



**FACULTY OF COMPUTING AND INFORMATION  
TECHNOLOGY**

**Department of Computing and Information Technology**

**Sabah Branch Campus**

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**AACS1564 Problem Solving and Programming**

**Assignment**

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Total Marks	:	/ 100	/ 40
Grade	:		

*Declaration of Originality*

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

Signature:

Name: LIEW WEI WEI Date: 27/9/2023



**AACS1564 Problem Solving and Programming (Assignment Rubric) – Assignment**

CLO	Attribute/Subattribute and Criteria	Weight (%)	Attainment Scale					Student Attainment		
			Very Weak - 1	Weak - 2	Fair - 3	Good - 4	Very Good - 5	Level	Marks	CLO Marks
CLO 2	<b>Problem Solving/Problem Identification – Solution Design</b> <ul style="list-style-type: none"> <li>· Method of solution</li> <li>· Constant and variables</li> <li>Overall program design</li> </ul>	20%	Not able to design a solution (flowchart or pseudocode) for the problem. No constant and variables presented.	Able to design solution (flowchart or pseudocode) with major logical errors for the problem. Explanation on constant and variables are incomplete.	Able to design solution (flowchart or pseudocode) with minor logical errors for the problem. Explanation on constant and variables are incomplete.	Able to design solution (flowchart or pseudocode) for the problem. Constant and variables are explained and presented.	Able to design an efficient solution (flowchart or pseudocode) for the problem. Constant and variables are well explained and presented.			
	<b>Problem Solving/Analysis – Process Testing &amp; Outputs</b> <ul style="list-style-type: none"> <li>· Test cases (at least 3) and presented in table form</li> <li>· Output screenshot for each of the test cases</li> </ul>	10%	Not able to perform process testing. No screenshot on the output.	Able to perform process testing with less than 3 test cases. No presentation on the test cases. Incomplete output screenshots.	Able to perform process testing with less than 3 test cases. Test cases are presented in table form. Incomplete output screenshots.	Able to perform process testing and generate at least 3 test cases. All the test cases are presented in table form and supported by output screenshots.	Able to perform process testing and generate all possible test cases. All test cases are well presented in table form and supported by output screenshots.			
	<b>Problem Solving/Application –Beginning and Ending of the System</b> <ul style="list-style-type: none"> <li>· System Logo</li> <li>· Display menu with prices</li> <li>· Ending Message</li> </ul>	5%	Not able to display system logo, menu and prices, and ending message.	Display incomplete system logo, available menu and prices, and ending message without proper arrangement.	Display complete system logo, available menu and prices, and ending message without proper arrangement.	Display complete system logo, available menu and prices, and ending message with proper arrangement.	Display complete system logo, available menu and prices, and ending message with clarity, detailed and proper arrangement.			

# AACS1564 Problem Solving and Programming (Assignment Rubric) – Assignment

<b>CLO 2</b>	<b>Problem Solving/Application</b> – User Input and Error Handling  · User input · Error handling (out of range)	5%	Not able to obtain user input. No error handling.	Able to obtain part of the user input. No error handling.	Able to obtain user input. Minor error handling.	Able to obtain user input with proper error handling.	Able to obtain user input with proper error handling for required input with proper error messages.		
	<b>Problem Solving/Application</b> –Purchasing Process  · Process bill details (calculation) · Payment process (pay amount and balance)	10%	No bill calculation and payment processes.	Able to perform bill calculation and payment processes. (with major error)	Able to perform bill calculation and payment processes. (with minor error)	Able to perform bill calculation and payment processes.	Able to perform bill calculation and payment processes and produce accurate results with proper formatting.		
	<b>Problem Solving/Application</b> – Daily Sales Report  · Accumulation of required totals – accuracy · Layout/Format – tidiness · Sales by category	15%	Not able to generate Daily Sales Report	Able to generate Daily Sales Report. Inaccurate information (Major). No report format and arrangement.	Able to generate Daily Sales Report. Inaccurate information (Minor). Improper report format and arrangement.	Able to generate Daily Sales Report with accurate information. Improper format and arrangement.	Able to generate Daily Sales Report with accurate information, tidy and neat format.		
	<b>Problem Solving/Synthesis</b> –Programming Skills  · Looping · Condition · User defined function · Use of appropriate comments	10%	Improper structure of programming codes.	Proper structure of programming code without comments. No user function is applied	Proper structure of programming code without comments. Minor user defined function is applied.	Proper structure of programming code with minor comments. User defined function is applied.	Well structure of programming code with comments to increase the clarity. Effectively used of user defined function.		

