04/2023    available
=====

                                Stock
=====
STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
a0001            bread              1              1              1           1.00    11/11/2000    available
a1234            coconut            1              1              2           10.00    28/04/2023    unavailable
a2345            wert             100            20            100          34.00    12/03/2345    -
q1235            qsdf              30             5              30          123.00    12/05/6745    -
a2567            qdct             120            60            120          23.00    14/05/7234    -
t6709            sxcv              20             4              20          20.00    23/04/2023    -
a1209            qxrb              30             5              30          12.00    06/07/2023    -
q4578            wshj              30            10             30          30.00    30/03/2023    -
w2356            wxct             120            30            120          45.00    23/04/2024    -
=====

                                Unavailable
=====
STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
a1234            coconut            1              1              2           10.00    28/04/2023    unavailable
=====

                                Available
=====
STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
q1231            apple              1              10             20           1.00    28/04/2023    available
a0001            bread              1              1              1           1.00    11/11/2000    available
=====

                                Status havent update
=====
STOCK CODE      STOCK NAME      QUANTITY      MINIMUM      REORDER      PRICE      DATE      STATUS
=====
a2345            wert             100            20            100          34.00    12/03/2345    -
q1235            qsdf              30             5              30          123.00    12/05/6745    -
a2567            qdct             120            60            120          23.00    14/05/7234    -
t6709            sxcv              20             4              20          20.00    23/04/2023    -
a1209            qxrb              30             5              30          12.00    06/07/2023    -
q4578            wshj              30            10             30          30.00    30/03/2023    -
w2356            wxct             120            30            120          45.00    23/04/2024    -
=====

Total Stock Record = 10

Report generate at 2023-04-29 09:39:08

Press any key to continue . . . |

```

The pictures above are my report function. It will show out the stock below and above the minimum level. Besides that, it will be categorized into three tables for the status. Furthermore, the report will also show the total record in my binary file and the local current time of this report generated.

4.2 Sales Module By Loke Kevin

4.2.1 Brief Description

4.2.1.1 addSales

The main function of this function is to add in the sales record that was made by our company and write it into the Sales.txt file. And of course the record will be checked by many validation functions such as checking the user input if there already is a record inside the text file and checking the length of the user input to make sure all of the input is under the length we set. Other than that, when the user enter the item code and member ID it will have a function to check the record in other module binary file and will deny the user input if they enter the code and ID is not inside the file. If the input is correct it will have a function to find the same item code in the stock module binary file and get the price. After the user input the record successfully it will ask the user whether they want to continue to add or back to the menu.

4.2.1.2 displaySales

The main function of this function is to display all sales records that user input. It reads all the info from the Sales.txt file and displays it out clearly. After displaying all the records it will ask the user whether the user wants to modify the record or back to the menu.

4.2.1.3 searchSales

The main function of this function is to let users search according to the field they want, for example searching by Sales ID, Item Code or Member ID by entering the same ID or Code. This function have validation that will compare the user input with the Sales.txt file to check whether the record is exist or not. After user input the valid ID or Code it will display the all the record that according to what the user input. After displaying the record it will ask the user whether the user wants to modify the record or back to the menu.

4.2.1.4 modifySales

The main function of this function is to let users modify the record that they feel that the user input wrongly. This function has a validation function that checks if the Sales ID is already in use, and of course checking the length too. Other than that, this function has another validation function that checks Item Code and Member ID by scanning the binary file from stock module and member module to check whether the Code or ID is valid or not. Lastly, if the user input the correct item code the price will automatically modify accordingly.

4.2.1.5 deleteSales

The main function of this function is to let users delete the record they don't want or they wrote wrongly. From the first it will ask the user whether they want to have a look on the record or direct delete. If the users choose to delete it will let users enter the Sales ID they wanted to delete, after they entered the Sales ID it will have a validation that checks whether the Sales ID exists or not. After the validation it will display the record that user input and ask the user that they confirm whether to delete the record or not. Lastly, when the record is deleted successfully it will ask the user whether they want to continue to delete or back to the menu.

4.2.1.6 salesReport

The main function of this function is to count the revenue and total up the revenue and the total sales and make a report by displaying the whole record clearly and this is to let our company observe the record and make marketing strategy decisions accordingly.

4.2.2 Output & File Contents

