TARC

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UNIVERSITY COLLEGE

Faculty of Computing and Information Technology
AACS1074 Programming Concepts & Design I
Assignment 2022/2023

Assignment Title	:	UMT Pos System
Programme	:	DCS
Tutorial Group	:	Group 8
Tutor	:	YASOTHA MUNIRETNAM
Submission Date	:	23/9/2022

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DECLARATION OF ORIGINALITY

We declare that this assignment is free from all forms of plagiarism and for all intents and purposes is our own work. We understand that we will be penalized if we have not complied with TAR UC's Plagiarism policy.

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Table of Contents

1.0 Introduction

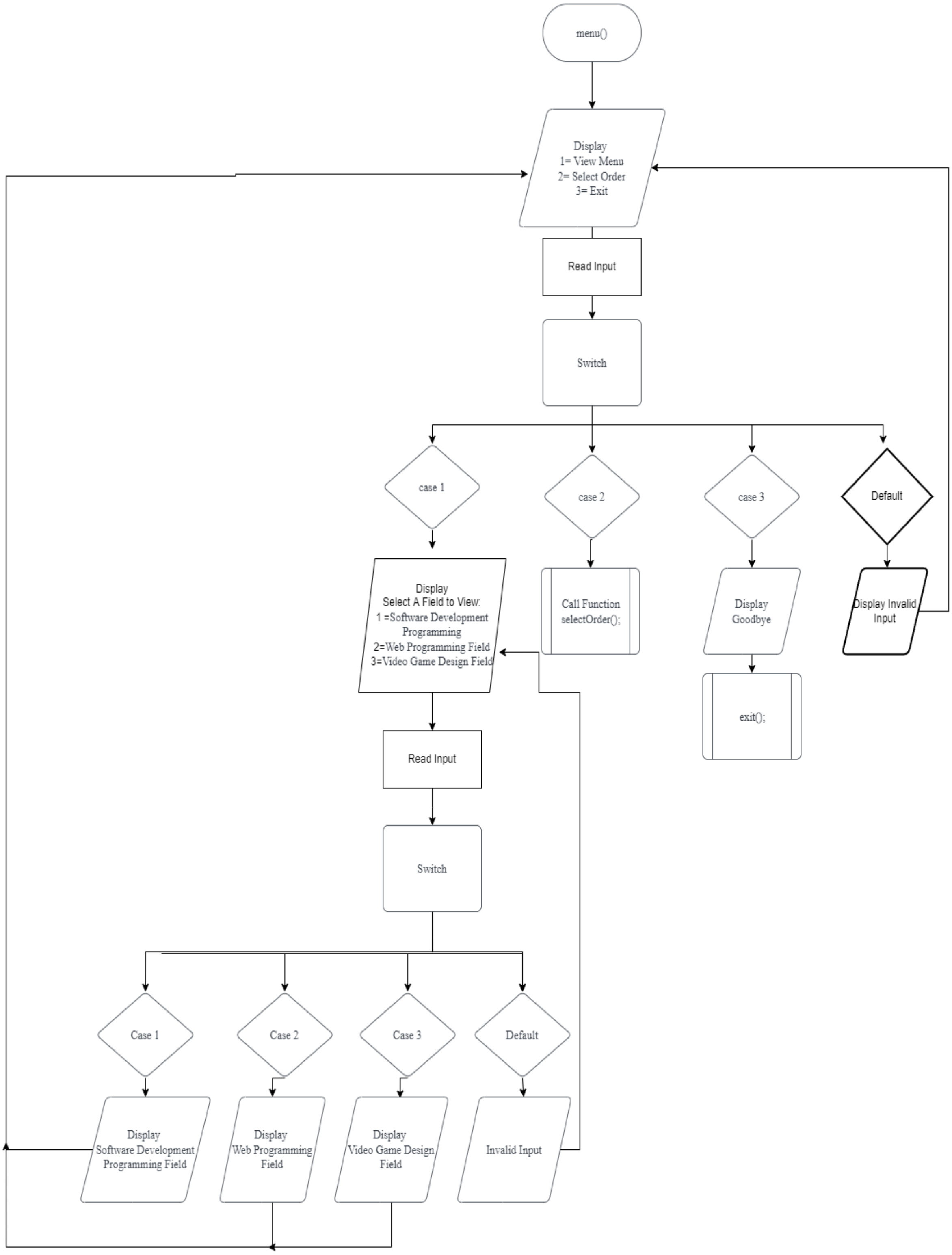
Hello Sir/Miss, my team has prepared a UMT Pos System where it is a bookstore selling programming books for different fields. The fields included in this system are Software Development Programming, Web programming and Video game design.

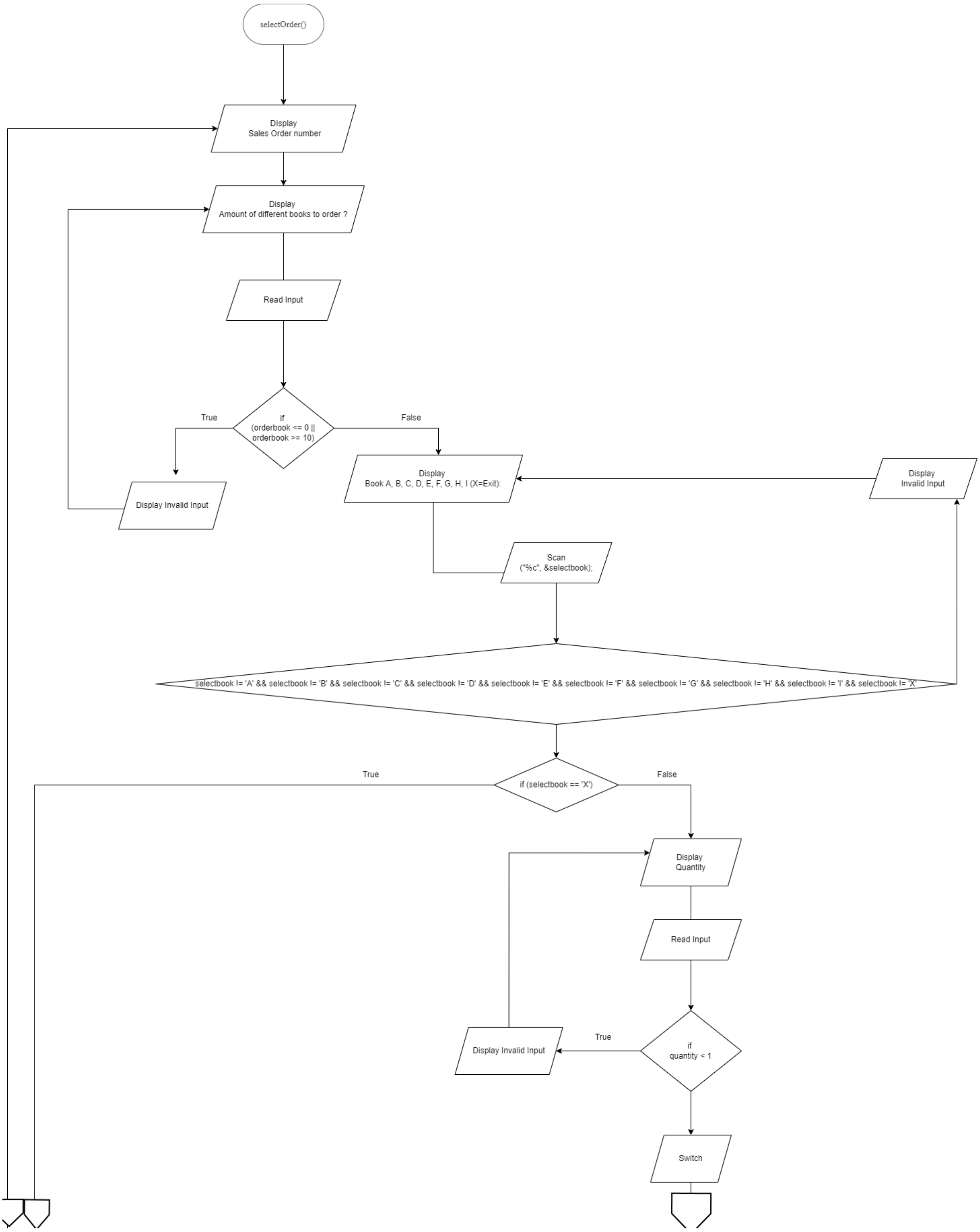
The bookstore is open on weekdays to sell mainly the programming books for year 1 students. The purpose of this system is to help students in programming class ro purchase reference books for their studies, and it also helps sellers to record whole day worth of data on how much books have sold and how much it cost for the book sold.

