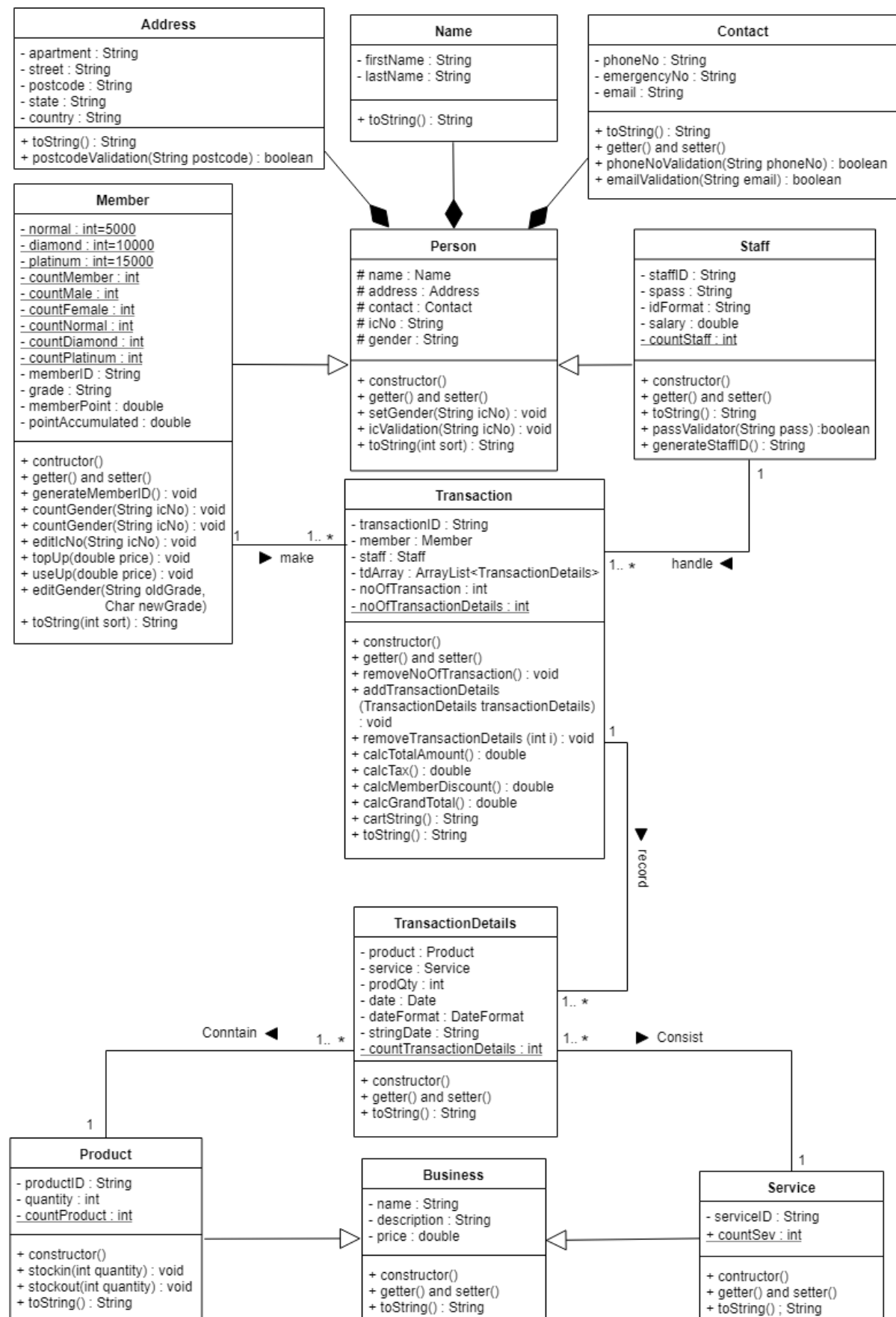


UML DIAGRAM



Member Module (Ong YiLiang)

```
General Output
-----Configuration: <Default>-----
OOP SALON
-----
Member Module      : (1)
Payment           : (2)
Product AND Service : (3)
Staffing          : (4)
Generate Report    : (5)
Please select an integer : 1

MEMBERSHIP MODULE
-----
Registration       : (1)
Search Member     : (2)
Modify Member     : (3)
Display Member    : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***        : Other
Please select an integer : 1

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

IC No              : CANCLE

MEMBERSHIP MODULE
-----
Registration       : (1)
Search Member     : (2)
Modify Member     : (3)
Display Member    : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***        : Other
Please select an integer : |
```

Figure 1.0 personnel can select 1 to the member module and select 1 again go to the registration function. When personnel miss click to the function they can input “CANCLE” to exits.

General Output

```
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***       : Other
Please select an integer : 1

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

IC No           : 000303-07-1093
***Member Exist***

Add Member (y/Y=YES)? y

IC No           : 123123121231
***IC Number must be in the form XXXXXX-XX-XXXX***

IC No           : 213123-21-2134
Name >
First Name      :
Name >
First Name      : lee
Last Name       :
Last Name       : xin yee
Contact Number  : 0164114899
***Phone Number must be in the form XXX-XXXXXXXX***

Contact Number  : 016-4114899
Emergency Contact : 123-12321311
Email           : 123
***Invalid Email Format***

Email           : 213@gmail.com
Address >
```