```
----- Welcome To Sales Information -----  
  
Please Choose a field to enter >>>  
1. Add Sales Record  
2. Display Sales Record  
3. Search For Sales Record  
4. Edit Sales Record  
5. Delete Sales Record  
6. Sales Report  
7. Exit Program  
  
Please Choose your option : █
```

Firstly, the sales menu will have 7 options to let the user choose by entering the number. If the user entered 1 it will lead him to the addSales function. If the user entered 2 it will lead him to the displaySales function. If the user entered 3 it will lead him to the searchSales function. If the user entered 4 it will lead him to the modifySales function. If the user entered 5 it will lead him to the deleteSales function. If the user entered 6 it will lead him to the salesReport function. Lastly if the user entered 7 it will exit the whole program.

```
Please enter the Sales ID (S101)    > S101
The Sales ID had been used !!
Please enter the Sales ID (S101)    > S1000
The Sales ID is too long !!
Please enter the Sales ID (S101)    > S117
Please enter the Item Code (V1001) > V1002
Item Code not found in the server !!
Please enter the Item Code (V1001) > V1001
Please enter Member ID (MEM0001)   > MEM0003
Member ID not found in the server !!
Please enter Member ID (MEM0001)   > MEM0001
Please enter Item Quantity          > 20

Data Insert Success !!

Do you want to continue to add?
y = yes , n = no >
```

After entering the addSales function it will let you enter all the information accordingly and it will have validation that checks and it will process if it is correct, and will let the user re-enter if the input is wrong.

```

Do you want to continue to add?
y = yes , n = no > n

Do you want to back to Main Menu ?
y = yes, n = no > y

----- Welcome To Sales Information -----

Please Choose a field to enter >>>
1. Add Sales Record
2. Display Sales Record
3. Search For Sales Record
4. Edit Sales Record
5. Delete Sales Record
6. Sales Report
7. Exit Program

Please Choose your option :

```

The function will ask you whether you want to continue to add or not and it will ask whether the user wants to go back to the main menu or exit.

```

Please Choose your option : 2
Sales Id      Item Code      Quantity      Price(RM)      Member ID      Date
-----
S101          V1001          20            30.00          MEM0001        15/3/2023
S102          V1003          20            30.00          MEM0002        17/3/2023
S103          V1001          20            50.00          MEM0004        18/3/2023
S104          V1003          20            80.00          MEM0002        18/3/2023
S105          V1003          30            30.00          MEM0002        20/3/2023
S106          V1003          30            30.00          MEM0002        22/3/2023
S107          V1003          30            30.00          MEM0002        25/3/2023
S108          V1003          30            20.00          MEM0002        6/4/2023
S109          V1003          30            20.00          MEM0002        8/4/2023
S110          V1002          30            20.00          MEM0002        10/4/2023
S112          V1002          30            20.00          MEM0002        18/4/2023
S111          V1001          10            30.00          MEM0001        21/4/2023
S113          V1001          20            30.00          MEM0002        21/4/2023
S116          V1001          20            50.00          MEM0001        24/4/2023
S117          V1001          20            40.00          MEM0001        27/4/2023

Do you want to Edit the Data?
y = yes , n = no >

```

This is the output of the displaySales function that shows all the input that users add by using the addSales function. After displaying all the records it will ask whether the user wants to edit the data or not if the user chooses yes, it will lead the user to the modifySales function.

```

Please Choose your option : 3

Choose one category to search >>>>
1. Sales ID
2. Item Code
3. Member ID
4. Back to Main Menu

Please enter your choice >

```

This is the output of the searchSales function that has 4 categories to let the user choose to search for.

```

Please enter Sales ID to search (S101) > S101

.....SEARCH RESULT.....
Sales Id      Item Code      Quantity      Price(RM)      Member ID      Date
S101          V1001           20            30.00          MEM0001       15/3/2023

Do you want to Edit the Data?
y = yes , n = no >

```

```

Please enter Item Code to search (V1001) > V1003

.....SEARCH RESULT.....
Sales Id      Item Code      Quantity      Price(RM)      Member ID      Date
S102          V1003           20            30.00          MEM0002       17/3/2023
S104          V1003           20            80.00          MEM0002       18/3/2023
S105          V1003           30            30.00          MEM0002       20/3/2023
S106          V1003           30            30.00          MEM0002       22/3/2023
S107          V1003           30            30.00          MEM0002       25/3/2023
S108          V1003           30            20.00          MEM0002       6/4/2023
S109          V1003           30            20.00          MEM0002       8/4/2023

Do you want to Edit the Data?
v = yes , n = no > _

```

When the user enters the Sales ID, Item Code or the Member ID it will display all the results in the Sales.txt file that the user searches for. After searching it will ask the user to see whether they want to edit the data or not.

