APPENDIX B:

Attached a scanned copy with the report with the filled details and signatures.

Declaration of Original Work for CE/CZ2002 Assignment

We hereby declare that the attached group assignment has been researched, undertaken, completed and submitted as a collective effort by the group members listed below.

We have honored the principles of academic integrity and have upheld Student Code of Academic Conduct in the completion of this work.

We understand that if plagiarism is found in the assignment, then lower marks or no marks will be awarded for the assessed work. In addition, disciplinary actions may be taken.

Name	Course (CE2002 or CZ2002)	Lab Group	Signature /Date
Nicholas Ng Chia Chun	CZ 2002	SS9	14/11/21
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Important notes:

1. Name must **EXACTLY MATCH** the one printed on your Matriculation Card.

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Design Considerations

Our main design goal when designing RRPSS is to ensure that our code is easy to change and reusable. We reduced the rigidity and fragility of design to a bare minimum when making adjustments to our code.

Single Responsibility Principle (SRP)

When designing RRPSS, it is vital to ensure that each class has only one responsibility as this will help us to prevent unexpected side-effects of future changes. As such, we kept in mind that each of our classes only has a single purpose.

Thus, we made sure to create individual classes for each restaurant entity, i.e. Menu, Promotion, Table, Reservation, Staff and Order. Thereafter, we assigned a controller class to each entity in the restaurant. For example, a staff controller manages the staff. The purpose of our controllers is to manage the responsibilities of its assigned entity only. Furthermore, take the example of creating a reservation, the task is divided among classes each responsible for ensuring the reservation can be created successfully.

This is so that changes are rarely made to any single entity, instead, any changes to be made according to the requirements will be made to the controller instead.

Without SRP, we might need to update the dependencies or recompile the dependent classes even though they are not directly affected by our change. Even if only one of the other responsibilities is implemented by our class, the classes would still require an update.

By ensuring that our controller class such as reservationController and tableController are strongly focused, with highly related behaviour within the class, we can avoid unnecessary complexities and improve the overall cohesion of our RRPSS code.

Open-Closed Principle (OCP)

The idea we follow is to be able to add new functionality to our RRPSS without changing the existing code, thus we can extend our modules without changing them. This prevents situations in which a change to one of our classes also requires us to adapt all depending classes which would make our RRPSS code very inflexible.

As an example for OCP, we have planned for our Promotion class to extend the Menu Section class. This is because our Promotion class would inherit the same functionalities as the Menu Section class, but with additional functionalities. In this sense, we do not change the code to our Menu Section, but simply extend it to Promotion. Furthermore, if our Promotion class were to require additional methods, we simply add it to the Promotion class without changing the Menu Section class.

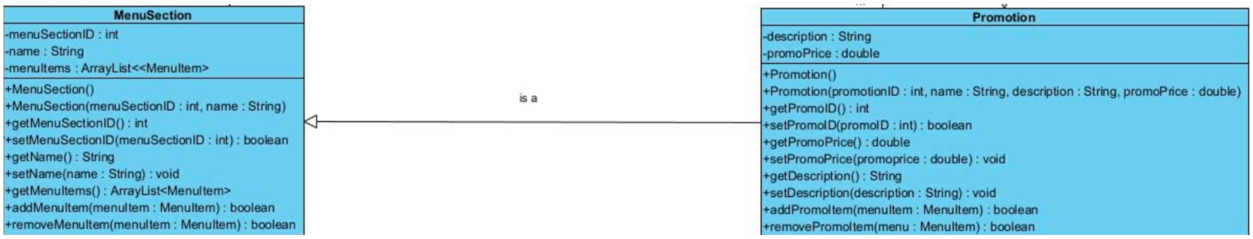

MenuSection
-menuSectionID : int
-name : String
-menuItems : ArrayList<<MenuItem>
+MenuSection()
+MenuSection(menuSectionID : int, name : String)
+getMenuSectionID() : int
+setMenuSectionID(menuSectionID : int) : boolean
+getName() : String
+setName(name : String) : void
+getMenuItems() : ArrayList<MenuItem>
+addMenuItem(menuItem : MenuItem) : boolean
+removeMenuItem(menuItem : MenuItem) : boolean
is a
Promotion
-description : String
-promoPrice : double
+Promotion()
+Promotion(promotionID : int, name : String, description : String, promoPrice : double)
+getPromoID() : int
+setPromoID(promoID : int) : boolean
+getPromoPrice() : double
+setPromoPrice(promoprice : double) : void
+getDescription() : String
+setDescription(description : String) : void
+addPromoItem(menuItem : MenuItem) : boolean
+removePromoItem(menu : MenuItem) : boolean