Figure 1.1 Check Exist, validation, escapable and user-friendliness

```
General Output
Emergency Contact : 123-12321311
Email             : 123
***Invalid Email Format***

Email             : 213@gmail.com
Address >
Apartment         :
Street           : asdf
Postcode         : fds
Postcode         : 213
Postcode         : 13221
State            : asb
Country          : adv

>Please select n/N(normal) | d/D(Diamond) | p/P(Platinum)<
Grade (N/D/P)    : 8
Grade (N/D/P)    : q
Grade (N/D/P)    : 1.1
Grade (N/D/P)    : d

REGISTRATION SUCCESS
=====
Member ID       : 19F0011
Name            : LEE XIN YEE
IC No          : 213123-21-2134
Gender          : FEMALE
Contact No      : 016-4114899
Emergency Contact : 123-12321311
Email           : 213@gmail.com
Address         :
                ASDF,
                13221 ASB,
                ADV.
Grade           : DIAMOND
Current Point   : 0.0
Point Accumulated : 10000.0

Add Member (y/Y=YES)?
```

Figure 1.2 validate postcode and grade, generate point accumulated and generate memberID according current year, gender and sequence.

```
ASDF,
13221 ASB,
ADV.
Grade      : DIAMOND
Current Point : 0.0
Point Accumulated : 10000.0

Add Member (y/Y=YES)? 0

MEMBERSHIP MODULE
-----
Registration      : (1)
Search Member     : (2)
Modify Member     : (3)
Display Member    : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***       : Other
Please select an integer : 2

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

SEARCH
=====
Member ID   : (1)
Name        : (2)
IC No.      : (3)
Gender      : (4)
Postcode    : (5)
Grade       : (6)
Member Point : (7)
Exit        : Others
Please select an integer : |
```

Figure 1.3 any key to exit and select 2 to search function

```
General Output
SEARCH
=====
Member ID      : (1)
Name           : (2)
IC No.         : (3)
Gender         : (4)
Postcode       : (5)
Grade          : (6)
Member Point   : (7)
Exit           : Others
Please select an integer : 1

Enter Member ID : 19m0001

1.
Member ID      : 19M0001
Name           : ONG YILIANG
IC No.         : 000303-07-1093
Gender         : MALE
Contact No     : 011-16552294
Emergency Contact : 016-4114899
Email          : ongyiliang13616@gmail.com
Address        : 1-23A-11 HARMONY VIEW,
                LINTANG SLIM,
                11600 GEORGETOWN,
                MALAYSIA.
Grade          : PLATINUM
Current Point   : 20353.5
Point Acumulated : 35353.5

SEARCH
=====
Member ID      : (1)
Name           : (2)
IC No.         : (3)
Gender         : (4)
Postcode       : (5)
```

Figure 1.4 presses the respective integer to select search. Search by ID and ic does not need to filter because they are unique.

```
General Output
SEARCH
=====
Member ID      : (1)
Name           : (2)
IC No.         : (3)
Gender         : (4)
Postcode       : (5)
Grade          : (6)
Member Point   : (7)
Exit           : Others
Please select an integer : 4

Gender (M/F) : f

SORT BY >
=====
Member ID      : (1)
Name           : (2)
Gender         : (3)
Grade          : (4)
Member Point   : (5)
Default        : Other
Select an integer : 4

ASCENDING (>) : (1)
DESCENDING (<) : (2)
Select an integer(1/2) : 1

MEMBER LIST
=====
1.
Member ID      : 19F0005
Grade          : NORMAL
Name           : OOI KE YI
IC No          : 001209-07-5112
Gender         : FEMALE
Contact No     : 014-12356789
Emergency Contact : 014-1235678
```

Figure 1.5 press 4 to search by gender and select sort. After that, personnel have to select 1 or 2 in ascending or descending. The result will display according to the user request.

MEMBER LIST

=====

```
1.
Member ID      : 19F0005
Grade          : NORMAL
Name           : OOI KE YI
IC No          : 001209-07-5112
Gender         : FEMALE
Contact No     : 014-12356789
Emergency Contact : 014-1235678
Email          : ooikeyi@hotmail.com
Address        : 1-12-11 TAMAN KHENG TEAN,
                LINTANG SLIM,
                11600 GEORGETOWN,
                MALAYSIA.
Current Point   : 10565.0
Point Acumulated : 15565.0

2.
Member ID      : 19F0008
Grade          : NORMAL
Name           : NG MEI XIN
IC No          : 981110-07-3482
Gender         : FEMALE
Contact No     : 017-12345689
Emergency Contact : 017-8912345
Email          : ngmeixin@gmail.com
Address        : 1-12-11 TAMAN KHENG TEAN,
                LINTANG SLIM,
                11600 GEORGETOWN,
                MALAYSIA.
Current Point   : 9759.0
Point Acumulated : 14759.0

3.
Member ID      : 19F0006
Grade          : DIAMOND
Name           : MABEL HENG
IC No          : 010331-07-4658
Gender         : FEMALE
Contact No     : 015-12346789
Emergency Contact : 015-6789123
Email          : mabelheng@gmail.com
Address        : 1-16-12 AMAN,
                TAMAN BAIK,
                11500 GELUGOR,
                MALAYSIA.
Current Point   : 12690.0
Point Acumulated : 22690.0
```

Figure 1.6 The result will display from Normal member to Platinum member when sort by grade with ascending order.


```

5.
Member ID      : 19F0011
Grade          : DIAMOND
Name           : LEE XIN YEE
IC No          : 213123-21-2134
Gender         : FEMALE
Contact No     : 016-4114899
Emergency Contact : 123-12321311
Email          : 213@gmail.com
Address        :
               : ASDF.
               : 13221 ASB,
               : ADV.
Current Point  : 0.0
Point Accumulated : 10000.0

Filter this list(y/Y=YES)? y

SEARCH
=====
Name           : (1)
Postcode       : (2)
Grade          : (3)
Member Point   : (4)
Exit           : Others
Please select an integer : 4

Range of Member Point -> MIN : 10000
                        MAX : 20000

SORT BY >
-----
Member ID      : (1)
Name           : (2)
Gender         : (3)
Grade          : (4)
Member Point   : (5)
Default       : Other
Select an integer : 5

ASCENDING (>) : (1)
DESCENDING (<) : (2)
Select an integer(1/2) : 2

MEMBER LIST
=====

1.
Member ID      : 19F0006