```

Please enter the Sales ID (S101) to get the Data > S1001

Sales Id not found in the server !!

Please enter the Sales ID (S101) to get the Data > S101

.....DATA RETRIEVED.....
Sales Id      Item Code      Quantity      Price(RM)      Member ID      Date
S101          V1001          20            30.00          MEM0001        15/3/2023

.....Please choose the field you want to edit.....
1. Item Code
2. Quantity
3. Member ID
4. Return to Main Menu

Please enter your choice >>>

```

This is the output from the modifySales function. Firstly, it will let you enter the Sales Id that the user wants to edit and have the validation too. After the user enters the Sales ID successfully it will display the record so can let the user more easily depend on what they want to edit. Continue, after displaying the record it will have 3 fields that the user can choose to edit for.

```

.....Please choose the field you want to edit.....
1. Item Code
2. Quantity
3. Member ID
4. Return to Main Menu

Please enter your choice >>> 1

Please enter the new Item Code (V1001) >>> V1002

Item Code not found in the server !!

Please enter the new Item Code (V1001) >>> V1001
Confirm Change? (y/n) : y

Data Changed Success !!

Do you still want to Edit the Data ?
y = yes , n = no > _

```

After the user chooses the field that they want to edit it will let the user enter the new Code or ID that user wants to change to. For Item Code and Member ID it will have the validation to check from the binary file that is located in Stock Module and Member Module. Lastly it will ask to let the user confirm the changes.

DELETE SALES RECORD >>>>

1. Show Record

2. Delete Record

3. Return to Main Menu

Please enter your choice >

This is the output from the deleteSales function that lets the user choose whether to display the record first or let the user direct to delete the record.

Please enter your choice > 1

Sales Id	Item Code	Quantity	Price(RM)	Member ID	Date
S101	V1001	20	40.00	MEM0001	15/3/2023
S102	V1003	20	30.00	MEM0002	17/3/2023
S103	V1001	20	50.00	MEM0004	18/3/2023
S104	V1003	20	80.00	MEM0002	18/3/2023
S105	V1003	30	30.00	MEM0002	20/3/2023
S106	V1003	30	30.00	MEM0002	22/3/2023
S107	V1003	30	30.00	MEM0002	25/3/2023
S108	V1003	30	20.00	MEM0002	6/4/2023
S109	V1003	30	20.00	MEM0002	8/4/2023
S110	V1002	30	20.00	MEM0002	10/4/2023
S112	V1002	30	20.00	MEM0002	18/4/2023
S111	V1001	10	30.00	MEM0001	21/4/2023
S113	V1001	20	30.00	MEM0002	21/4/2023
S116	V1001	20	50.00	MEM0001	24/4/2023
S117	V1001	20	40.00	MEM0001	27/4/2023

Do you want to Delete any Data?

y = yes , n = no >

When the user chooses to show a record, it will display all the records the same functioning as the displaySales and the only difference is that it will ask the user whether they want to delete any data or not.

Please enter the Sales ID (S101) that you want to delete > S117

.....DATA RETRIEVED.....

Sales Id	Item Code	Quantity	Price(RM)	Member ID	Date
S117	V1001	20	40.00	MEM0001	27/4/2023

Do you confirm you want to delete?

y = yes , n = no > y

Sales Record Deleted !!

Do you still want continue to delete?

y = yes , n = no >

When the user chooses to delete the record, it will ask the user to enter the Sales ID that the user wants to delete. After the user enters the ID it will have a validation function to check whether the Sales ID exists in the Sales.txt file. After displaying the data it will come out with the confirmation message to let the user confirm doing it.

SALES REPORT						
Sales Id	Item Code	Quantity	Price(RM)	Member ID	Date	Revenue
S101	V1001	20	40.00	MEM0001	15/3/2023	800.00
S102	V1003	20	30.00	MEM0002	17/3/2023	600.00
S103	V1001	20	50.00	MEM0004	18/3/2023	1000.00
S104	V1003	20	80.00	MEM0002	18/3/2023	1600.00
S105	V1003	30	30.00	MEM0002	20/3/2023	900.00
S106	V1003	30	30.00	MEM0002	22/3/2023	900.00
S107	V1003	30	30.00	MEM0002	25/3/2023	900.00
S108	V1003	30	20.00	MEM0002	6/4/2023	600.00
S109	V1003	30	20.00	MEM0002	8/4/2023	600.00
S110	V1002	30	20.00	MEM0002	10/4/2023	600.00
S112	V1002	30	20.00	MEM0002	18/4/2023	600.00
S111	V1001	10	30.00	MEM0001	21/4/2023	300.00
S113	V1001	20	30.00	MEM0002	21/4/2023	600.00
S116	V1001	20	50.00	MEM0001	24/4/2023	1000.00
Total Revenue =						11000.00
Total Sales =						14

Lastly is the salesReport function. This shows all the records that users input and calculate the revenue of each sales and displaying it on the right side of the report. After all the records have come out it will display the total revenue and the total sales of the company made all over.

4.3 Member Module by Goo Yong Kang

4.3.1 Brief Description

The module has 6 functions in total for staff to manage member's information and data. The 6 functions are addMember, searchMember, modifyMember, displayMember, renewMembership and resetPassword. The module allows users to add, search, modify and display the member information. Users can also use the external functions to do modification easily such as renewMembership and resetPassword. Every input is validated to ensure the user enters valid data.

4.3.1.1 addMember

addMember function allows users to add new members to the MemberList.dat file. Users have to enter member's name, ID, gender, password and membership type with specific format to add a member. If users entered an invalid input, the function will prompt users to enter again until the input is matched with the format.

4.3.1.2 searchMember

searchMember function allows users to search the member by name, ID, gender, membership type and membership expiry date. If the match is found, the result will be shown. Otherwise, it will show no result and return to the previous function. Users can enter '99' to return to the previous function if needed.

4.3.1.3 modifyMember

modifyMember function allows users to modify member's name, gender and membership type by entering member's ID. Users can enter '99' to return to the previous function if needed.

4.3.1.4 displayMember

displayMember function reads the MemberList.dat file and shows the member information with name, ID, gender, membership type and membership expiry date to the users.

4.3.1.5 renewMembership

renewMembership functions allows users to extend the membership period by 5 years automatically by entering member's ID. If the member ID is not found, it will show no result and return to the previous function.

4.3.1.6 resetPassword

resetPassword function allows users to change member's password by entering member's ID. Users have to enter the current password in order to reset the password. Users can enter '99' to return to the previous function if needed.

4.3.2 Outputs & File Contents