	<b>Problem Solving/Synthesis</b> –Additional Feature	5%	No additional feature added to the system.	Less significant of additional feature is added to the system.	Additional feature is added to the system.	Useful and practical additional feature added to the system.	Excellent, useful and practical additional feature added to the system.			
<b>CLO3</b>	<b>Inquisitive Mind</b> – Initiative in Completing Task	10%	No initiative to complete a task.	Demonstrate limited initiative in completing a task.	Demonstrate moderate initiative in completing a task.	Demonstrate good initiative in completing a task.	Demonstrate excellent initiative in completing a task.			
	<b>Inquisitive Mind</b> – Effort in Completing Report	10%	No effort to complete the report.	Minimal effort to complete the report.	Sufficient effort to complete the report.	Good effort to complete the report.	Excellent effort to complete the report.			
	<b>Total</b>	100%								

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## **PURPOSE OF SYSTEM**

The Covid-19 pandemic has significantly affected and reduced the average sales of multiple industries. In converse, the food delivery restaurants have increased the sales during this pandemic period. H&S Restaurant is one of the restaurants that sells various meals and provides delivery services to customers. Recently, the owner of H&S Restaurant, Mr. Chris has found that there is difficulty in he needs manually recording each customer order and their billing. As a result, he requested a system that could efficiently keep records of bill customers and the meals total sold each day.

As a system developer, I am assigned by my program manager to develop a simple Meal Billing System for the H&S Restaurant to receive orders from customers and issue the bills to their customers and also can produce a basic daily meal sales report for the user.

## **PSEUDOCODE**

1. START
2. Display Restaurant Logo
3. Display "Welcome to H&S Restaurant, what would you like to order?"
4. Display Restaurant Menu
5. Display initializes an empty order list
6. Prompt user to input (between num 1 to 10)
7. Read user's choice
8. IF choice = valid
9. Break the loop
10. IF choice is invalid
11. Display "incorrect input"
12. Continue loop
13. Prompt user to input quantity
14. IF quantity is 0
15. Display "invalid\_enter again"
  
16. Display choices add more or check out
17. Prompt user to choose
18. IF choice = check out
19. Break the loop
20. IF choice = add more
21. Continue loop
22. Add selected items and quantities to order list
  
23. Display the order details charges\_of\_meals\_SST\_total amount
24. Prompt user for payment
25. Read payment amount
26. IF payment amount is less than total
27. Display "cash not enough" and ask for make payment again
28. Calculate and display the change
  
29. Prompt user choose 1 for Next Customer and 2 for Sales Report
30. IF choice = 1
31. Continue loop
32. IF choice = 2
33. Break the loop
34. IF choice < 1 or > 2
35. Display "invalid\_re-enter again"
  
36. Display running date
37. Display header of daily meal sales report
38. Display the total\_amount\_sales\_total\_amout\_meals\_of the day
  
39. END



## **ADDITIONAL FEATURES**

I have added some features to this system, they are auto-counting the customers when the user selects to next customer, and it will be at the top part after “Welcome to H & S Restaurant, would you like to order?”. The second feature is customers can add more meals after their 1<sup>st</sup> order if they choose to add more. Lastly, the feature added is a date, that can run the same as the actual date.

## **PROGRAM TESTING SCENARIOS & PROGRAM TESTING OUTPUTS**

### **1<sup>st</sup> Scenario – Counted customers**

Input		Output
Customer No.	Next Customer (Press 1) or Sales Report (Press 2)	Customer No.
1	1	2
2	1	3
3	1	4
4	1	5
5	1	6