```

Figure 1.7 shows that gender are allowed to filter because the attribute are not primary key and not unique. The search filter select list will exclude gender because gender are the first search so it should be exclude to avoid same search again. Personnel can also filter or search the member point by range and sort the result with order.

```
General Output
SORT BY >
-----
Member ID      : (1)
Name           : (2)
Gender         : (3)
Grade          : (4)
Member Point   : (5)
Default        : Other
Select an integer : 5

ASCENDING (>) : (1)
DESCENDING (<) : (2)
Select an integer(1/2) : 2

MEMBER LIST
=====

1.
Member ID      : 19F0006
Current Point   : 12690.0
Point Acumulated : 22690.0
Grade          : DIAMOND
Name           : MABEL HENG
IC No          : 010331-07-4658
Gender         : FEMALE
Contact No     : 015-12346789
Emergency Contact : 015-6789123
Email          : mabelheng@gmail.com
Address        : 1-16-12 AMAN,
                TAMAN BAIK,
                11500 GELUGOR,
                MALAYSIA.

2.
Member ID      : 19F0005
Current Point   : 10565.0
Point Acumulated : 15565.0
Grade          : NORMAL
Name           : OOI KE YI
IC No          : 001209-07-5112
Gender         : FEMALE
Contact No     : 014-12356789
Emergency Contact : 014-1235678
Email          : ooikeyi@hotmail.com
Address        : 1-12-11 TAMAN KHENG TEAN,
                LINTANG SLIM,
                11600 GEORGETOWN,
                MALAYSIA.
```

Figure 1.8 the reports are shown according to the request after filter from the first search.

```
SEARCH
=====
Member ID      : (1)
Name           : (2)
IC No.         : (3)
Gender         : (4)
Postcode       : (5)
Grade          : (6)
Member Point   : (7)
Exit           : Others
Please select an integer : 0

MEMBERSHIP MODULE
-----
Registration    : (1)
Search Member   : (2)
Modify Member   : (3)
Display Member  : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***      : Other
Please select an integer : 3

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : 18m0001

***Please make registration at Module(1) --> Funtion(1)***

Continue to edit other member(y/Y=YES)? y

Enter Member ID : 19m0001

OLD RECORD
-----
Member ID      : 19M0001
Name           : ONG YILIANG
IC No          : 000303-07-1093
Gender         : MALE
Contact No     : 011-16552294
Emergency Contact : 016-4114899
Email          : ongyiliang13616@gmail.com
Address        : 1-23A-11 HARMONY VIEW,
                LINTANG SLIM,
                11600 GEORGETOWN.
```

Figure 1.9 personnel can select any integer to exit from the function selection to selection membership module function. The modify function will verify the member ID first if the id not found system will ask the personnel register for the customer. Otherwise, the system will show the current record of the member.

```
OLD RECORD
-----
Member ID      : 19M0001
Name           : ONG YILIANG
IC No          : 000303-07-1093
Gender         : MALE
Contact No     : 011-16552294
Emergency Contact : 016-4114899
Email          : ongyiliang13616@gmail.com
Address        : 1-23A-11 HARMONY VIEW,
                LINTANG SLIM,
                11600 GEORGETOWN,
                MALAYSIA.
Grade          : PLATINUM
Current Point   : 20353.5
Point Acumulated : 35353.5

DELETE patient      : (999)
Edit Name           : (1)
Edit IC No          : (2)
Edit Contact No     : (3)
Edit Emergency Contact No. : (4)
Edit Email          : (5)
Edit Address        : (6)
***EXIT***         : Others
Please select an integer : 999
Remove ONG YILIANG as a member (y/Y=YES)? y

ONG YILIANG has been remove from Member List.

Continue to edit other member(y/Y=YES)? y

Enter Member ID : 19f0010

OLD RECORD
-----
Member ID      : 19F0010
Name           : TAN SIEW MEI
IC No          : 020228-07-9758
Gender         : FEMALE
Contact No     : 019-12345678
Emergency Contact : 019-1234567
Email          : tansiewmei@hotmail.com
Address        : 1-23A-10 HARMONY VIEW,
                LINTANG SLIM,
                11600 GEORGETOWN,
                MALAYSIA.
Grade          : DIAMOND
Current Point   : 2350.0
Point Acumulated : 12350.0
```

Figure 1.10 it show that personnel can delete the member by pressing '999'. After that the system will confirm with the personnel again. If personnel agree the member will be remove from member list. After press 'Y', yes for continue edit other member, the system will ask the user to input ID again.

```
General Output
OLD RECORD
-----
Member ID      : 19F0010
Name           : TAN SIEW MEI
IC No          : 020228-07-9758
Gender         : FEMALE
Contact No     : 019-12345678
Emergency Contact : 019-1234567
Email          : tansiewmei@hotmail.com
Address        : 1-23A-10 HARMONY VIEW,
                LINTANG SLIM,
                11600 GEORGETOWN,
                MALAYSIA.
Grade          : DIAMOND
Current Point   : 2350.0
Point Acumulated : 12350.0

DELETE patient      : (999)
Edit Name           : (1)
Edit IC No.         : (2)
Edit Contact No.    : (3)
Edit Emergency Contact No. : (4)
Edit Email          : (5)
Edit Address        : (6)
                ***EXIT*** : Others
Please select an integer : 0

Continue to edit other member(y/Y=YES)? g

MEMBERSHIP MODULE
-----
Registration        : (1)
Search Member       : (2)
Modify Member       : (3)
Display Member      : (4)
Upgrade Membership  : (5)
Product Redemption  : (6)
                ***EXIT*** : Other
Please select an integer : 5

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : |
```