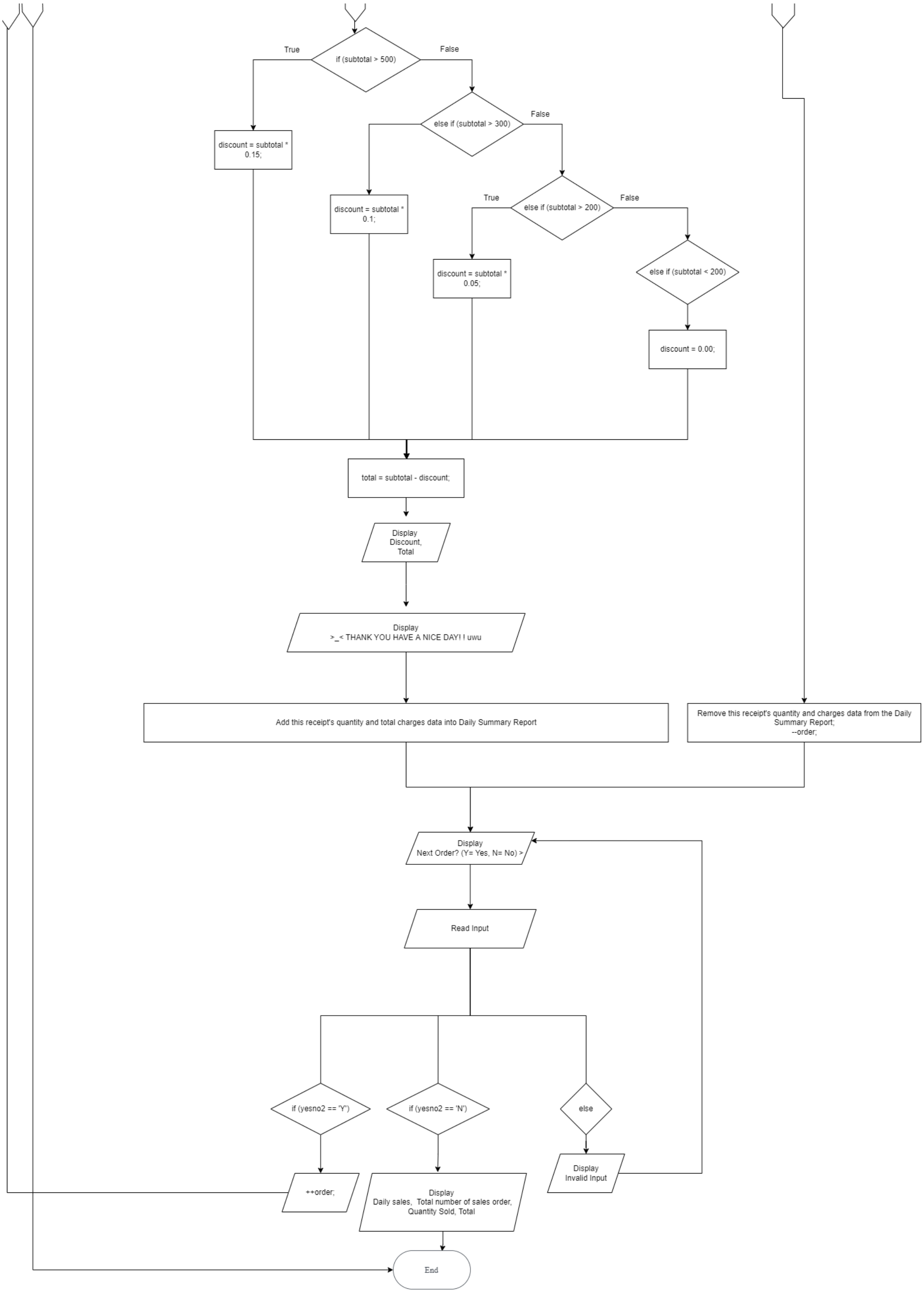
This system can help the student view the menu to see what specific books it sells, each field has 3 books available for students. And if students are interested and want to purchase the books, this system can help them select how many and which book for their orders and the system will calculate how much for the price and give a discount according to the purchase and print out a receipt.

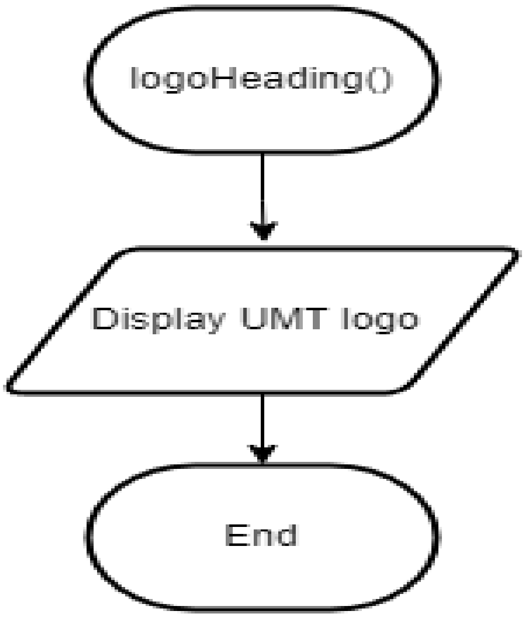
By pressing yes to the continuing order, the system will keep running for the next student to use the program to make the next order until they don't want to order any longer. After each order from a student, the system stores all the purchase quantity and purchase data into the daily summary report where it will display how much quantity each type of book has sold in a day and display the final amount of price for all the orders to the seller.

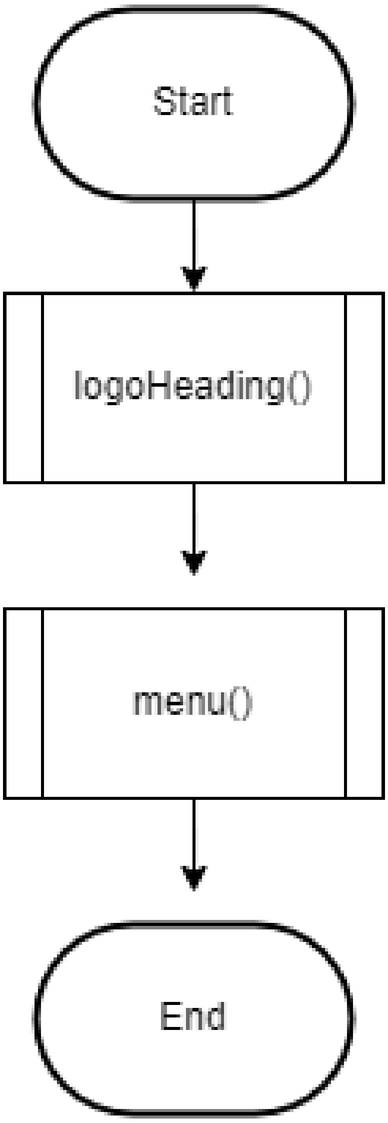
2.0 Flowchart Design




selectOrder()
DIsplay
Sales Order number
Display
Amount of different books to order ?
Read Input
True
if
(orderbook <= 0 ||
orderbook >= 10)
False
Display Invalid Input
Display
Book A, B, C, D, E, F, G, H, I (X=Exit):
Display
Invalid Input
Scan
("%c", &selectbook);
selectbook != 'A' && selectbook != 'B' && selectbook != 'C' && selectbook != 'D' && selectbook != 'E' && selectbook != 'F' && selectbook != 'G' && selectbook != 'H' && selectbook != 'I' && selectbook != 'X'
True
if (selectbook == 'X')
False
Display
Quantity
Read Input
True
Display Invalid Input
if
quantity < 1
Switch


True
if (subtotal > 500)
False
discount = subtotal * 0.15;
else if (subtotal > 300)
False
discount = subtotal * 0.1;
True
else if (subtotal > 200)
False
discount = subtotal * 0.05;
else if (subtotal < 200)
discount = 0.00;
total = subtotal - discount;
Display Discount, Total
Display >_< THANK YOU HAVE A NICE DAY! ! uwu
Add this receipt's quantity and total charges data into Daily Summary Report
Remove this receipt's quantity and charges data from the Daily Summary Report; --order;
Display Next Order? (Y= Yes, N= No) >
Read Input
if (yesno2 == 'Y')
if (yesno2 == 'N')
else
++order;
Display Daily sales, Total number of sales order, Quantity Sold, Total
Display Invalid Input
End


logoHeading()
Display UMT logo
End


Start
logoHeading()
menu()
End

3.0 Constants and Variables

```
Global variable{
                    #define A 69.00
                    #define B 70.00
                    #define C 55.50
                    #define D 26.37
                    #define E 44.50
                    #define F 67.00
                    #define G 75.00
                    #define H 60.00
                    #define I 83.00
                    }
void menu() {int viewMenu , fieldView }
int selectOrder(){int  x, order , qtyBook[9]  , finalqtySold, orderbook, quantity, receipttotal[9]
double totalbook[9], price , total, discount, finalSold, receiptbook[9]
char yesno, selectbook, yesno2}
```

3.1 Constants

Identifiers	Data types	Values	Description /Purpose information
A	double	69.00	Use to label price for book A, can be used in calculating total amount needed to pay for an order
B	double	70.00	Use to label price for book B, can be used in calculating total amount needed to pay for an order
C	double	55.50	Use to label price for book C, can be used in calculating total amount needed to pay for an order
D	double	26.37	Use to label price for book D, can be used in calculating total amount needed to pay for an order

E	double	44.50	Use to label price for book E, can be used in calculating total amount needed to pay for an order
F	double	67.00	Use to label price for book F, can be used in calculating total amount needed to pay for an order
G	double	75.00	Use to label price for book G, can be used in calculating total amount needed to pay for an order
H	double	60.00	Use to label price for book H, can be used in calculating total amount needed to pay for an order
I	double	83.00	Use to label price for book I, can be used in calculating total amount needed to pay for an order

3.2 Variables

Identifier	**Data type**	**Description/Purpose information**
viewMenu	int	Use for switch to select 3 option (View Menu, Select Order, Exit) the moment the system starts
fieldView	int	If user select 1 for 'viewMenu', it will take user to the second switch to select 3 different field category and if user input the field's number it will display the available book in that field in the Menu
x	int	used in a 'for loop' to make sure the amount of loop is the same as the value from 'orderbook'
order	int	Show the seller how many orders have been made, everytime an order is complete.