**Output:**

1<sup>st</sup> Test

```

=====
1105
=====
Welcome to H&S Restaurant, would you like to order?

Customer number: 1

=====
Meals                                     Price
=====
1. Roti Canai                            RM      2.00
2. Cheese Naan                           RM      7.90
3. Nasi Briyani                          RM     12.90
4. Mamak Mee Goreng                      RM      8.50
5. Masalah Dosa                          RM      6.50
6. Soto                                  RM      7.90
7. Teh Tarik                             RM      3.00
8. Air Suam                              RM      1.00
9. Leong Fun Susu                        RM      4.50
10. 100 Plus                             RM      2.90

Enter the type of meal (1-10): 1
Enter quantity: 1
Add more? (Press 1) || Check Out (Press 2): 2

=====
CHECK OUT
=====
Total quantity(Roti Canai)      : |1|      RM 2.00
Total quantity(Cheese Naan)     : |0|      RM 0.00
Total quantity(Nasi Briyani)    : |0|      RM 0.00
Total quantity(Mamak Mee Gorengss) : |0|      RM 0.00
Total quantity(Masalah Dosa)    : |0|      RM 0.00
Total quantity(Soto)            : |0|      RM 0.00
Total quantity(Teh Tarik)       : |0|      RM 0.00
Total quantity(Air Suam)        : |0|      RM 0.00
Total quantity(Leong Fun Susu)  : |0|      RM 0.00
Total quantity(100 Plus)        : |0|      RM 0.00

Subtotal                        = RM 2.00

Total Service/Sales tax 6%     = RM 0.12

Total : RM 2.12

Paid : RM 3

Changes : RM 0.88

Thank You and Please Come Again.

Next customer? (Press 1) , Sales Report (Press 2): 1

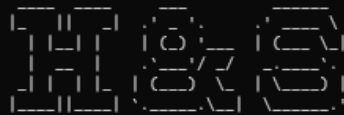
=====
1105
=====
Welcome to H&S Restaurant, would you like to order?

Customer number: 2

=====
Meals                                     Price
=====
1. Roti Canai                            RM      2.00
2. Cheese Naan                           RM      7.90
3. Nasi Briyani                          RM     12.90
4. Mamak Mee Goreng                      RM      8.50
5. Masalah Dosa                          RM      6.50
6. Soto                                  RM      7.90
7. Teh Tarik                             RM      3.00
8. Air Suam                              RM      1.00
9. Leong Fun Susu                        RM      4.50
10. 100 Plus                             RM      2.90

Enter the type of meal (1-10): |
```

2<sup>nd</sup> Test



Welcome to H&S Restaurant, would you like to order?

Customer number: 2

Meals	Price
1. Roti Canai	RM 2.00
2. Cheese Naan	RM 7.90
3. Nasi Briyani	RM 12.90
4. Mamak Mee Goreng	RM 8.50
5. Masalah Dosa	RM 6.50
6. Soto	RM 7.90
7. Teh Tarik	RM 3.00
8. Air Suam	RM 1.00
9. Leong Fun Susu	RM 4.50
10. 100 Plus	RM 2.90

Enter the type of meal (1-10): 3

Enter quantity: 1

Add more? (Press 1) || Check Out (Press 2): 2

#### CHECK OUT

Total quantity(Roti Canai)	:	0	RM 0.00
Total quantity(Cheese Naan)	:	0	RM 0.00
Total quantity(Nasi Briyani)	:	1	RM 12.90
Total quantity(Mamak Mee Gorengss)	:	0	RM 0.00
Total quantity(Masalah Dosa)	:	0	RM 0.00
Total quantity(Soto)	:	0	RM 0.00
Total quantity(Teh Tarik)	:	0	RM 0.00
Total quantity(Air Suam)	:	0	RM 0.00
Total quantity(Leong Fun Susu)	:	0	RM 0.00
Total quantity(100 Plus)	:	0	RM 0.00

Subtotal = RM 12.90

Total Service/Sales tax 6% = RM 0.77

Total : RM 13.67

Paid : RM 15

Changes : RM 1.33

Thank You and Please Come Again.

Next customer? (Press 1) , Sales Report (Press 2): 1



Welcome to H&S Restaurant, would you like to order?

Customer number: 3

Meals	Price
1. Roti Canai	RM 2.00
2. Cheese Naan	RM 7.90
3. Nasi Briyani	RM 12.90
4. Mamak Mee Goreng	RM 8.50
5. Masalah Dosa	RM 6.50
6. Soto	RM 7.90
7. Teh Tarik	RM 3.00
8. Air Suam	RM 1.00
9. Leong Fun Susu	RM 4.50
10. 100 Plus	RM 2.90

Enter the type of meal (1-10): |

### 3<sup>rd</sup> Test

Figure 1 illustrates the evolution of a 2D lattice. The top row shows a square lattice with a central square. The middle row shows a square lattice with a central square and four smaller squares at the corners. The bottom row shows a square lattice with a central square and four smaller squares at the corners, with the central square and corners shaded.

Welcome to H&S Restaurant, would you like to order?