Figure 1.11 shows that the user can exit the function easily. If the user select 5. The system will go to upgrade Membership module

```
General Output
MEMBERSHIP MODULE
-----
Registration      : (1)
Search Member    : (2)
Modify Member     : (3)
Display Member    : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***       : Other
Please select an integer : 5

WARM REMINDER
-----
>Enter 'CANCEL' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : CANCEL

MEMBERSHIP MODULE
-----
Registration      : (1)
Search Member    : (2)
Modify Member     : (3)
Display Member    : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***       : Other
Please select an integer : 5

WARM REMINDER
-----
>Enter 'CANCEL' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : 19m0001

***Please make registration at Module(1) --> Funtion(1)***

Enter Member ID : 19f0010

>Please select n/N(normal) | p/P(Platinum) | d/D(Diamond)<
Grade (N/P/D)      : d

***Upgrade membership to the same level is not allowed***

MEMBERSHIP MODULE
```

Figure 1.12 shows that the personnel can exit by enter 'CANCEL' on memberID input. Besides that it will also verify the existing of member. The system will also not allowed member upgrade from grade to same grade

```
General Output
WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : 19m0004

***This member have reach the highest position of membership***

MEMBERSHIP MODULE
-----
Registration      : (1)
Search Member     : (2)
Modify Member     : (3)
Display Member    : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***       : Other
Please select an integer : 5

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : 19f0005

>Please select n/N(normal) | p/P(Platinium) | d/D(Diamond)<
Grade (N/P/D)      : p

19F0005 successes to upgrade membership from NORMAL to PLATINUM
Old Point          : 10565.0
Point Needed       : -10000.0
Current Point      : 565.0

MEMBERSHIP MODULE
-----
```

Figure 1.13 when the member have reach platinum position system will not allowed them to upgrade again because they had reach the highest grade. While the member success to upgrade the membership the system will show the point information for the personnel.

```
General Output
Enter Member ID : 19f0010

>Please select n/N(normal) | p/P(Platinum) | d/D(Diamond)<
Grade (N/P/D)      : p

***Please TOP UP***
Current Point      : 2350.0
Point Needed       : 5000.0
Point Lack         : -2650.0

MEMBERSHIP MODULE
-----
Registration       : (1)
Search Member      : (2)
Modify Member      : (3)
Display Member     : (4)
Upgrade Membership : (5)
Product Redemption : (6)
***EXIT***        : Other
Please select an integer : 6

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : 19f0010

Colt Badlab          RM55.00 : (1)
Oribe Dry Texturizin RM30.00 : (2)
Living Proof Dry Sha RM45.00 : (3)
Christophe Robin Vol RM60.00 : (4)

Select a product :
```

Figure 1.14 when the member does not have enough point to upgrade membership they sytem will show the point information to personnel. Besides that, member can use their member to redeem product.


```
General Output
Enter Member ID : 19f0010

Colt Badlab          RM55.00 : (1)
Oribe Dry Texturizin RM30.00 : (2)
Living Proof Dry Sha RM45.00 : (3)
Christophe Robin Vol RM60.00 : (4)

Select a product : 1
Quantity : 10
***Member Point not enough***
Current Point : 2350.0
Point Needed : 5500.0
Point Lack : -3150.0

Continue to redeem product(y/Y=YES)? y
Select a product : 2
Quantity : 3

Continue to redeem product(y/Y=YES)? y
Select a product : 1
Quantity : -2
***Redemption for this product is canceled***

Continue to redeem product(y/Y=YES)? 0
1.Oribe Dry Texturizing Spray * 3
Total Point Use: 900.0

Confirm to redeem these products(y/Y=YES)? y
>>Redemption successful<<

Current Point : 1450.0

MEMBERSHIP MODULE
-----
Registration : (1)
Search Member : (2)
Modify Member : (3)
Display Member : (4)
Upgrade Membership : (5)
Product Redemption : (6)
```

Figure 1.15 the system will show notice when the point is not enough to redeem certain product with the quantity. Besides that, personnel can cancel to redeem the product when they miss select product. Lastly, the system will show the total point use by member to redeem the selected product.

```
General Output
***EXIT***      : Other
Please select an integer : 6

WARM REMINDER
-----
>Enter 'CANCLE' for String type to EXIT
>Enter 'X' for Character type to EXIT
>Enter NEGATIVE NUMBER(-1) for numerical type to EXIT

Enter Member ID : 19f0010

Colt Badlab          RM55.00 : (1)
Oribe Dry Texturizin RM30.00 : (2)
Living Proof Dry Sha RM45.00 : (3)
Christophe Robin Vol RM60.00 : (4)

Select a product : 4
Quantity        : 21
***Not enough Stock***

Continue to redeem product(y/Y=YES)? y
Select a product : 4
Quantity        : 1

Continue to redeem product(y/Y=YES)? 0
1.Christophe Robin Volumizing Conditioner * 1
Total Point Use: 600.0

Confirm to redeem these products(y/Y=YES)? 0

***Redemption Cancele***

Current Point : 1450.0

MEMBERSHIP MODULE
-----
Registration       : (1)
Search Member     : (2)
Modify Member     : (3)
Display Member    : (4)
Upgrade Membership : (5)
```

Figure 1.16 shows that when stock is not enough the system will send notice to personnel and personnel can cancel the whole redemption from the last confirm.