		the order value increase by 1
qtyBook[9]	int	All the quantity for each 9 type of book ordered by the student is store into the daily summary report
orderbook	int	determine how many type of book a student wants to order
quantity	int	determine how much book to order for the book of their choice
receipttotal[9]	int	All the quantity for each 9 type of book ordered by the student is store into the receipt
finalqtySold	int	Total quantity of book sold for Daily summary report
totalbook[9]	double	the total price after a book type times with the amount of quantity ordered and store it in the daily summary report
price	double	depends on the ‘selectbook’ value, the price changes according to the type of book selected
total	double	The total amount after subtotal subtract with discount on the receipt
discount	double	Give discount depends on the subtotal amount
finalSold	double	Sum up all the ‘totalbook[9]’ for the final value in the daily summary report
receiptbook[9]	double	the total price after a book type times with the amount of quantity ordered and display it on the receipt
yesno	char	To confirm an order from the student
yesno2	char	Deciding whether to continue the order or not. If yes, loop the select order system. If no, display the daily summary report

selectbook	char	to determine which book a student wants

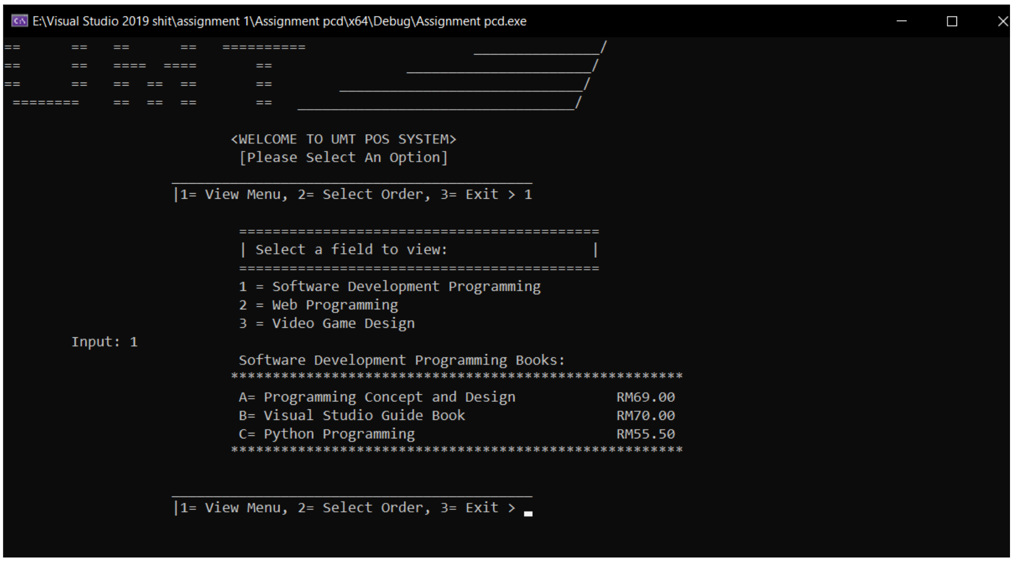
4.0 Program Testing & Outputs

3.1 Run 1 Scenario

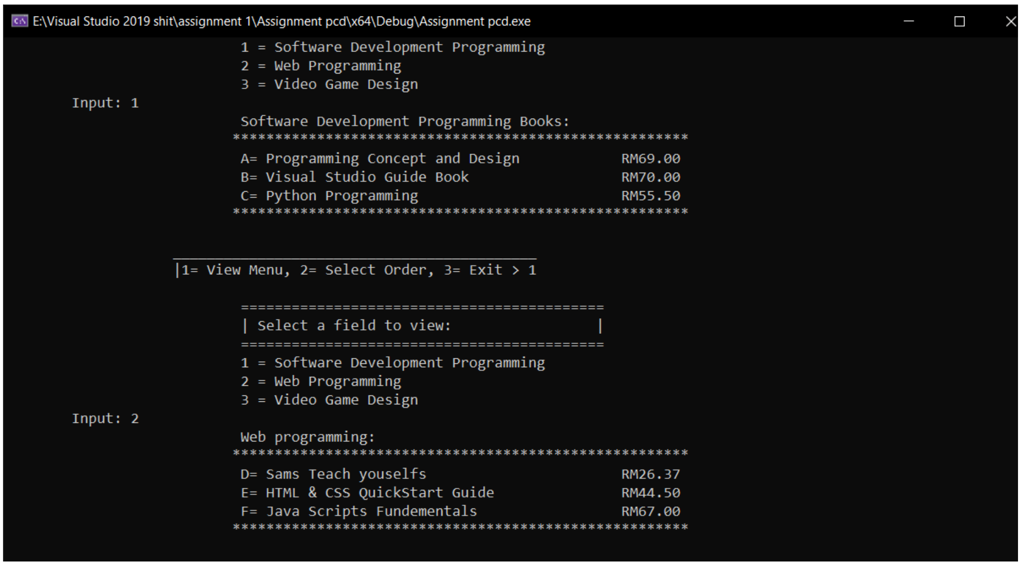
Viewing through all the fields and books available for that particular field, Exit program after finish viewing all 3 fields.

Test Data + Expected Outputs Table

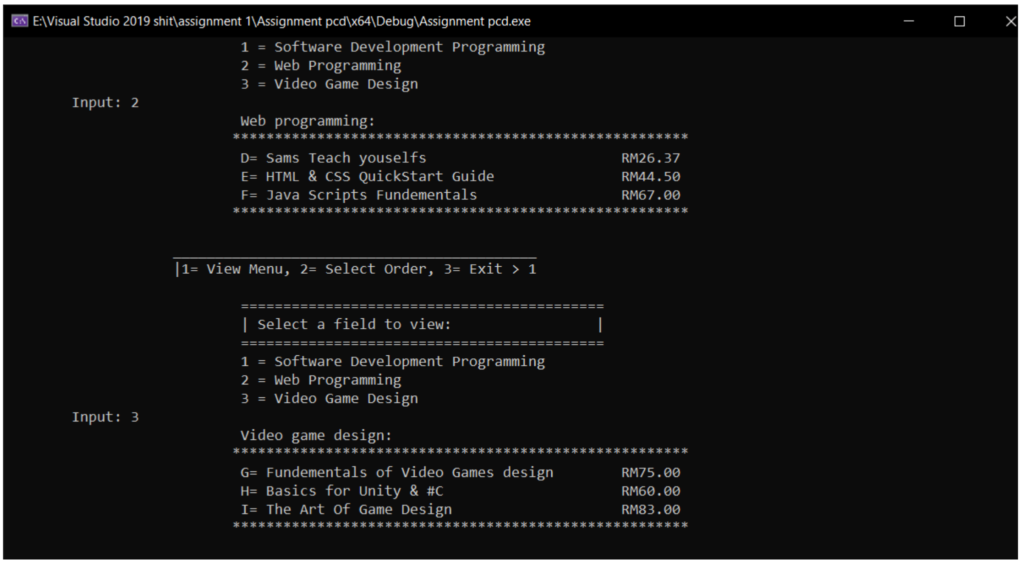
	Input	Expected Results / Outputs
select field	**Field Selected**	**Display**
1	1	Display “Software Development Programming” field, head back to UMT heading right after
2	2	Display “Web Programming” field, head back to UMT heading right after
3	3	Display “Video Game Design” field, head back to UMT heading right after
4	a ; -9	Invalid input, loop back to selecting field


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

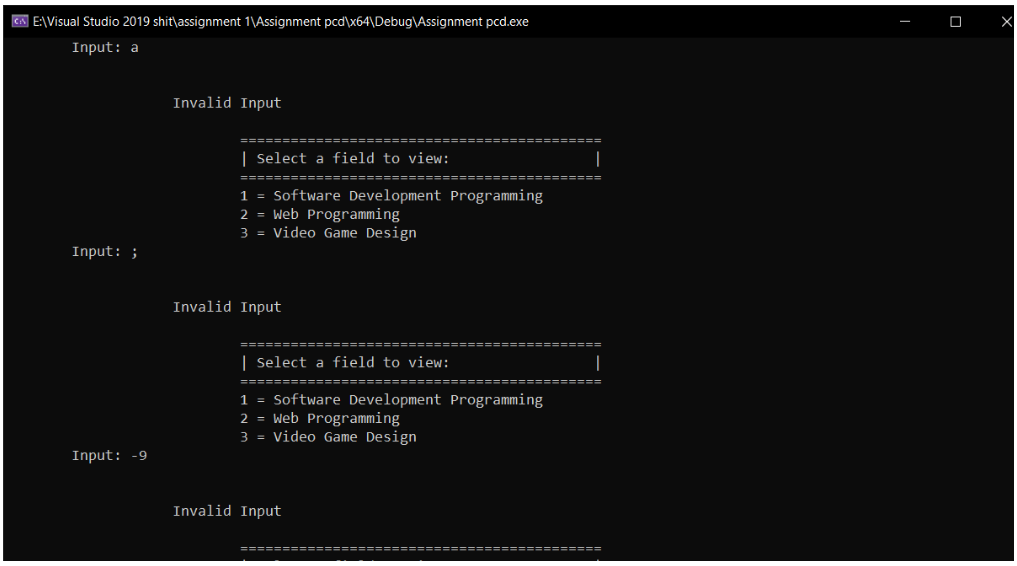
```
==      ==   ==      ==   ==========                    ________________/
==      ==   ====  ====        ==                ________________________/
==      ==   ==  ==  ==        ==        ______________________________/
 ========    ==  ==  ==        ==   __________________________________/

                           <WELCOME TO UMT POS SYSTEM>
                            [Please Select An Option]
                    ___________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > 1

                            ===========================================
                            | Select a field to view:                 |
                            ===========================================
                            1 = Software Development Programming
                            2 = Web Programming
                            3 = Video Game Design
        Input: 1

                            Software Development Programming Books:
                           ******************************************************
                            A= Programming Concept and Design            RM69.00
                            B= Visual Studio Guide Book                  RM70.00
                            C= Python Programming                        RM55.50
                           ******************************************************

                    ___________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > _
```