Customer number: 3

Meals	Price
1. Roti Canai	RM 2.00
2. Cheese Naan	RM 7.90
3. Nasi Briyani	RM 12.90
4. Mamak Mee Goreng	RM 8.50
5. Masalah Dosa	RM 6.50
6. Soto	RM 7.90
7. Teh Tarik	RM 3.00
8. Air Suam	RM 1.00
9. Leong Fun Susu	RM 4.50
10. 100 Plus	RM 2.90

```
Enter the type of meal (1-10): 10
```

Enter quantity: 1

Add more? (Press 1) || Check Out (Press 2): 2

**CHECK OUT**

Total quantity(Roti Canai)	:	0	RM 0.00
Total quantity(Cheese Naan)	:	0	RM 0.00
Total quantity(Nasi Briyani)	:	0	RM 0.00
Total quantity(Mamak Mee Gorengss)	:	0	RM 0.00
Total quantity(Masalah Dosa)	:	0	RM 0.00
Total quantity(Soto)	:	0	RM 0.00
Total quantity(Teh Tarik)	:	0	RM 0.00
Total quantity(Air Suam)	:	0	RM 0.00
Total quantity(Leong Fun Susu)	:	0	RM 0.00
Total quantity(100 Plus)	:	11	RM 2.90

Subtotal = RM 2.90

Total Service/Sales tax 6% = RM 0.17

Total : RM 3.07

Paid : RM 4

Changes : RM 0.93

Thank You and Please Come Again.

Next customer? (Press 1) , Sales Report (Press 2): 1

1	2	3
1	2	3
1	2	3
1	2	3

Welcome to H&S Restaurant, would you like to order?

Customer number: 4

Meals	Price
1. Roti Canai	RM 2.00
2. Cheese Naan	RM 7.90
3. Nasi Briyani	RM 12.90
4. Mamak Mee Goreng	RM 8.50
5. Masalah Dosa	RM 6.50
6. Soto	RM 7.90
7. Teh Tarik	RM 3.00
8. Air Suam	RM 1.00
9. Leong Fun Susu	RM 4.50
10. 100 Plus	RM 2.90

```
Enter the type of meal (1-10):
```

## 14

```
Enter the type of meal (1-10): |
```

```

|_|_|||_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|

Welcome to H&S Restaurant, would you like to order?

Customer number: 5


=====
Meals                               Price
=====
1. Roti Canai                       RM    2.00
2. Cheese Naan                      RM    7.90
3. Nasi Briyani                     RM   12.90
4. Mamak Mee Goreng                 RM    8.50
5. Masalah Dosa                     RM    6.50
6. Soto                             RM    7.90
7. Teh Tarik                        RM    3.00
8. Air Suam                         RM    1.00
9. Leong Fun Susu                   RM    4.50
10. 100 Plus                         RM    2.90

Enter the type of meal (1-10): 7
Enter quantity: 3
Add more? (Press 1) || Check Out (Press 2): 2


                                CHECK OUT

-----
Total quantity(Roti Canai)          :    |0|      RM 0.00
Total quantity(Cheese Naan)         :    |0|      RM 0.00
Total quantity(Nasi Briyani)        :    |0|      RM 0.00
Total quantity(Mamak Mee Gorengss)  :    |0|      RM 0.00
Total quantity(Masalah Dosa)        :    |0|      RM 0.00
Total quantity(Soto)                 :    |0|      RM 0.00
Total quantity(Teh Tarik)            :    |3|      RM 9.00
Total quantity(Air Suam)             :    |0|      RM 0.00
Total quantity(Leong Fun Susu)       :    |0|      RM 0.00
Total quantity(100 Plus)             :    |0|      RM 0.00

-----
Subtotal                            = RM 9.00

Total Service/Sales tax 6%          = RM 0.54

-----
Total : RM 9.54

-----
Paid : RM 10

-----

Changes : RM 0.46

Thank You and Please Come Again.

Next customer? (Press 1) , Sales Report (Press 2): 1

|_|_|||_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|
|_|_|_|_|_| | |_|_|_|_|_| | |_|_|_|_|_|

Welcome to H&S Restaurant, would you like to order?

Customer number: 6


=====
Meals                               Price
=====
1. Roti Canai                       RM    2.00
2. Cheese Naan                      RM    7.90
3. Nasi Briyani                     RM   12.90
4. Mamak Mee Goreng                 RM    8.50
5. Masalah Dosa                     RM    6.50
6. Soto                             RM    7.90
7. Teh Tarik                        RM    3.00
8. Air Suam                         RM    1.00
9. Leong Fun Susu                   RM    4.50
10. 100 Plus                         RM    2.90

Enter the type of meal (1-10): |

```

Inputs			Outputs			
Add More (Press 1) or Check Out (Press 2)	Meal Type	Quantity	2 <sup>nd</sup> Round order Meal Charges (RM)	Add with 1 <sup>st</sup> Round order Meal Charges (RM) total	SST (6%) (RM)	Total Amount with SST (RM)
1	1	3	2.00 * 3 = 6.00	13.90	0.83	14.73
1	2	2	4.50* 1 = 7.90	12.40	0.74	13.14
1	3	3	2.00* 1 = 38.70	6.50	0.39	6.89
1	4	1	1 * 8.50 = 8.50	29.80	1.79	31.59
1	5	1	1 * 6.50 = 6.50	9.50	0.51	8.50