General Output

TOP PURCHASE MEMBER
=====

Enter a number for TOP PURCHASE MEMBER
(more than 4 and less than 10): 5

TOP 5 Most Purchase Member

16/7/2019 14:29

NAME	GRADE	EMAIL	TOTAL PURCHASE
MELVIN TAN	PLATINUM	melvintan@gmail.com	RM2331.00
MABEL HENG	DIAMOND	mabelheng@gmail.com	RM2269.00
BRIAN ENG	PLATINUM	brianeng@yahoo.com	RM2040.50
XIAO MING	DIAMOND	xiaoming@yahoo.com	RM1925.30
LEE JIA ZHE	NORMAL	leejiazhe@hotmail.com	RM1736.00

END OF REPORT

Figure 1.17 show the top 5 purchase member report. The min are selected by the personnel.
For example they can also produce top 6 most purchase member report

General Output

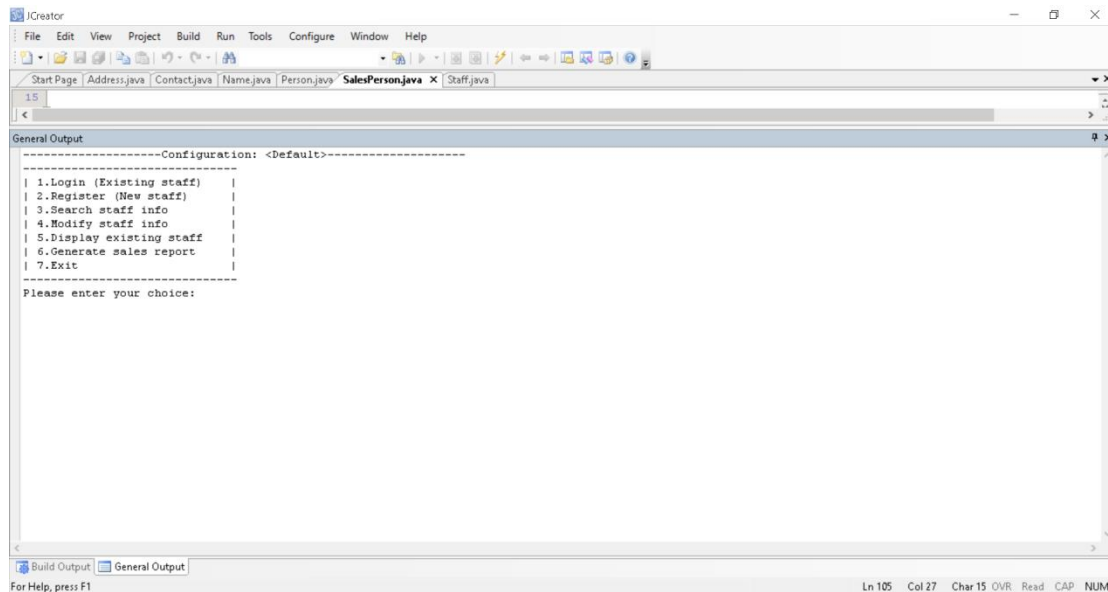
MEMBER GRADE SUMMARY : (1)
TOP PURCHASE MEMBER : (2)
STOCK LEVEL : (3)
: (4)
Please select an integer : 1
Enter for a YEAR : 2019

MEMBER GRADE SUMMARY REPORT IN 2019

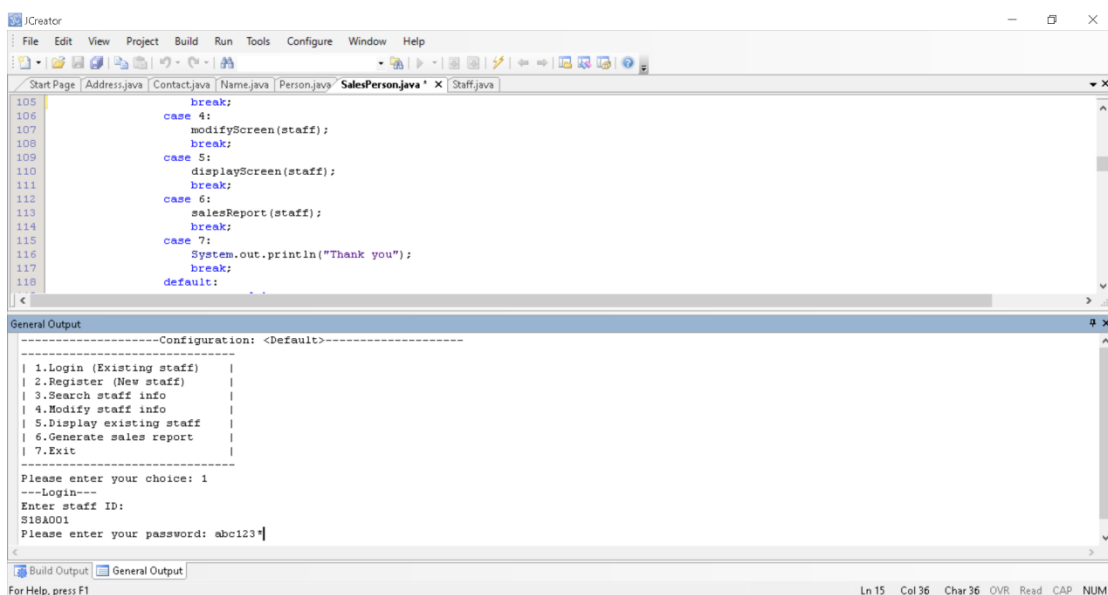
GRADE	NAME	POINT
NORMAL	NG MEI XIN	9759.0
	OOI KE YI	10565.0
	LEE JIA ZHE	12360.0
	TOTAL MEMBER :	3
DIAMOND	TAN SIEW MEI	2350.0
	WAYNE CHONG	6510.0
	XIAO MING	9253.0
	MABEL HENG	12690.0
	TOTAL MEMBER :	4
PLATINUM	BRIAN ENG	5405.0
	MELVIN TAN	8310.0
	ONG YILIANG	20353.5
	TOTAL MEMBER :	3