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

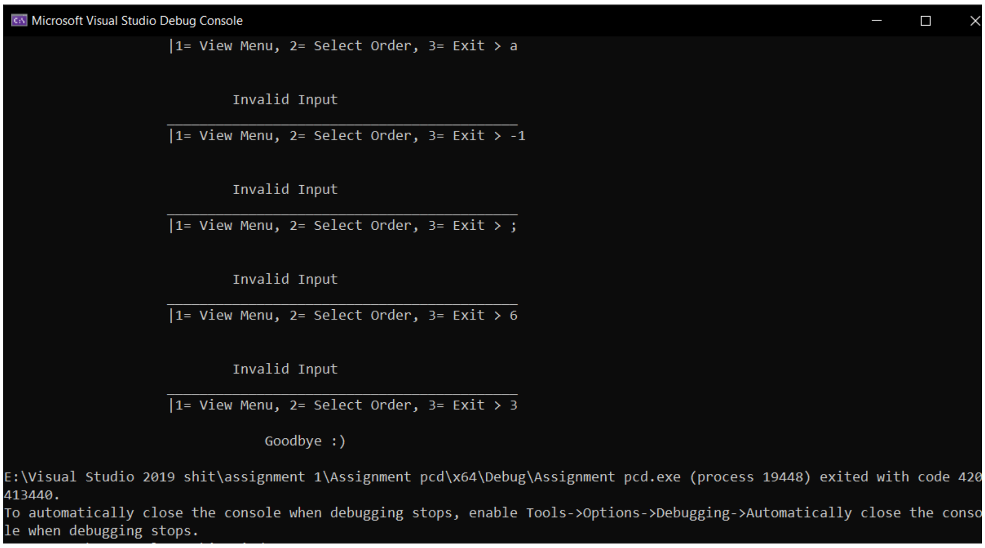
```
                            1 = Software Development Programming
                            2 = Web Programming
                            3 = Video Game Design
        Input: 1

                            Software Development Programming Books:
                           ******************************************************
                            A= Programming Concept and Design            RM69.00
                            B= Visual Studio Guide Book                  RM70.00
                            C= Python Programming                        RM55.50
                           ******************************************************

                    ___________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > 1

                            ===========================================
                            | Select a field to view:                 |
                            ===========================================
                            1 = Software Development Programming
                            2 = Web Programming
                            3 = Video Game Design
        Input: 2

                            Web programming:
                           ******************************************************
                            D= Sams Teach youselfs                       RM26.37
                            E= HTML & CSS QuickStart Guide               RM44.50
                            F= Java Scripts Fundementals                 RM67.00
                           ******************************************************
```


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

```
                            1 = Software Development Programming
                            2 = Web Programming
                            3 = Video Game Design
        Input: 2

                            Web programming:
                           ******************************************************
                            D= Sams Teach youselfs                       RM26.37
                            E= HTML & CSS QuickStart Guide               RM44.50
                            F= Java Scripts Fundementals                 RM67.00
                           ******************************************************

                    ___________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > 1

                            ===========================================
                            | Select a field to view:                 |
                            ===========================================
                            1 = Software Development Programming
                            2 = Web Programming
                            3 = Video Game Design
        Input: 3

                            Video game design:
                           ******************************************************
                            G= Fundementals of Video Games design        RM75.00
                            H= Basics for Unity & #C                     RM60.00
                            I= The Art Of Game Design                    RM83.00
                           ******************************************************
```



```
        Input: a


                    Invalid Input

                            ============================================
                            | Select a field to view:                  |
                            ============================================
                            1 = Software Development Programming
                            2 = Web Programming
                            3 = Video Game Design
        Input: ;


                    Invalid Input

                            ============================================
                            | Select a field to view:                  |
                            ============================================
                            1 = Software Development Programming
                            2 = Web Programming
                            3 = Video Game Design
        Input: -9


                    Invalid Input

                            ============================================
```



```
                    |1= View Menu, 2= Select Order, 3= Exit > a


                            Invalid Input
                    ______________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > -1


                            Invalid Input
                    ______________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > ;


                            Invalid Input
                    ______________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > 6


                            Invalid Input
                    ______________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > 3

                                Goodbye :)

E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe (process 19448) exited with code 420
413440.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
```

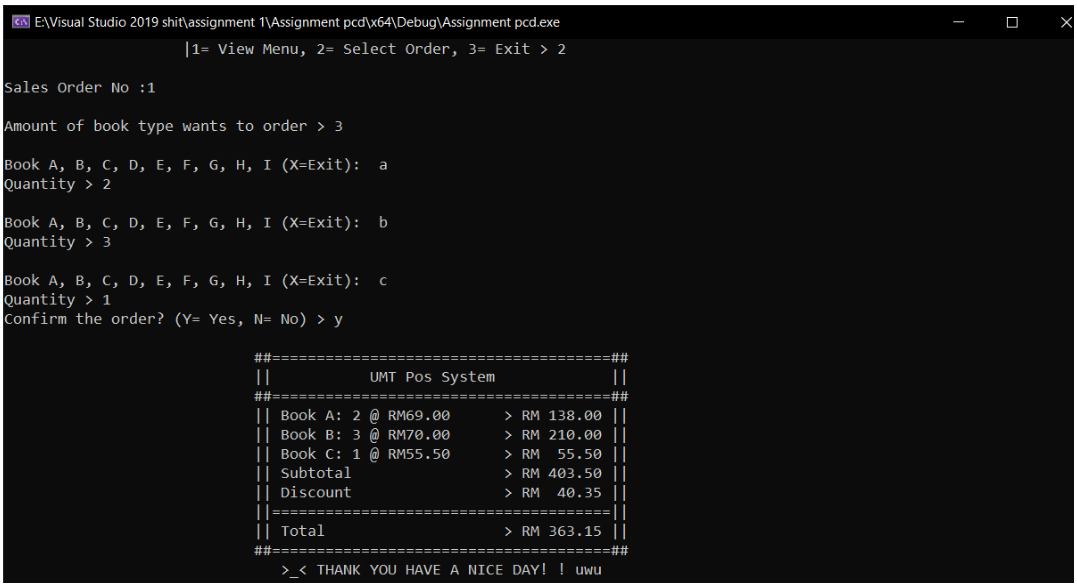
3.2 Run 2 Scenario

Have 3 sales orders for that day. Daily Summary Report is displayed after last sales order

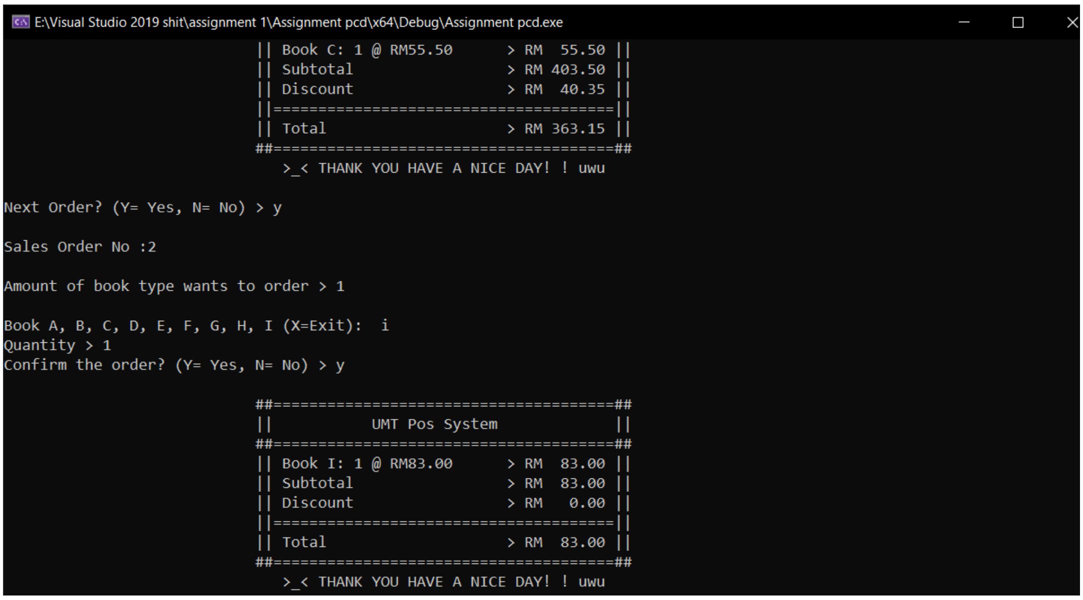
Test Data + Expected Outputs Table

	Input		**Expected Results / Outputs**			
Order	**Book Ordered**	**Quantity**		**Book charges**	**Discount**	**Total charges**
1	A B C	2 3 1		2*69.00 = 138.00 3*70.00 = 210.00 1*55.50 = 55.50	40.35	363.15
2	I	1		1*83.00 = 83.00	00.00	83.00
3	A D G E	1 2 1 1		1*69.00 = 69.00 2*26.37 = 52.74 1*75.00 = 75.00 1*44.50 = 45.00	12.06	229.18