## 2<sup>nd</sup> Scenario – Same customer can add more meals

OUTPUT:

### 1<sup>st</sup> Test

```

THE RESTAURANT

Welcome to H&S Restaurant, would you like to order?
Customer number: 1

=====
Meals                                Price
=====
1. Roti Canai                        RM    2.00
2. Cheese Naan                      RM    7.90
3. Nasi Briyani                     RM   12.90
4. Mamak Mee Goreng                 RM    8.50
5. Masalah Dosa                     RM    6.50
6. Soto                             RM    7.90
7. Teh Tarik                        RM    3.00
8. Air Suam                         RM    1.00
9. Leong Fun Susu                   RM    4.50
10. 100 Plus                         RM    2.90

Enter the type of meal (1-10): 2
Enter quantity: 1
Add more? (Press 1) || Check Out (Press 2): 1

=====
Meals                                Price
=====
1. Roti Canai                        RM    2.00
2. Cheese Naan                      RM    7.90
3. Nasi Briyani                     RM   12.90
4. Mamak Mee Goreng                 RM    8.50
5. Masalah Dosa                     RM    6.50
6. Soto                             RM    7.90
7. Teh Tarik                        RM    3.00
8. Air Suam                         RM    1.00
9. Leong Fun Susu                   RM    4.50
10. 100 Plus                         RM    2.90

Enter the type of meal (1-10): 1
Enter quantity: 3
Add more? (Press 1) || Check Out (Press 2): 2

CHECK OUT
=====
Total quantity(Roti Canai)          :  |3|    RM 6.00
Total quantity(Cheese Naan)         :  |1|    RM 7.90
Total quantity(Nasi Briyani)         :  |0|    RM 0.00
Total quantity(Mamak Mee Gorengss)   :  |0|    RM 0.00
Total quantity(Masalah Dosa)         :  |0|    RM 0.00
Total quantity(Soto)                 :  |0|    RM 0.00
Total quantity(Teh Tarik)            :  |0|    RM 0.00
Total quantity(Air Suam)             :  |0|    RM 0.00
Total quantity(Leong Fun Susu)       :  |0|    RM 0.00
Total quantity(100 Plus)             :  |0|    RM 0.00

Subtotal                            = RM 13.90

Total Service/Sales tax 6%          = RM 0.83

Total : RM 14.73

Paid : RM 15

Changes : RM 0.27

Thank You and Please Come Again.

```



```

=====
Meals                                     Price
=====
1. Roti Canai                            RM      2.00
2. Cheese Naan                           RM      7.90
3. Nasi Briyani                          RM     12.90
4. Mamak Mee Goreng                      RM      8.50
5. Masalah Dosa                         RM      6.50
6. Soto                                  RM      7.90
7. Teh Tarik                             RM      3.00
8. Air Suam                              RM      1.00
9. Leong Fun Susu                        RM      4.50
10. 100 Plus                             RM      2.90

Enter the type of meal (1-10): 6
Enter quantity: 1
Add more? (Press 1) || Check Out (Press 2): 1
=====
Meals                                     Price
=====
1. Roti Canai                            RM      2.00
2. Cheese Naan                           RM      7.90
3. Nasi Briyani                          RM     12.90
4. Mamak Mee Goreng                      RM      8.50
5. Masalah Dosa                         RM      6.50
6. Soto                                  RM      7.90
7. Teh Tarik                             RM      3.00
8. Air Suam                              RM      1.00
9. Leong Fun Susu                        RM      4.50
10. 100 Plus                             RM      2.90

Enter the type of meal (1-10): 9
Enter quantity: 1
Add more? (Press 1) || Check Out (Press 2): 2

                                CHECK OUT
=====
Total quantity(Roti Canai)               : |0|    RM 0.00
Total quantity(Cheese Naan)              : |0|    RM 0.00
Total quantity(Nasi Briyani)             : |0|    RM 0.00
Total quantity(Mamak Mee Gorengss)       : |0|    RM 0.00
Total quantity(Masalah Dosa)             : |0|    RM 0.00
Total quantity(Soto)                    : |1|    RM 7.90
Total quantity(Teh Tarik)                : |0|    RM 0.00
Total quantity(Air Suam)                 : |0|    RM 0.00
Total quantity(Leong Fun Susu)           : |1|    RM 4.50
Total quantity(100 Plus)                 : |0|    RM 0.00
=====
Subtotal                                 = RM 12.40

Total Service/Sales tax 6%              = RM 0.74
=====
Total : RM 13.14
=====
Paid   : RM 14
=====

Changes : RM 0.86

Thank You and Please Come Again.
```

### 3<sup>rd</sup> Test



Welcome to H&S Restaurant, would you like to order?