```
Member Module
-----
1. Add Member
2. Search Member
3. Modify Member
4. Display Member
5. Renew Membership
6. Reset Password
7. Exit

Enter your selection from the options above: 4

Member List
-----
Member Name Member ID Gender Membership Type Membership Expiry date
-----
Ah Bu MEM00001 M N 22/04/2028
Xiao Mei MEM00002 F P 22/04/2028
Xiao Chou MEM00003 M P 27/04/2028
Alishan MEM00004 M N 27/04/2028

Member Module
-----
1. Add Member
2. Search Member
3. Modify Member
4. Display Member
5. Renew Membership
6. Reset Password
7. Exit

Enter your selection from the options above: |
```

At the beginning of the module, it shows the menu with 7 options. The option '4' is entered so it runs the forth function, shows the member list and returns to the previous function, the main menu.

```
Enter your selection from the options above: 1

Add Member
-----
Enter member name: Mei Nv
Enter member ID (Format-MEM00001): MEM
Member ID must follow the format.

Enter member ID (Format-MEM00001): MEM00005
Enter member gender (M-Male, F-Female): F
Enter password (Min-8, Max-30): WoZuiMei
Enter membership type (N-Normal, P-Premium): P

Member added successfully.

Member Module
-----
1. Add Member
2. Search Member
3. Modify Member
4. Display Member
5. Renew Membership
6. Reset Password
7. Exit

Enter your selection from the options above: 4

Member List
-----
Member Name Member ID Gender Membership Type Membership Expiry date
-----
Ah Bu MEM00001 M N 22/04/2028
Xiao Mei MEM00002 F P 22/04/2028
Xiao Chou MEM00003 M P 27/04/2028
Alishan MEM00004 M N 27/04/2028
Mei Nv MEM00005 F P 27/04/2028
```

Next, the user chose to add a member. A member's information is entered and added to the member list successfully. It will also prompt the user to enter again if any invalid input is detected. The member list is displayed and it shows the record of the new member.