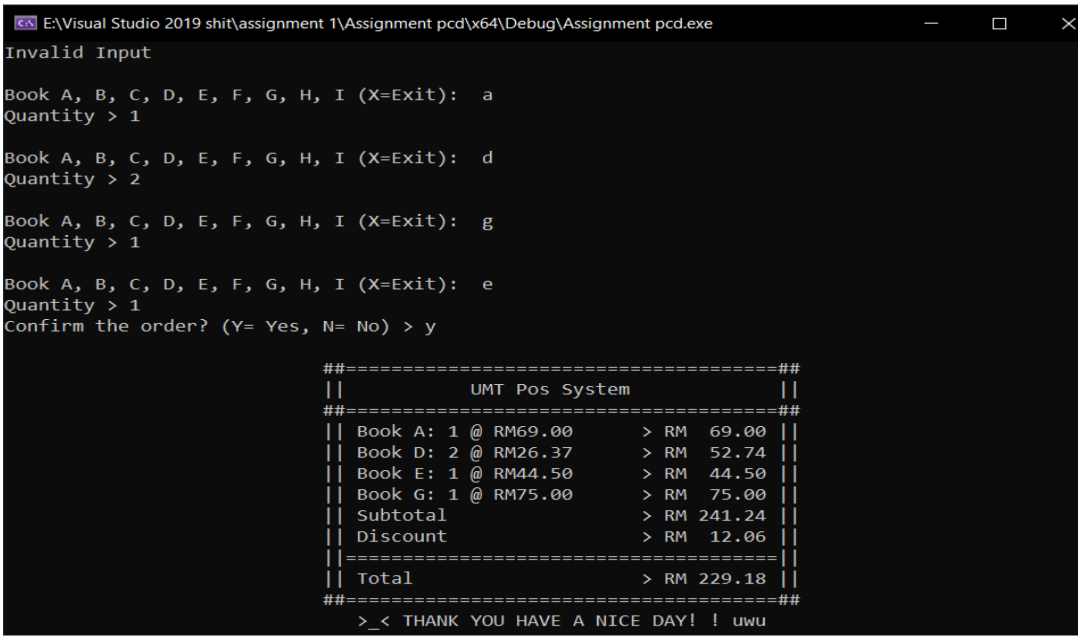
			Total	Sales Order Summary Report A 3 207.00 B 3 210.00 C 1 55.50 D 2 52.74 E 1 45.00 F 0 00.00 G 1 75.00 H 0 00.00 I 1 83.00 12 727.74	52.41	675.33


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

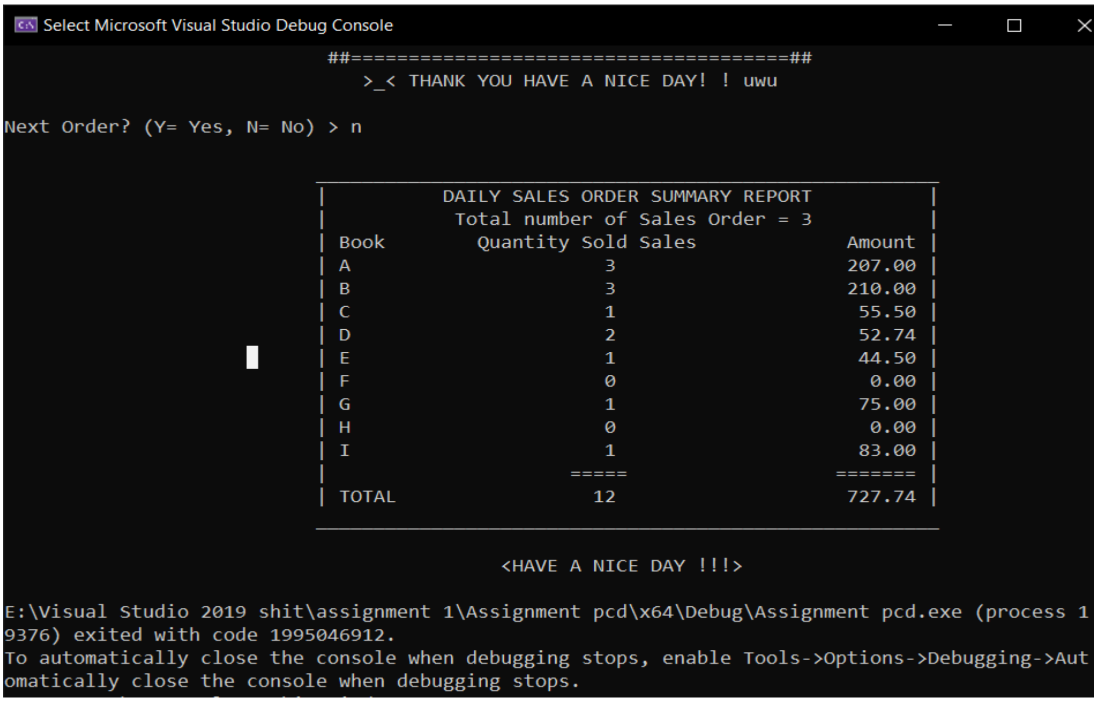
```
                    |1= View Menu, 2= Select Order, 3= Exit > 2

Sales Order No :1

Amount of book type wants to order > 3

Book A, B, C, D, E, F, G, H, I (X=Exit):  a
Quantity > 2

Book A, B, C, D, E, F, G, H, I (X=Exit):  b
Quantity > 3

Book A, B, C, D, E, F, G, H, I (X=Exit):  c
Quantity > 1
Confirm the order? (Y= Yes, N= No) > y

                            ##====================================##
                            ||           UMT Pos System           ||
                            ##====================================##
                            || Book A: 2 @ RM69.00      > RM 138.00 ||
                            || Book B: 3 @ RM70.00      > RM 210.00 ||
                            || Book C: 1 @ RM55.50      > RM  55.50 ||
                            || Subtotal                 > RM 403.50 ||
                            || Discount                 > RM  40.35 ||
                            ||====================================||
                            || Total                    > RM 363.15 ||
                            ##====================================##
                               >_< THANK YOU HAVE A NICE DAY! ! uwu
```


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

```
                            || Book C: 1 @ RM55.50      > RM  55.50 ||
                            || Subtotal                 > RM 403.50 ||
                            || Discount                 > RM  40.35 ||
                            ||====================================||
                            || Total                    > RM 363.15 ||
                            ##====================================##
                               >_< THANK YOU HAVE A NICE DAY! ! uwu

Next Order? (Y= Yes, N= No) > y

Sales Order No :2

Amount of book type wants to order > 1

Book A, B, C, D, E, F, G, H, I (X=Exit):  i
Quantity > 1
Confirm the order? (Y= Yes, N= No) > y

                            ##====================================##
                            ||           UMT Pos System           ||
                            ##====================================##
                            || Book I: 1 @ RM83.00      > RM  83.00 ||
                            || Subtotal                 > RM  83.00 ||
                            || Discount                 > RM   0.00 ||
                            ||====================================||
                            || Total                    > RM  83.00 ||
                            ##====================================##
                               >_< THANK YOU HAVE A NICE DAY! ! uwu
```



```
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  a
Quantity > 1

Book A, B, C, D, E, F, G, H, I (X=Exit):  d
Quantity > 2

Book A, B, C, D, E, F, G, H, I (X=Exit):  g
Quantity > 1

Book A, B, C, D, E, F, G, H, I (X=Exit):  e
Quantity > 1
Confirm the order? (Y= Yes, N= No) > y

                            ##=====================================##
                            ||           UMT Pos System            ||
                            ##=====================================##
                            || Book A: 1 @ RM69.00       > RM  69.00 ||
                            || Book D: 2 @ RM26.37       > RM  52.74 ||
                            || Book E: 1 @ RM44.50       > RM  44.50 ||
                            || Book G: 1 @ RM75.00       > RM  75.00 ||
                            || Subtotal                  > RM 241.24 ||
                            || Discount                  > RM  12.06 ||
                            ||===================================||
                            || Total                     > RM 229.18 ||
                            ##=====================================##
                               >_< THANK YOU HAVE A NICE DAY! ! uwu
```



```
                            ##=====================================##
                               >_< THANK YOU HAVE A NICE DAY! ! uwu

Next Order? (Y= Yes, N= No) > n

                            _______________________________________________________
                            |          DAILY SALES ORDER SUMMARY REPORT            |
                            |           Total number of Sales Order = 3            |
                            | Book        Quantity Sold Sales              Amount |
                            | A                       3                    207.00 |
                            | B                       3                    210.00 |
                            | C                       1                     55.50 |
                            | D                       2                     52.74 |
                            | E                       1                     44.50 |
                            | F                       0                      0.00 |
                            | G                       1                     75.00 |
                            | H                       0                      0.00 |
                            | I                       1                     83.00 |
                            |                     =====                   ======= |
                            | TOTAL                  12                    727.74 |
                            _______________________________________________________

                                           <HAVE A NICE DAY !!!>

E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe (process 1
9376) exited with code 1995046912.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Aut
omatically close the console when debugging stops.
```