Customer number: 3

Meals	Price
1. Roti Canai	RM 2.00
2. Cheese Naan	RM 7.90
3. Nasi Briyani	RM 12.90
4. Mamak Mee Goreng	RM 8.50
5. Masalah Dosa	RM 6.50
6. Soto	RM 7.90
7. Teh Tarik	RM 3.00
8. Air Suam	RM 1.00
9. Leong Fun Susu	RM 4.50
10. 100 Plus	RM 2.90

Enter the type of meal (1-10): 9

Enter quantity: 1

Add more? (Press 1) || Check Out (Press 2): 1

Meals	Price
1. Roti Canai	RM 2.00
2. Cheese Naan	RM 7.90
3. Nasi Briyani	RM 12.90
4. Mamak Mee Goreng	RM 8.50
5. Masalah Dosa	RM 6.50
6. Soto	RM 7.90
7. Teh Tarik	RM 3.00
8. Air Suam	RM 1.00
9. Leong Fun Susu	RM 4.50
10. 100 Plus	RM 2.90

Enter the type of meal (1-10): 1

Enter quantity: 1

Add more? (Press 1) || Check Out (Press 2): 2

#### CHECK OUT

Total quantity(Roti Canai)	:	1	RM 2.00
Total quantity(Cheese Naan)	:	0	RM 0.00
Total quantity(Nasi Briyani)	:	0	RM 0.00
Total quantity(Mamak Mee Gorengss)	:	0	RM 0.00
Total quantity(Masalah Dosa)	:	0	RM 0.00
Total quantity(Soto)	:	0	RM 0.00
Total quantity(Teh Tarik)	:	0	RM 0.00
Total quantity(Air Suam)	:	0	RM 0.00
Total quantity(Leong Fun Susu)	:	1	RM 4.50
Total quantity(100 Plus)	:	0	RM 0.00

Subtotal = RM 6.50

Total Service/Sales tax 6% = RM 0.39

Total : RM 6.89

Paid : RM 7

Changes : RM 0.11

Thank You and Please Come Again.

# 4<sup>th</sup> Test

```

H&S

Welcome to H&S Restaurant, would you like to order?

Customer number: 4

=====
Meals                                Price
=====
1. Roti Canai                        RM    2.00
2. Cheese Naan                       RM    7.90
3. Nasi Briyani                      RM   12.90
4. Mamak Mee Goreng                  RM    8.50
5. Masalah Dosa                      RM    6.50
6. Soto                              RM    7.90
7. Teh Tarik                         RM    3.00
8. Air Suam                          RM    1.00
9. Leong Fun Susu                    RM    4.50
10. 100 Plus                          RM    2.90

Enter the type of meal (1-10): 3
Enter quantity: 2
Add more? (Press 1) || Check Out (Press 2): 1

=====
Meals                                Price
=====
1. Roti Canai                        RM    2.00
2. Cheese Naan                       RM    7.90
3. Nasi Briyani                      RM   12.90
4. Mamak Mee Goreng                  RM    8.50
5. Masalah Dosa                      RM    6.50
6. Soto                              RM    7.90
7. Teh Tarik                         RM    3.00
8. Air Suam                          RM    1.00
9. Leong Fun Susu                    RM    4.50
10. 100 Plus                          RM    2.90

Enter the type of meal (1-10): 8
Enter quantity: 1
Add more? (Press 1) || Check Out (Press 2): 1

=====
Meals                                Price
=====
1. Roti Canai                        RM    2.00
2. Cheese Naan                       RM    7.90
3. Nasi Briyani                      RM   12.90
4. Mamak Mee Goreng                  RM    8.50
5. Masalah Dosa                      RM    6.50
6. Soto                              RM    7.90
7. Teh Tarik                         RM    3.00
8. Air Suam                          RM    1.00
9. Leong Fun Susu                    RM    4.50
10. 100 Plus                          RM    2.90

Enter the type of meal (1-10): 7
Enter quantity: 1
Add more? (Press 1) || Check Out (Press 2): 2

=====
CHECK OUT
=====
Total quantity(Roti Canai)          : 0|    RM 0.00
Total quantity(Cheese Naan)         : 0|    RM 0.00
Total quantity(Nasi Briyani)        : 2|   RM 25.80
Total quantity(Mamak Mee Gorengss)  : 0|    RM 0.00
Total quantity(Masalah Dosa)        : 0|    RM 0.00
Total quantity(Soto)                 : 0|    RM 0.00
Total quantity(Teh Tarik)            : 1|    RM 3.00
Total quantity(Air Suam)             : 1|    RM 1.00
Total quantity(Leong Fun Susu)       : 0|    RM 0.00
Total quantity(100 Plus)             : 0|    RM 0.00
=====
Subtotal                            = RM 29.80
Total Service/Sales tax 6%          = RM 1.79
=====
Total : RM 31.59
=====
Paid : RM 32
=====
Changes : RM 0.41

Thank You and Please Come Again.