Figure 1.18 show the member grade summary report in year. The year can select by the personnel. The system will verify with the memberID to get the member that register at the selected year.

Staff Module (Melvin Tan You Jie)



This is the main layout of the SalesPerson main menu screen. Within this screen, there will be 6 functions available for the user, which is login, register new staff, search staff info, modify staff info, display existing staff and generate sales report. There is also a Back function to allow the user to go back to the previous page.



In the login screen, it will allow the staff to login into their existing account to continue to the Transaction Screen. For the login process, the user will need to key in their Staff ID, and their Account Password.

The screenshot shows the JCreator IDE with a Java file named `Staff.java` open. The code is a switch-case menu for a staff management system. The cases are: 1. Login (Existing staff), 2. Register (New staff), 3. Search staff info, 4. Modify staff info, 5. Display existing staff, 6. Generate sales report, 7. Exit. The output window shows the program running and displaying the menu. The user has entered '1' for the login option, and the program prompts for a staff ID and password. The staff ID entered is 'S18A000', which is invalid, and the program prompts the user to try again.

```

105         break;
106     case 4:
107         modifyScreen(staff);
108         break;
109     case 5:
110         displayScreen(staff);
111         break;
112     case 6:
113         salesReport(staff);
114         break;
115     case 7:
116         System.out.println("Thank you");
117         break;
118     default:
119         ...

```

```

General Output
-----
1.Login (Existing staff) |
2.Register (New staff) |
3.Search staff info |
4.Modify staff info |
5.Display existing staff |
6.Generate sales report |
7.Exit |
-----
Please enter your choice: 1
---Login---
Enter staff ID:
S18A000
Invalid staff ID. Please try again.
Please enter your staff ID: |

```

There is a Staff ID and Password verification function to check whether the user has inputted the correct ID and password. If any of the information has been wrongly inputted, an error message will show up to notify the user on what information is wrongly written and will allow the user to re-enter the information, until the correct information is written.

The screenshot shows the JCreator IDE with a Java file named `Staff.java` open. The code is the Register New Staff function. It prompts the user to enter their first name, last name, I.C. number, address (apartment, street, postcode, state, country), phone number, emergency number, e-mail, and password. The output window shows the program running and displaying the registration form. The user has entered 'Melvin' for the first name, 'Tan' for the last name, and '000401070027' for the I.C. number. The address is '46-4-3, Greenlane Heights, Jalan Besi, 11600, Pulau Pinang, Malaysia'. The phone number is '0143020994', the emergency number is '0164341139', and the e-mail is 'melvin@gmail.com'. The password is 'Abc123**', which is invalid, and the program prompts the user to try again. The user has successfully registered an account and is asked if they want to add another staff.

```

151     )
152     else
153     {

```

```

General Output
-----
3.Search staff info |
4.Modify staff info |
5.Display existing staff |
6.Generate sales report |
7.Exit |
-----
Please enter your choice: 2
---Register new staff---
Enter first name: Melvin
Enter last name: Tan
Enter I.C Number: 000401070027
Enter address (apartment): 46-4-3, Greenlane Heights
Enter address (street): Jalan Besi
Enter address (postcode): 11600
Enter address (state): Pulau Pinang
Enter address (country): Malaysia
Enter phone number: 0143020994
Enter emergency number: 0164341139
Enter e-mail: melvin@gmail.com
*Requirements (Between 8-12 chars, contain at least one digit, lowercase letter, uppercase letter and special symbol)
Please create a password for your account: Abc123*12
Password invalid. Please try again.
Create your password: Abc123**
Password is valid.
You have successfully registered an account.
Would you like to add another staff?? (Press Y to continue, others to exit) >>

```

Next, there is the Register New Staff function. In this function, it will allow the user to create a new Staff Account to use the system. The user will need to input their first name, last name, I.C. number, address, phone number, emergency number, e-mail, and create a password for their account. After successfully creating an account, the system will ask the user whether they will want to create another account. The user will press Y if they want to create another account, and any other button otherwise. There are some validations within this process, which are at the email and password part, where the email needs to follow the standard format, and the password needs to follow the requirements that was stated before entering the new password. If there is anything wrong, an error message will pop-up and will allow the user to re-enter.