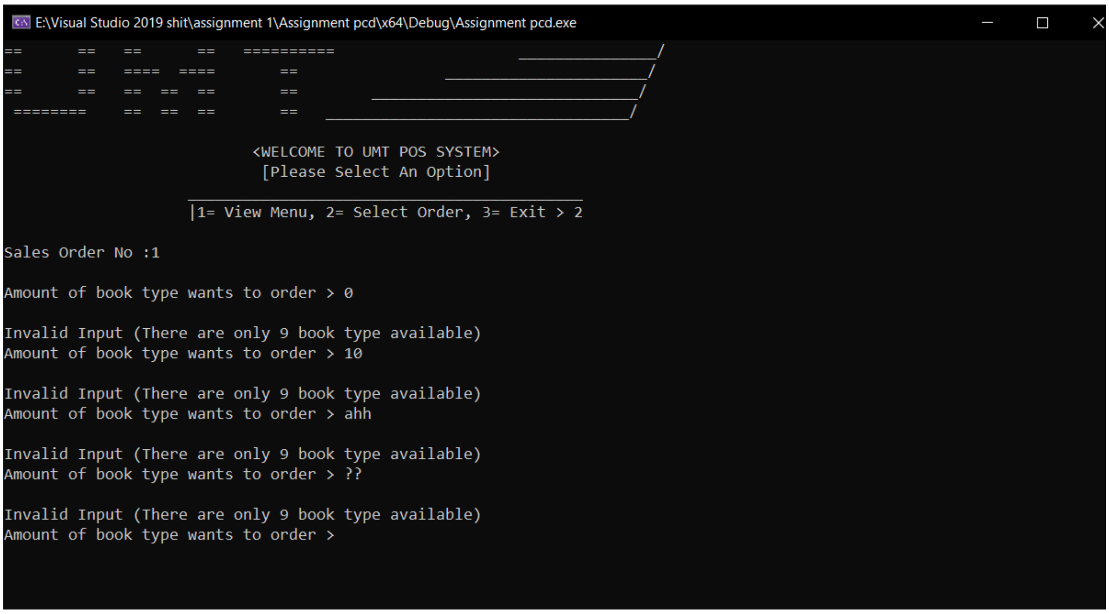
3.3 Run 3 Scenario

Validating input for the system when selecting order, Exit after validating all input

Test Data + Expected Outputs Table

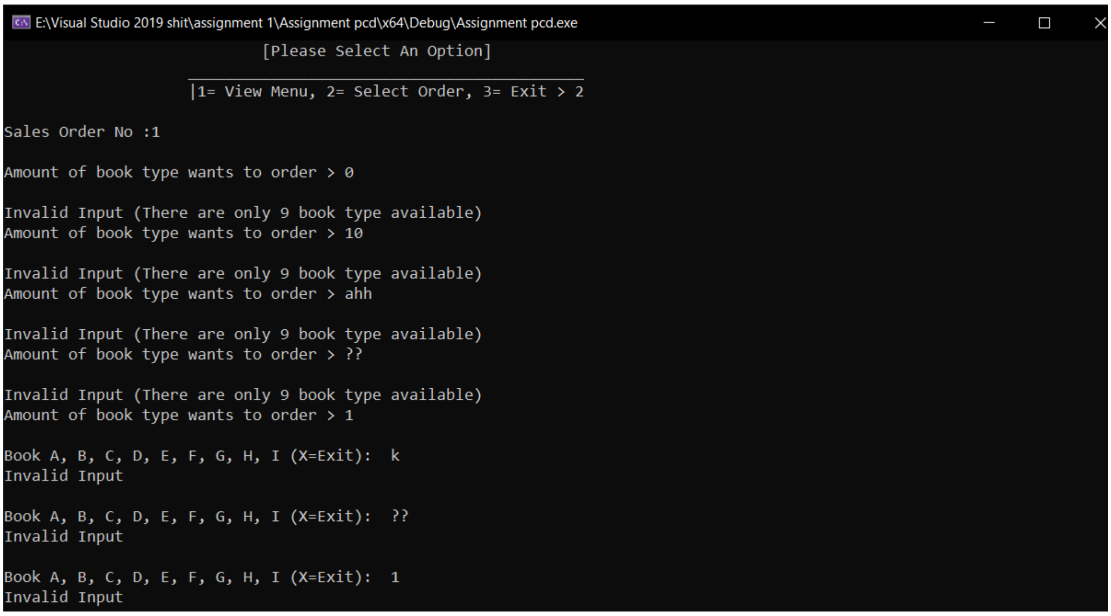
	Input				Expected Results / Outputs			
Select Order	Amount of book want to order	book ordered	Qty	Confirm order		Book charges	Discount	Total charges

1	0 10 ahh ??							
	1	k ?? 1						
	1	a	-1 a ??					
	1	a	1	k ?? 2				
	1	a	1	y		1*69.00	00.00	69.00
					Total :	Sales Order Summary Report A 1 69.00 B 0 00.00 C 0 00.00 D 0 00.00 E 0 00.00 F 0 00.00 G 0 00.00 H 0 00.00 I 0 00.00 1 69.00	00.00	69.00

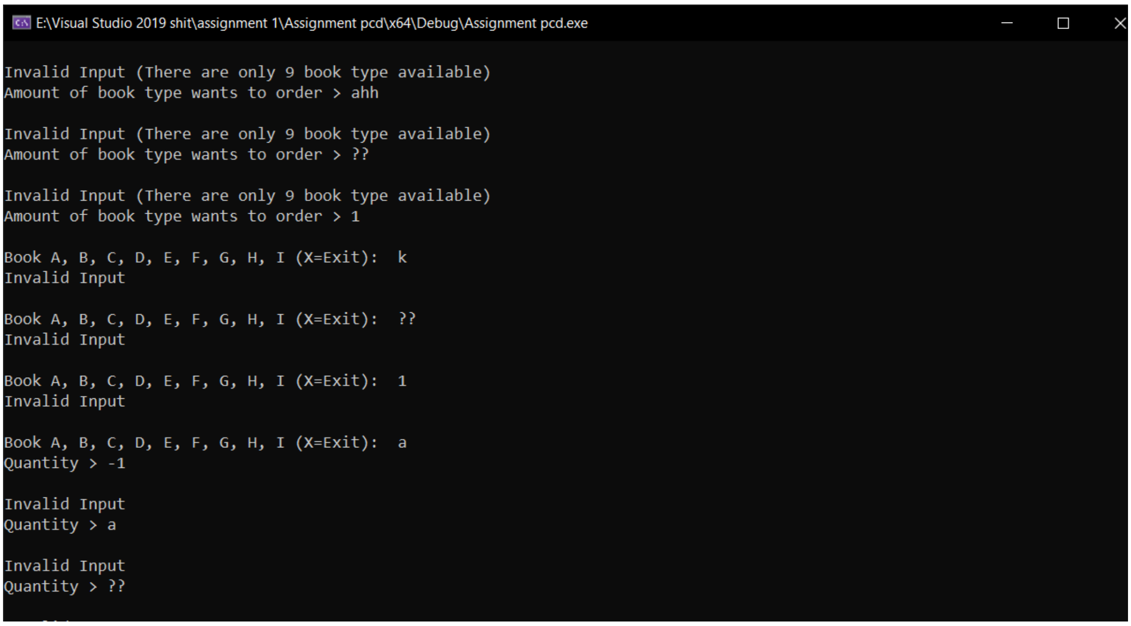


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

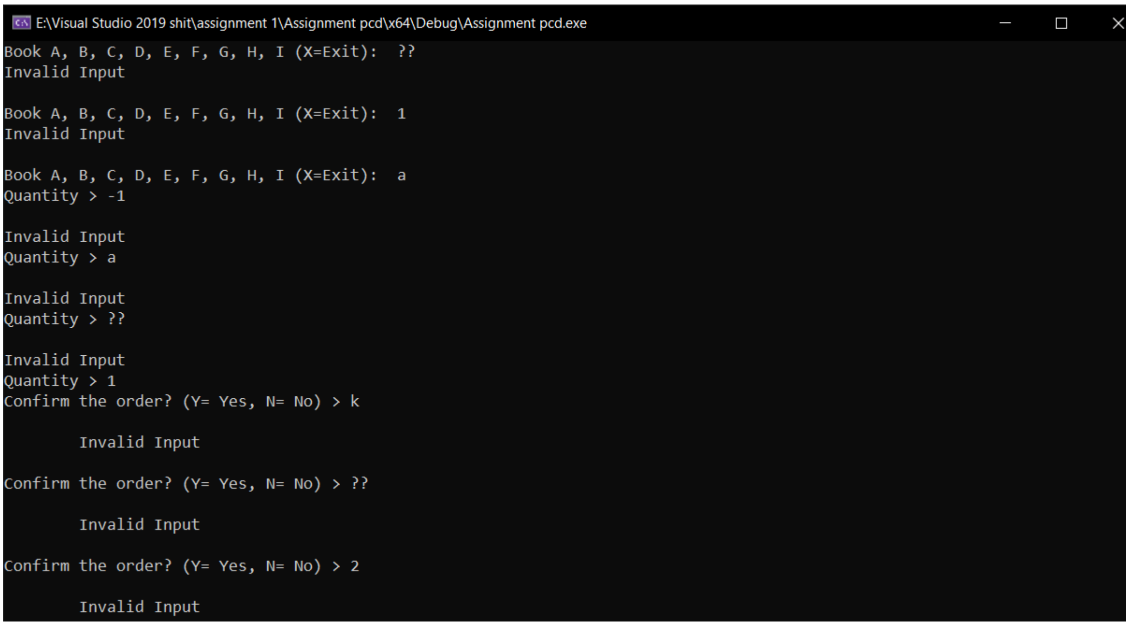
```
==      ==   ==       ==   ==========                    _______________/
==      ==   ====  ====       ==               ______________________/
==      ==   ==  ==  ==       ==       _____________________________/
 ========    ==  ==  ==       ==   _________________________________/

                           <WELCOME TO UMT POS SYSTEM>
                            [Please Select An Option]
                    ____________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > 2

Sales Order No :1

Amount of book type wants to order > 0

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > 10

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > ahh

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > ??

Invalid Input (There are only 9 book type available)
Amount of book type wants to order >
```