```

## 5<sup>th</sup> Test

# THE

Welcome to H&S Restaurant, would you like to order?

Customer number: 5

Meals	Price	
1. Roti Canai	RM	2.00
2. Cheese Naan	RM	7.90
3. Nasi Briyani	RM	12.90
4. Mamak Mee Goreng	RM	8.50
5. Masalah Dosa	RM	6.50
6. Soto	RM	7.90
7. Teh Tarik	RM	3.00
8. Air Suam	RM	1.00
9. Leong Fun Susu	RM	4.50
10. 100 Plus	RM	2.90

Enter the type of meal (1-10): 1

Enter quantity: 1

Add more? (Press 1) || Check Out (Press 2): 7

Invalid! Please re-enter again! : 1

Meals	Price	
1. Roti Canai	RM	2.00
2. Cheese Naan	RM	7.90
3. Nasi Briyani	RM	12.90
4. Mamak Mee Goreng	RM	8.50
5. Masalah Dosa	RM	6.50
6. Soto	RM	7.90
7. Teh Tarik	RM	3.00
8. Air Suam	RM	1.00
9. Leong Fun Susu	RM	4.50
10. 100 Plus	RM	2.90

Enter the type of meal (1-10): 5

Enter quantity: 1

Add more? (Press 1) || Check Out (Press 2): 2

CHECK OUT

Total quantity(Roti Canai)	:	1	RM 2.00
Total quantity(Cheese Naan)	:	0	RM 0.00
Total quantity(Nasi Briyani)	:	0	RM 0.00
Total quantity(Mamak Mee Gorengss)	:	0	RM 0.00
Total quantity(Masalah Dosa)	:	1	RM 6.50
Total quantity(Soto)	:	0	RM 0.00
Total quantity(Teh Tarik)	:	0	RM 0.00
Total quantity(Air Suam)	:	0	RM 0.00
Total quantity(Leong Fun Susu)	:	0	RM 0.00
Total quantity(100 Plus)	:	0	RM 0.00

Subtotal = RM 8.50

Total Service/Sales tax 6% = RM 0.51

Total : RM 9.01

Paid : RM 10

Changes : RM 0.99

Thank You and Please Come Again.

Inputs		Outputs
Date	Next Customer (Press 1) or Sales Report (Press 2)	Date
23/9/2023	2	23/9/2023
24/9/2023	2	24/9/2023
25/9/2023	2	25/9/2023
26/9/2023	2	26/9/2023
27/9/2023	2	27/9/2023

**3<sup>rd</sup> Scenario** – Daily Report will display current date

OUTPUT:

1<sup>st</sup> Test

2023-09-23

[ Daily Sales Report ]

Item	Quantity	RM
Roti Canai	8	16.00
Cheese Naan	1	7.90
Nasi Briyani	3	38.70
Mee Goreng	1	8.50
Masalah Dosa	1	6.50
Soto	0	0.00
Teh Tarik	0	0.00
Air Suam	0	0.00
Leong Fun	0	0.00
100 Plus	0	0.00

Total Quantity : 14  
 Total Amount : RM 77.60  
 Total SST : RM 4.66  
 Total Customers : 7

Thank You and Please Come Again.

2<sup>nd</sup> Test

2023-09-24		
[ Daily Sales Report ]		
-----		
Item	Quantity	RM
-----		
Roti Canai	8	16.00
Cheese Naan	0	0.00
Nasi Briyani	0	0.00
Mee Goreng	0	0.00
Masalah Dosa	0	0.00
Soto	0	0.00
Teh Tarik	0	0.00
Air Suam	0	0.00
Leong Fun	0	0.00
100 Plus	0	0.00
-----		
Total Quantity	: 8	
Total Amount	: RM 16.00	
Total SST	: RM 0.96	
Total Customers	: 1	
-----		
Thank You and Please Come Again.		