The screenshot shows the JCreator IDE with the 'General Output' window open. The output displays a menu of options, followed by a selection of option 3 (Search staff info). It then prompts for a staff ID, which is entered as 'S18A001'. The program returns detailed information for this staff member, including Name, IC No, Gender, Contact No, Emergency Contact, Email, and Address. Below this, it shows the Staff ID and Salary for the same staff member. The output ends with the menu being displayed again.

```

151
152         else
153     {
General Output
-----
| 1.Login (Existing staff) |
| 2.Register (New staff) |
| 3.Search staff info    |
| 4.Modify staff info    |
| 5.Display existing staff |
| 6.Generate sales report |
| 7.Exit                |
-----
Please enter your choice: 3
Enter staff ID of staff to search:
S18A001
Name          : Calvin Lim
IC No         : 001210020129
Gender        : M
Contact No    : 0143020994
Emergency Contact : 0164341139
Email         : calvinlim@gmail.com
Address       : 46-8-2, GREENLANE HEIGHTS,
              JALAN BESI,
              11600 GEORGETOWN,
              MALAYSIA.

Staff ID      : S18A001
Salary       : RM2000.00
-----
| 1.Login (Existing staff) |

```

Then, there is the Search Function. It will allow the user to find any detailed information of a specific staff, upon entering their Staff ID. If the Staff ID entered does not exist, an error message will pop-up and will allow the user to re-enter the Staff ID.

The screenshot shows the JCreator IDE with the 'General Output' window open. The output displays the same menu as before, followed by a selection of option 4 (Modify staff info). It prompts for a staff ID, which is entered as 'S18A001'. Then, it prompts for information to modify, with '1' (Phone No.) selected. A new phone number '0143029108' is entered, and the program confirms 'Modification complete.'. The output ends with the menu being displayed again.

```

151
152         else
153     {
General Output
-----
Salary       : RM2000.00
-----
| 1.Login (Existing staff) |
| 2.Register (New staff) |
| 3.Search staff info    |
| 4.Modify staff info    |
| 5.Display existing staff |
| 6.Generate sales report |
| 7.Exit                |
-----
Please enter your choice: 4
Enter staff ID of staff to modify info:
S18A001
1.Phone No.
2.Email
Select information to modify: 1
Enter new phone number:
0143029108
Modification complete.
-----
| 1.Login (Existing staff) |
| 2.Register (New staff) |
| 3.Search staff info    |
| 4.Modify staff info    |
| 5.Display existing staff |
| 6.Generate sales report |
| 7.Exit                |
-----

```

Also, there is the Modify Staff Info function. This will allow the user to change the details of a staff upon entering the Staff ID. It will allow the user to change the phone number and email, and similar with the registration function, there will be a validation for the phone number and email.

Product And Service Module (Chong Tze Wee)

```
General Output
-----Configuration: <Default>-----
OOP SALON
-----
Member Module      : (1)
Payment           : (2)
Product AND Service : (3)
Staffing          : (4)
Generate Report    : (5)
Please select an integer : 3

Product or Service(1/2):1

-----
PRODUCT FUNCTION
-----
1.Add new Stock
2.Edit Stock
3.Search Stock
4.Show Stock
5.Stock Return
6.Product Stock Level Report
7.Back
-----

Choose any function(1-5):1

-----
Adding new Product
-----
Name      :hair conditioner
Description : for dry hair
Price     :30.5
ProductID  :pz05
Quantity  :50

Successfully Add Product
Name      :HAIR CONDITIONER
Description : FOR DRY HAIR
Price     :RM30.50
ProductID  :PZ05
Quantity  :50

Continue to add Product (Y=yes,(other)=no)? y

-----
Adding new Product
-----
Name
```

This is product and service module. This module contain several functions which are add new stock, edit stock, search , show and stock return . when go to add new stock function, the personnel have to enter name, description, price, productID and, quantity.

General Output

```
Search By?
-----
1.PRODUCT ID
2.PRODUCT NAME
3.PRICE
4.DESCRPTION
5.BACK
Select one (1-5) > 2
Enter The Product Name That You Want To Search:colt badlab

Name       :COLT BADLAB
Description :HAIR WAX
Price      :RM55.00
ProductID  :PZ01
Quantity   :40

Search By?
-----
1.PRODUCT ID
2.PRODUCT NAME
3.PRICE
4.DESCRPTION
5.BACK
Select one (1-5) > 3
Enter The Product Price That You Want To Search:60

Name       :CHRISTOPHE ROBIN VOLUMIZING CONDITIONER
Description :HAIR CONDITIONER
Price      :RM60.00
ProductID  :PZ04
Quantity   :20

Search By?
-----
1.PRODUCT ID
2.PRODUCT NAME
3.PRICE
4.DESCRPTION
5.BACK
Select one (1-5) >
```

This module did contain search function too. The personnel can search by product ID, name, price, description and press 5 for back.

```
General Output
4.Show Stock
5.Stock Return
6.Product Stock Level Report
7.Back
-----
Choose any function(1-5):4
-----
Product
-----
Name      :COLT BADLAB
Description:HAIR WAX
Price     :RM55.00
ProductID :PZ01
Quantity  :40

Name      :ORIBE DRY TEXTURIZING SPRAY
Description:HAIR SPRAY
Price     :RM30.00
ProductID :PZ02
Quantity  :30

Name      :LIVING PROOF DRY SHAMPOO
Description:HAIR SHAMPOO
Price     :RM45.00
ProductID :PZ03
Quantity  :60

Name      :CHRISTOPHE ROBIN VOLUMIZING CONDITIONER
Description:HAIR CONDITIONER
Price     :RM60.00
ProductID :PZ04
Quantity  :20

Name      :HAIR CONDITIONER
Description: FOR DRY HAIR
Price     :RM30.50
ProductID :PZ05
Quantity  :50

Name      :
Description:
Price     :RM10.00
ProductID :PZ06
Quantity  :10
```

This module could also perform show all product function. The function will display all the detail of every product.