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

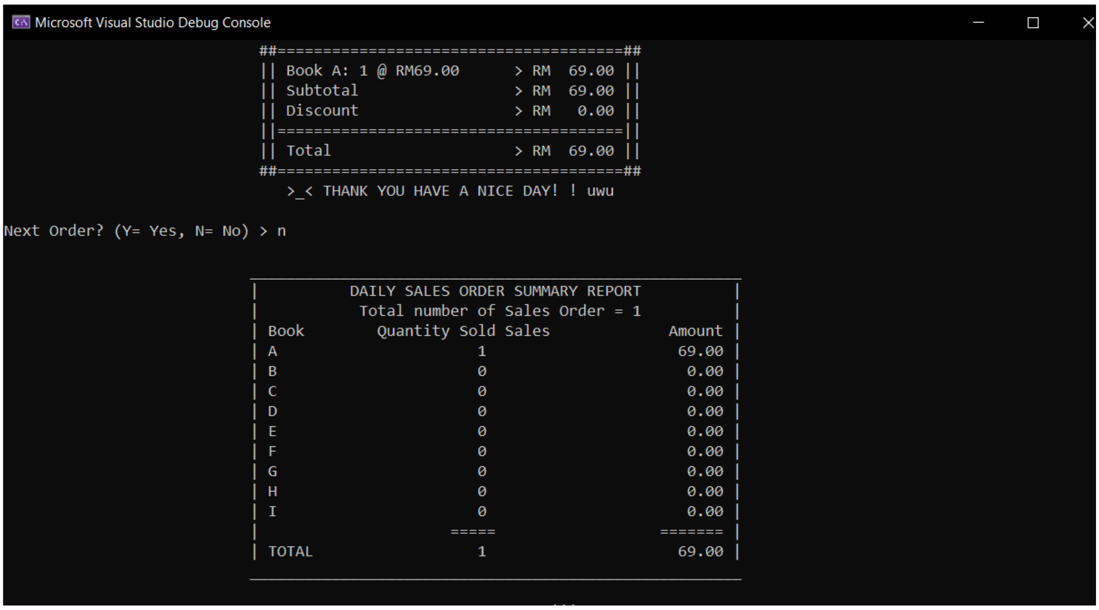
```
                             [Please Select An Option]
                    ___________________________________________
                    |1= View Menu, 2= Select Order, 3= Exit > 2

Sales Order No :1

Amount of book type wants to order > 0

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > 10

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > ahh

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > ??

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > 1

Book A, B, C, D, E, F, G, H, I (X=Exit):  k
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  ??
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  1
Invalid Input
```


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

```
Invalid Input (There are only 9 book type available)
Amount of book type wants to order > ahh

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > ??

Invalid Input (There are only 9 book type available)
Amount of book type wants to order > 1

Book A, B, C, D, E, F, G, H, I (X=Exit):  k
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  ??
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  1
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  a
Quantity > -1

Invalid Input
Quantity > a

Invalid Input
Quantity > ??
```


E:\Visual Studio 2019 shit\assignment 1\Assignment pcd\x64\Debug\Assignment pcd.exe

```
Book A, B, C, D, E, F, G, H, I (X=Exit):  ??
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  1
Invalid Input

Book A, B, C, D, E, F, G, H, I (X=Exit):  a
Quantity > -1

Invalid Input
Quantity > a

Invalid Input
Quantity > ??

Invalid Input
Quantity > 1
Confirm the order? (Y= Yes, N= No) > k

        Invalid Input

Confirm the order? (Y= Yes, N= No) > ??

        Invalid Input

Confirm the order? (Y= Yes, N= No) > 2

        Invalid Input
```



```
                            ##=====================================##
                            || Book A: 1 @ RM69.00      > RM  69.00 ||
                            || Subtotal                 > RM  69.00 ||
                            || Discount                 > RM   0.00 ||
                            ||=====================================||
                            || Total                    > RM  69.00 ||
                            ##=====================================##
                               >_< THANK YOU HAVE A NICE DAY! ! uwu

Next Order? (Y= Yes, N= No) > n

                           _____________________________________________________
                           |          DAILY SALES ORDER SUMMARY REPORT           |
                           |           Total number of Sales Order = 1           |
                           | Book         Quantity Sold Sales            Amount  |
                           | A                      1                     69.00  |
                           | B                      0                      0.00  |
                           | C                      0                      0.00  |
                           | D                      0                      0.00  |
                           | E                      0                      0.00  |
                           | F                      0                      0.00  |
                           | G                      0                      0.00  |
                           | H                      0                      0.00  |
                           | I                      0                      0.00  |
                           |                    =====                   =======  |
                           | TOTAL                  1                     69.00  |
                           _____________________________________________________
```