```

Member Module
-----
1. Add Member
2. Search Member
3. Modify Member
4. Display Member
5. Renew Membership
6. Reset Password
7. Exit

Enter your selection from the options above: 3
Enter member ID to modify: MEM00003

Member information:
1. Name: Xiao Chou
2. Gender: M
3. Membership status: P
99. Return

Enter number to modify: 1
Enter new name: Xiao Shuai
Are you sure to change your name to Xiao Shuai (Y-Yes, N-No)? Y
Name change successful.

Member information:
1. Name: Xiao Shuai
2. Gender: M
3. Membership status: P
99. Return

Enter number to modify: |

```

Now, the user wants to modify the member information. A member ID is entered and it shows the member information available for the user to modify. It will ask the user to confirm the modification before changing the information.

```

Enter number to modify: 99
Returning...

Member Module
-----
1. Add Member
2. Search Member
3. Modify Member
4. Display Member
5. Renew Membership
6. Reset Password
7. Exit

Enter your selection from the options above: 4

Member List
-----

```

Member Name	Member ID	Gender	Membership Type	Membership Expiry date
Ah Bu	MEM00001	M	N	22/04/2028
Xiao Mei	MEM00002	F	P	22/04/2028
Xiao Shuai	MEM00003	M	P	27/04/2028
Alishan	MEM00004	M	N	27/04/2028
Mei Nv	MEM00005	F	P	27/04/2028

```

Member Module
-----
1. Add Member
2. Search Member
3. Modify Member
4. Display Member
5. Renew Membership
6. Reset Password
7. Exit

Enter your selection from the options above: |

```

The user entered '99' to return to the previous function. The member list is displayed again and shows the record of the member being modified.

4.4 Staff Module by Jerome Lu Zheng Yao

4.4.1 Brief description

4.4.1.1 add Staff

The main purpose of this function is to add a new record to a text file. It records the staff name, personal password, recovery email, position and the role of the staff member.

4.4.1.2 searchStaff

The main purpose of this function is to find the information of a staff member such as recovery email, position and the role by using the Staff ID.

4.4.1.3 displayStaff

The main purpose of this function is to display the record of the staff member such as the StaffID, Name, Position, Role, Recovery Email and the password. To open this function, the user has to type the designated password to open it. This is because it contains all the information of a staff member.

4.4.1.4 modifyStaff

The main purpose of this function is to edit the record of the staff member such as the Name, Position, Role, Recovery Email and Password.

4.4.1.5 checkPassword

The main purpose of this function is to let the user check his or her own password by using his or her own recovery Email and Staff ID.

4.4.1.6 ReportStaff

Different with the displayStaff function, this function just shows a staff member id, name, position and the role. The user just needs to choose this function then the info will show in a proper method which is in the tabular form.

4.4.2 Outputs & File Content

```
=== YY Company Staff Information System ===

Menu:
1. Add Staff
2. Display Staff
3. Generate Report
4. Edit Staff Information
5. Check Password Account
6. Search Staff
7. Exit
Enter your choice (1-7): 2
Enter password to display staff list: 07151213
=== Staff List ===
```

ID	Name	Position	Role	Recovery Email	Password
A001	jerome	it	normalstaff	jeromelu@gmail.com	12345667
A002	ling	market	leader	ling@gmail.com	12345600
A003	kangyong	it	normalstaff	goo@gmail.com	66712345
A004	kelvin	it	leader	kelvin@gmail.com	12340000
A005	Oscar	it	normalstaff	Oscar@gmail.com	12341234
A006	Alex	customerservice	leader	alex@gmail.com	12340909
A007	Jimmy	finnacie	normalstaff	jimmy@gmail.com	12349090
A008	jean	market	normalstaff	laujean@gmail.com	34567890
A009	ali	sale	normalstaff	ali@gmail.com	44455567
A010	loke	it	normalstaff	loke@gmail.com	00000000
A010	loke	it	normalstaff	loke@gmail.com	00000000

First, I am going to show you about the display staff function. As you can see that they are about 10 row of record of different staff with the Staff id, name, position, role, recovery email and the password. Before to start the function first, you have to key the password which is the 07151213 to able to see the record of the staff. The reason that I doing it is because it contain all of the related info of a staff so this function is just for only few people to run such as manager.