3<sup>rd</sup> Test

2023-09-25

[ Daily Sales Report ]

Item	Quantity	RM
Roti Canai	5	10.00
Cheese Naan	1	7.90
Nasi Briyani	0	0.00
Mee Goreng	2	17.00
Masalah Dosa	0	0.00
Soto	0	0.00
Teh Tarik	0	0.00
Air Suam	1	1.00
Leong Fun Susu	0	0.00
100 Plus	0	0.00

Total Quantity : 9  
Total Amount : RM 35.90  
Total SST : RM 2.15  
Total Customers : 2

Thank You and Please Come Again.

4<sup>th</sup> Test

2023-09-26

[ Daily Sales Report ]

Item	Quantity	RM
Roti Canai	2	4.00
Cheese Naan	1	7.90
Nasi Briyani	0	0.00
Mee Goreng	1	8.50
Masalah Dosa	0	0.00
Soto	0	0.00
Teh Tarik	0	0.00
Air Suam	0	0.00
Leong Fun Susu	0	0.00
100 Plus	0	0.00

Total Quantity : 4  
Total Amount : RM 20.40  
Total SST : RM 1.22  
Total Customers : 1

Thank You and Please Come Again.



5<sup>th</sup> Test

2023-09-27

[ Daily Sales Report ]

Item	Quantity	RM
Roti Canai	1	2.00
Cheese Naan	2	15.80
Nasi Briyani	0	0.00
Mee Goreng	0	0.00
Masalah Dosa	0	0.00
Soto	0	0.00
Teh Tarik	1	3.00
Air Suam	0	0.00
Leong Fun Susu	1	4.50
100 Plus	1	2.90

Total Quantity : 6  
Total Amount : RM 28.20  
Total SST : RM 1.69  
Total Customers : 2

Thank You and Please Come Again.

## **CONSTANTS AND VARIABLES**

### **8.1 CONSTANTS**

Data Type	Constant	Description
Array	PRICE []	An array for meal prices
Double	R	Represent the price of Roti Canai.
Double	C	Represent the price of Cheese Naan.
Double	N	Represent the price of Nasi Briyani.
Double	M	Represent the price of Mamak Mee Goreng.
Double	D	Represent the price of Masalah Dosa.
Double	S	Represent the price of Soto.
Double	T	Represent the price of Teh Tarik.
Double	A	Represent the price of Air Suam.
Double	L	Represent the price of Leong Fun Susu.
Double	P	Represent the price of 100 Plus
Double	SST	Represent Sales and Services Tax

## 8.2 Variables

Data Type	Variables	Description
Integer	type_of_meal	Integer variable represent the type of meal.
Integer	qty1 to qty10	Integer variables represent the quantities ordered for each meal.
Double	amt1 to amt10	Double variables represent the total amount for each meal.
Integer	total_roti_report	Integer variables representing the total sales of roti canai
Integer	total_cheese_report	Integer variables representing the total sales of cheese naan
Integer	total_nasi_report	Integer variables representing the total sales of nasi briyani
Integer	total_mamak_report	Integer variables representing the total sales of mamak mee goreng
Integer	total_dosa_report	Integer variables representing the total sales of masalah dosa
Integer	total_soto_report	Represent the Integer variables representing the total sales of soto
Integer	total_teh_report	Integer variables representing the total sales of teh tarik
Integer	total_air_report	Integer variables representing the total sales of air suam
Integer	total_leong_report	Integer variables representing the total sales of leong fun susu
Integer	total_100plus_report	Integer variables representing the total sales of 100plus
Integer	total_roti	Integer variables representing the total quantity of roti canai
Integer	total_cheese	Integer variables representing the total quantity of cheese naan
Integer	total_nasi	Integer variables representing the total quantity of nasi briyani
Integer	total_mamak	Integer variables representing the total quantity of mamak mee goreng
Integer	total_dosa	Integer variables representing the total quantity of masalah dosa
Integer	total_soto	Integer variables representing the total quantity of soto
Integer	total_teh	Integer variables representing the total quantity of teh tarik
Integer	total_air	Integer variables representing the total quantity of air suam
Integer	total_leong	Integer variables representing the total quantity of leong fun susu
Integer	total_100plus	Integer variables representing the total quantity of 100plus
Integer	choice and choice2	Integer variables representing user choices.
Integer	customer	Integer variable representing the customer count.

Double	cash	Double variable representing the payment amount.
typedef	t	to store the current time.
tm	tmObj	to store the date and time components.
Char (array)	date	a character array of size 11 used to store the formatted date string.