General Output

```
Choose any function(1-5):5

-----
Enter Product ID That you want to stock-in:pz01

Name       :COLT BADLAB
Description :HAIR WAX
Price      :RM55.00
ProductID  :PZ01
Quantity   :50

Enter the Stock-In Quantity :5
Sure to change?(Y/N)  Input the correct input
Sure to change?(Y/N)  y

Successfully Stock-in quantity

Name       :COLT BADLAB
Description :HAIR WAX
Price      :RM55.00
ProductID  :PZ01
Quantity   :55

Continue to stock-in Product (Y=yes,(other)=no)? y

-----
Enter Product ID That you want to stock-in:pz06

Name       :
Description :
Price      :RM10.00
ProductID  :PZ06
Quantity   :10

Enter the Stock-In Quantity :100
Sure to change?(Y/N)  Input the correct input
Sure to change?(Y/N)  y

Successfully Stock-in quantity

Name       :
Description :
Price      :RM10.00
ProductID  :PZ06
Quantity   :110

Continue to stock-in Product (Y=yes,(other)=no)? |
```

Beside that this module do also have stock in function by searching the product.

```
-----  
PRODUCT FUNCTION  
-----  
1.Add new Stock  
2.Edit Stock  
3.Search Stock  
4.Show Stock  
5.Stock Return  
6.Product Stock Level Report  
7.Back  
-----  
Choose any function(1-5):2  
  
-----  
Enter Product ID That you want to edit:pz01  
Name      :COLT BADLAB  
Description:HAIR WAX  
Price     :RM55.00  
ProductID :PZ01  
Quantity  :55  
-----  
Edit By?  
-----  
1.Name  
2.Description  
3.Price  
4.Exit  
  
Which data that you want to edit(1-3)>3  
Enter the new Price:30  
Sure to change?(Y/N)  Input the correct input  
Sure to change?(Y/N)  y  
  
Successfully modified Price  
  
Name      :COLT BADLAB  
Description:HAIR WAX  
Price     :RM30.00  
ProductID :PZ01  
Quantity  :55  
-----  
Edit By?
```

This module would also edit the stock record.

```
-----  
PRODUCT STOCK LEVEL REPORT  
-----  
  
Name       :COLT BADLAB  
Description :HAIR WAX  
Price      :RM55.00  
ProductID  :PZ01  
Quantity   :40  
  
Name       :ORIBE DRY TEXTURIZING SPRAY  
Description :HAIR SPRAY  
Price      :RM30.00  
ProductID  :PZ02  
Quantity   :30  
  
Name       :CHRISTOPHE ROBIN VOLUMIZING CONDITIONER  
Description :HAIR CONDITIONER  
Price      :RM60.00  
ProductID  :PZ04  
Quantity   :20  
  
-----  
-REPORT GENERATED-  
  
OOP SALON  
-----  
Member Module      : (1)  
Payment            : (2)  
Product AND Service : (3)  
Staffing           : (4)  
Generate Report    : (5)  
Please select an integer :
```

Lastly, this module would be able to produce a stock level report according to the personnel request.

Payment Module(Lee Jia Zhe)

As the user first enters the payment module, the system will prompt the user to first select a function, either to start a Transaction which is like a cart which is able to hold more than one TransactionDetails which is like a product. The Refund A Product function will allow the user to select a product to refund from a menu. After the user has inputted the amount the user wishes to refund then the quantity in the Product Class will increase as the stockin function is called from the Product class. The user can also to get a Transaction Report or choose to exit the module.

```
=====|
| TRANSACTION MODULE |
|=====|
| Start Transaction(Cart): (1) |
| Refund A Product       : (2) |
| Transaction Report     : (3) |
| EXIT                   : (4) |
|=====|
| You may select(1-3)   :  ";
```

After the user Enter the refund module, it will prompt the user to select a product to refund and ask for the quantity of the stock return so that it can calculate the new stock quantity.

```

    You may select(1-3)   :  2

        PZ01(40 In Stock): (1)
        PZ02(30 In Stock): (2)
        PZ03(20 In Stock): (3)
        PZ04(10 In Stock): (4)
        PZ01(40 In Stock): (5)
        PZ02(30 In Stock): (6)
        PZ03(20 In Stock): (7)
        PZ04(10 In Stock): (8)
        PZ01(40 In Stock): (9)
        PZ02(30 In Stock): (10)
    BACK TO MODULE (11)
Choose Product(1-10):4
```

After the user chooses to enter “Start Transaction”, the user can continue by adding a product which will prompt the user to select an option from Product. Then a TransactionDetails will be created in Transaction, several TransactionDetails can be created in Transaction as both these are <ArrayList> object. It can accommodate the changing amount of quantity. If it is the first time entering the transaction, it will only let the user go back or add a product.

```
System.out.printf("Current Transaction (cart) \n");
System.out.println("=====");
if(useCart == 0) {
    System.out.printf("Add Product : (1) \n");
    System.out.printf("  Go Back  : (2) \n");
} else {
    System.out.printf("Add Product           : (1) \n");
    System.out.printf("Add Service(COMING SOON): (2) \n");
    System.out.printf("Process Payment        : (3) \n");
    System.out.printf("Go Back                : (4) \n");
}
```

Afterwards, the user may enter “Process Payment” which will use a method in TransactionDetails to calculate the total price of the TransactionDetails and then a few methods in Transaction will calculate all the TransactionDetails with some calculation such as tax, discount for members, and then

calculating the Grand Total of the Transaction. after the calculation, member points can also be gained after a payment is successful.

```
470         member.get(oIndex).topUp(transactionTotal); /.
471         System.out.printf("\n Payment Succesful \n");
472         return true;
```

The user can also get a Transaction Report to display all the TransactionDetails within the Transaction.