```
Menu:
1. Add Staff
2. Display Staff
3. Generate Report
4. Edit Staff Information
5. Check Password Account
6. Search Staff
7. Exit
Enter your choice (1-7): 1
Enter id : A011
Enter Staff Name: lau
Enter Password (minimum 8 characters): 12312312
Enter Recovery Email (must be a Gmail address): lau@gmail.com
Enter Position: market
Enter Role: normalstaff
```

ID	Name	Position	Role	Recovery Email	Password
A001	jerome	it	normalstaff	jeromelu@gmail.com	12345667
A002	ling	market	leader	ling@gmail.com	12345600
A003	kangyong	it	normalstaff	goo@gmail.com	66712345
A004	kelvin	it	leader	kelvin@gmail.com	12340000
A005	Oscar	it	normalstaff	Oscar@gmail.com	12341234
A006	Alex	customerservice	leader	alex@gmail.com	12340909
A007	Jimmy	finnacie	normalstaff	jimmy@gmail.com	12349090
A008	jean	market	normalstaff	laujean@gmail.com	34567890
A009	ali	sale	normalstaff	ali@gmail.com	44455567
A010	loke	it	normalstaff	loke@gmail.com	00000000
A010	loke	it	normalstaff	loke@gmail.com	00000000
A011	lau	market	normalstaff	lau@gmail.com	12312312

```
Menu:
1. Add Staff
2. Display Staff
3. Generate Report
4. Edit Staff Information
5. Check Password Account
6. Search Staff
7. Exit
Enter your choice (1-7): 2
Enter password to display staff list: 07151213
=== Staff List ===
```

Next, is that I am going to add new staff. For adding the new staff, I have to fill in the info which is the id, name, password, email, position and the role. After that, I open the display staff again. It shows that the new staff info has a success record in it.

```
Menu:
1. Add Staff
2. Display Staff
3. Generate Report
4. Edit Staff Information
5. Check Password Account
6. Search Staff
7. Exit
Enter your choice (1-7): 5
Enter ID: A001
Enter recovery email: jeromelu@gmail.com
Password: 12345667
```

```
Menu:
1. Add Staff
2. Display Staff
3. Generate Report
4. Edit Staff Information
5. Check Password Account
6. Search Staff
7. Exit
Enter your choice (1-7): 6
Enter staff ID to search: A001
=== Search Results ===
ID      Name      Position  Role      Recovery Email
A001    jerome    it        normalstaff  jeromelu@gmail.com
```

Now, I am going to show the check password account function and the search staff function. The check password account function is to check the password by using the Staff ID and the recovery email. Then, the function will read the txt file to get the password. Next the search staff function will read the txt file to gain the name, position, role and the recovery email.

```

Menu:
1. Add Staff
2. Display Staff
3. Generate Report
4. Edit Staff Information
5. Check Password Account
6. Search Staff
7. Exit
Enter your choice (1-7): 3
===== Basic Staff Information =====
+-----+-----+-----+-----+
| ID   | Name           | Position      | Role           |
+-----+-----+-----+-----+
| A001 | jerome         | it            | normalstaff    |
+-----+-----+-----+-----+
| A002 | ling           | market       | leader         |
+-----+-----+-----+-----+
| A003 | kangyong       | it            | normalstaff    |
+-----+-----+-----+-----+
| A004 | kelvin         | it            | leader         |
+-----+-----+-----+-----+
| A005 | Oscar         | it            | normalstaff    |
+-----+-----+-----+-----+
| A006 | Alex           | cusermerservice | leader         |
+-----+-----+-----+-----+
| A007 | Jimmy         | finnacie      | normalstaff    |
+-----+-----+-----+-----+
| A008 | jean           | market       | normalstaff    |
+-----+-----+-----+-----+
| A009 | ali            | sale         | normalstaff    |
+-----+-----+-----+-----+
| A010 | loke           | it            | normalstaff    |
+-----+-----+-----+-----+
| A010 | loke           | it            | normalstaff    |
+-----+-----+-----+-----+
| A011 | lau            | market       | normalstaff    |
+-----+-----+-----+-----+

```

Last but not least, the generated report just displays the general information which is the ID, Name, Position and the Role compare to the display staff function.