Appendix – Program Listing

```
#include <stdio.h>
#include <ctype.h>
#pragma warning(disable:4996)
//define Book prices
#define A 69.00
#define B 70.00
#define C 55.50
#define D 26.37
#define E 44.50
#define F 67.00
#define G 75.00
#define H 60.00
#define I 83.00

void logoHeading()
{
        printf("==\t==   ==      ==   ==========\t\t\t_______________/\n");
        printf("==\t==   ====  ====       ==    \t\t_______________________/\n");
        printf("==\t==   ==  ==  ==       ==    \t______________________________/\n");
        printf(" ========    ==  ==  ==       ==    ___________________________________/\n");
        printf("\n\t\t\t   <WELCOME TO UMT POS SYSTEM>\n");
        printf("\t\t\t    [Please Select An Option]\n");
}
        void menu() //This function is for viewing the first 3 option
        {
                int viewMenu = 0, fieldView = 0;
                while (viewMenu != 3)
                {
                        viewMenu = 0;
                        fieldView = 0;
                        do
                        {
                                printf("\t\t    ______________________________________________ \n\t\t
|1= View Menu, 2= Select Order, 3= Exit > "); //if press something other than 1,2,3 display invalid input
                                scanf_s("%d", &viewMenu);
                                switch (viewMenu)
                {
                case 1: //field menu
                    do {
                        printf("\n\t\t\t
==========================================\n\t\t\t    | Select a field to view:\t\t      |\n\t\t\t
==========================================\n\t\t\t    1 = Software Development
Programming\n\t\t\t    2 = Web Programming\n\t\t\t    3 = Video Game Design\n\tInput: ");
                        scanf_s("%d", &fieldView);

                        switch (fieldView)
                        {
                        case 1:
                            printf("\t\t\t    Software Development
Programming Books:\n\t\t\t    ****************************************************\n\t\t\t
A= Programming Concept and Design\t\t RM69.00\n");
                            printf("\t\t\t    B= Visual Studio Guide Book \t\t
RM70.00\n\t\t\t    C= Python Programming \t\t\t RM55.50\n\t\t\t
****************************************************\n\n");
                            break;
                        case 2:
                            printf("\t\t\t    Web programming:\n\t\t\t
****************************************************\n\t\t\t    D= Sams Teach youselfs \t\t\t
RM26.37\n");
                            printf("\t\t\t    E= HTML & CSS QuickStart
Guide \t\t RM44.50\n\t\t\t    F= Java Scripts Fundementals \t\t RM67.00\n\t\t\t
****************************************************\n\n");
                            break;
                        case 3:
                            printf("\t\t\t    Video game design:\n\t\t\t
****************************************************\n\t\t\t    G= Fundementals of Video
Games design \t RM75.00\n");
                            printf("\t\t\t    H= Basics for Unity & #C \t\t\t
RM60.00\n\t\t\t    I= The Art Of Game Design \t\t\t RM83.00\n\t\t\t
****************************************************\n\n");
                            break;
                        default:
                            printf("\n\n\t\t    Invalid Input\n");
                            rewind(stdin);
                            break;
                        }
                    } while (fieldView < 1 || fieldView > 3);
                    break;
                case 2: //case 2 calls selectOrder function to ordering books
                    selectOrder();
                    break;
                case 3://end the program
                    printf("\n\t\t\t\tGoodbye :)\n");
                    exit();
                default:
                    printf("\n\n\t\t\t    Invalid Input\n");
                    rewind(stdin);
                }
            } while (viewMenu <= 0 || viewMenu > 3);
        }
    }
    int selectOrder()
    {
        int  x, order = 1, qtyBook[9] = { 0 } /*qtyBook is for storing daily summary of the books
ordered*/, finalqtySold = 0; //total quantity of book sold for daily summary
        double totalbook[9] = { 0 }/*total price for each book type for daily summary*/, price =
0, total = 0, discount = 0, finalSold = 0; //total price of book sold for daily summary
        char yesno, selectbook, yesno2;
        do
        {
            int orderbook = 0, quantity = 0;
            printf("\nSales Order No :%d\n\n", order);
            do
            {
                printf("Amount of book type wants to order > "); //how many type of
books the user wants to buy
                scanf("%d", &orderbook);
                if (orderbook <= 0 || orderbook >= 10)
                    printf("\nInvalid Input (There are only 9 book type
available)\n");
```

```
                    rewind(stdin);
            } while (orderbook < 1 || orderbook > 9);


            int receipttotal[9] = { 0 };//use for printing out quantity of book ordered per book
type for receipt
            double receiptbook[9] = { 0 } /*use for printing out total price per book for
receipt*/, totalbooks = 0, subtotal = 0;
            for (x = 1; x <= orderbook; ++x)
            {
                do {
                    rewind(stdin);
                    printf("\nBook A, B, C, D, E, F, G, H, I (X=Exit):  ");
                    scanf("%c", &selectbook);
                    selectbook = toupper(selectbook);
                    if (selectbook != 'A' && selectbook != 'B' && selectbook != 'C'
&& selectbook != 'D' && selectbook != 'E' && selectbook != 'F' && selectbook != 'G' && selectbook !=
'H' && selectbook != 'I' && selectbook != 'X')//for validating input
                        printf("Invalid Input\n");
                } while (selectbook != 'A' && selectbook != 'B' && selectbook != 'C'
&& selectbook != 'D' && selectbook != 'E' && selectbook != 'F' && selectbook != 'G' && selectbook !=
'H' && selectbook != 'I' && selectbook != 'X');
                if (selectbook == 'X')
                    return total;
                do {
                    printf("Quantity > ");
                    scanf("%d", &quantity);
                    if (quantity < 1)
                    {
                        printf("\nInvalid Input\n");
                        quantity = 0;
                        rewind(stdin);
                    }
                } while (quantity < 1);
                switch (selectbook)
                {
                case 'A':
                    price = A;
                    qtyBook[0] += quantity;
                    receipttotal[0] =+ quantity;
                    totalbook[0] = totalbook[0] + (price * quantity);
                    receiptbook[0] = (price * quantity);
                    break;
                case 'B':
                    price = B;
                    qtyBook[1] += quantity;
                    receipttotal[1] =+ quantity;
                    totalbook[1] = totalbook[1] + (price * quantity);
                    receiptbook[1] = (price * quantity);
                    break;
                case 'C':
                    price = C;
                    qtyBook[2] += quantity;
                    receipttotal[2] =+ quantity;
                    totalbook[2] = totalbook[2] + (price * quantity);
                    receiptbook[2] = (price * quantity);
                    break;
                case 'D':
                    price = D;
                    qtyBook[3] += quantity;
                    receipttotal[3] =+ quantity;
                    totalbook[3] = totalbook[3] + (price * quantity);
                    receiptbook[3] = (price * quantity);
                    break;
                case 'E':
                    price = E;
                    qtyBook[4] += quantity;
                    receipttotal[4] =+ quantity;
                    totalbook[4] = totalbook[4] + (price * quantity);
                    receiptbook[4] = (price * quantity);
                    break;
                case 'F':
                    price = F;
                    qtyBook[5] += quantity;
                    receipttotal[5] =+ quantity;
```

```
                    totalbook[5] = totalbook[5] + (price * quantity);
                    receiptbook[5] = (price * quantity);
                    break;
                case 'G':
                    price = G;
                    qtyBook[6] += quantity;
                    receipttotal[6] =+ quantity;
                    totalbook[6] = totalbook[6] + (price * quantity);
                    receiptbook[6] = (price * quantity);
                    break;
                case 'H':
                    price = H;
                    qtyBook[7] += quantity;
                    receipttotal[7] =+ quantity;
                    totalbook[7] = totalbook[7] + (price * quantity);
                    receiptbook[7] = (price * quantity);
                    break;
                case 'I':
                    price = I;
                    qtyBook[8] += quantity;
                    receipttotal[8] = +quantity;
                    totalbook[8] = totalbook[8] + (price * quantity);
                    receiptbook[8] = (price * quantity);
                    break;
                }//everything up there loop depends on the amount of type of books user wants to order
                totalbooks = (double)price * quantity;
                subtotal = (double)subtotal + totalbooks;//everything sum together
                quantity = 0;
            }
            do {
                rewind(stdin);
                printf("Confirm the order? (Y= Yes, N= No) > "); //comfirm order to print out receipt, if not return to menu
                scanf("%c", &yesno);
                yesno = toupper(yesno);
                switch (yesno)
```

```
                    {
                    case 'Y':
                        printf("\n\t\t\t
##==========================================##\n\t\t\t    || \t\t UMT Pos System \t    ||\n\t\t\t
##==========================================##");
                        if (receipttotal[0] != 0)
                            printf("\n\t\t\t    || Book A: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[0], price = A, receiptbook[0]);
                        if (receipttotal[1] != 0)
                            printf("\n\t\t\t    || Book B: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[1], price = B, receiptbook[1]);
                        if (receipttotal[2] != 0)
                            printf("\n\t\t\t    || Book C: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[2], price = C, receiptbook[2]);
                        if (receipttotal[3] != 0)
                            printf("\n\t\t\t    || Book D: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[3], price = D, receiptbook[3]);
                        if (receipttotal[4] != 0)
                            printf("\n\t\t\t    || Book E: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[4], price = E, receiptbook[4]);
                        if (receipttotal[5] != 0)
                            printf("\n\t\t\t    || Book F: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[5], price = F, receiptbook[5]);
                        if (receipttotal[6] != 0)
                            printf("\n\t\t\t    || Book G: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[6], price = G, receiptbook[6]);
                        if (receipttotal[7] != 0)
                            printf("\n\t\t\t    || Book H: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[7], price = H, receiptbook[7]);
                        if (receipttotal[8] != 0)
                            printf("\n\t\t\t    || Book I: %d @ RM%.2f \t> RM%7.2f
||", receipttotal[8], price = I, receiptbook[8]);

                        printf("\n\t\t\t    || Subtotal \t\t> RM%7.2f ||", subtotal);
                        if (subtotal > 500)
                        {
                            discount = subtotal * 0.15;
                        }
                        else if (subtotal > 300)
                        {
                            discount = subtotal * 0.1;
                        }
                        else if (subtotal > 200)
                        {
                            discount = subtotal * 0.05;
                        }
                        else if (subtotal < 200)
                        {
                            discount = 0.00;
                        }
                        total = subtotal - discount;
                        printf("\n\t\t\t    || Discount \t\t> RM%7.2f ||\n\t\t\t
||=========================================||\n\t\t\t    || Total    \t\t> RM%7.2f ||\n\t\t\t
##=========================================##", discount, total);
                        printf("\n\t\t\t      >_< THANK YOU HAVE A NICE DAY! !
uwu\t\n\n");
                        finalqtySold = qtyBook[0] + qtyBook[1] + qtyBook[2] +
qtyBook[3] + qtyBook[4] + qtyBook[5] + qtyBook[6] + qtyBook[7] + qtyBook[8];
                        finalSold = totalbook[0] + totalbook[1] + totalbook[2] +
totalbook[3] + totalbook[4] + totalbook[5] + totalbook[6] + totalbook[7] + totalbook[8];
                        break;
                    case 'N': //substract the all the book ordered in this order from the daily
summary report
                        totalbook[0] -= receiptbook[0];
                        totalbook[1] -= receiptbook[1];
                        totalbook[2] -= receiptbook[2];
                        totalbook[3] -= receiptbook[3];
                        totalbook[4] -= receiptbook[4];
                        totalbook[5] -= receiptbook[5];
                        totalbook[6] -= receiptbook[6];
                        totalbook[7] -= receiptbook[7];
                        totalbook[8] -= receiptbook[8];
                        qtyBook[0] -= receipttotal[0];
                        qtyBook[1] -= receipttotal[1];
                        qtyBook[2] -= receipttotal[2];
                        qtyBook[3] -= receipttotal[3];
                        qtyBook[4] -= receipttotal[4];
                        qtyBook[5] -= receipttotal[5];
                        qtyBook[6] -= receipttotal[6];
                        qtyBook[7] -= receipttotal[7];
                        qtyBook[8] -= receipttotal[8];
                        --order;
                        break;
                    default:
                        printf("\n\tInvalid Input\n\n");
                    }
                } while (yesno != 'Y' && yesno != 'N');
                do {
                    rewind(stdin);
                    printf("Next Order? (Y= Yes, N= No) > ");
                    scanf("%c", &yesno2);
                    yesno2 = toupper(yesno2);
                    if (yesno2 == 'Y')
                        ++order;
                    else if (yesno2 == 'N')
                    {
                        printf("\n\t\t\t _________________________________________________________\n");
                        printf("\t\t\t  |\t      DAILY SALES ORDER SUMMARY REPORT\t\t|\n");
                        printf("\t\t\t  |\t       Total number of Sales Order = %d\t\t|\n", order);
                        printf("\t\t\t  | Book\t Quantity Sold Sales\t\t Amount |\n");
                        printf("\t\t\t  | A \t\t %12d \t\t\t %6.2f |\n", qtyBook[0], totalbook[0]);
                        printf("\t\t\t  | B \t\t %12d \t\t\t %6.2f |\n", qtyBook[1], totalbook[1]);
                        printf("\t\t\t  | C \t\t %12d \t\t\t %6.2f |\n", qtyBook[2], totalbook[2]);
                        printf("\t\t\t  | D \t\t %12d \t\t\t %6.2f |\n", qtyBook[3], totalbook[3]);
```

```
                    printf("\t\t\t   | E \t\t %12d \t\t\t %6.2f |\n", qtyBook[4],
totalbook[4]);
                    printf("\t\t\t   | F \t\t %12d \t\t\t %6.2f |\n", qtyBook[5],
totalbook[5]);
                    printf("\t\t\t   | G \t\t %12d \t\t\t %6.2f |\n", qtyBook[6],
totalbook[6]);
                    printf("\t\t\t   | H \t\t %12d \t\t\t %6.2f |\n", qtyBook[7],
totalbook[7]);
                    printf("\t\t\t   | I \t\t %12d \t\t\t %6.2f |\n", qtyBook[8],
totalbook[8]);
                    printf("  \t\t\t   |  \t\t\t =====\t\t\t======= |\n");
                    printf("\t\t\t   | TOTAL\t %12d \t\t\t %6.2f |\n", finalqtySold,
finalSold);
                    printf("\t\t\t
____________________________________________________\n");
                    printf("\n\t\t\t\t\t   <HAVE A NICE DAY !!!>\n");
                    exit();
                }
                else
                    printf("\n\tInvalid Input\n\n");
            } while (yesno2 != 'Y' && yesno2 != 'N');
        } while (yesno2 == 'Y'); //next order

        }
int main()
{
    logoHeading();
    menu(); //the main body for everything
    return 0;
}
```