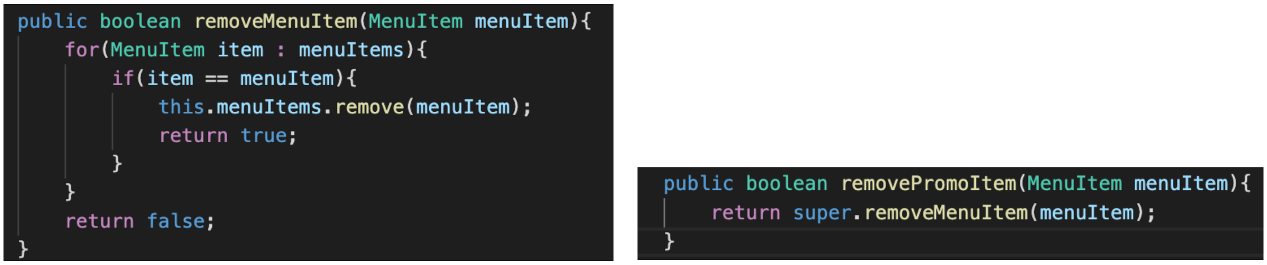
Figure 1. Promotion extends MenuSection example

Liskov Substitution Principle (LSP)

In RRPSS, we made sure that objects of a superclass are substitutable by objects of its subclasses without breaking the application. That requires the objects of our subclasses to behave in the same way as the objects of our superclass and honour the contract of the superclass.

As such, any overridden method of our subclasses should expect no more inputs than our superclass, and accept the same input parameter values as the method of the superclass. Furthermore, regarding outputs, the subclasses methods should also adhere to the same rules as that of the superclass. In summary, any subclass method should expect no more and provide no less than that of the superclass.

Following our previous example where Promotion extends MenuSection, to remove an item from Promotion we use the method removePromoItem(item). Adhering to LSP, we ensure that if we substitute the removePromoItem method with removeMenuItem(item) from the MenuSection class, the design will still work without breakage. This is because they have the same number and type of inputs, and return the same type of output. i.e., if all the removePromoItem(item) methods are replaced with removeMenuItem(item) instead, our app would still run normally without knowing the difference.



```
public boolean removeMenuItem(MenuItem menuItem){
    for(MenuItem item : menuItems){
        if(item == menuItem){
            this.menuItems.remove(menuItem);
            return true;
        }
    }
    return false;
}
```

```
public boolean removePromoItem(MenuItem menuItem){
    return super.removeMenuItem(menuItem);
}
```

Figure 2. removeMenuItem method and removePromoItem method

Interface Segregation Principle (ISP)

When designing our RRPSS, our main intention in order to not violate the ISP is to ensure that clients do not depend upon interfaces that they do not use. Essentially, we made sure that there should not be any interface that has many attributes with some not in use. For example, instead of a general-purpose interface, there can be many client-specific interfaces. This can be achieved by breaking application interfaces into smaller ones in order to reduce the side effects of using larger interfaces. Even though it could increase the code complexity and requires more time and effort spent to adhere to this principle, it would make our code more flexible thus making it a more flexible design.

Dependency Injection Principle (DIP)

Essentially, the DIP makes a class independent of its dependencies. To adhere to DIP, we ensured that there should be no dependency targeted on the concrete classes.

Assumptions

1. Date format used: dd/MM/yyyy
2. Time format used: HH:mm
3. The operating hours of the restaurant are from 10:00 - 22:00
4. The restaurant only has 8 tables with capacity of 2 - 10
5. Joining and splitting of tables is not allowed
6. Members get a 20% discount
7. GST is 7%
8. The staff only use RRPSS during operating hours (e.g. Does not create orders outside of operating hours)
9. Reservation cannot be made more than 2 months in advance
10. Reservation is only held for 1 hour after reservation timing
11. Reservation is automatically removed when an order is created with reference to the guest's contact
12. Guests cannot arrive/create orders earlier than the reservation time
13. When creating an order and the guest's reservation cannot be found, the order will proceed as if no reservation is made
14. Guests occupy the table indefinitely until the invoice is printed (No dining time limit)
15. The smallest possible table capacity will be assigned (e.g. 2 pax will not be assigned to a table of capacity 8 if a table of capacity 2 is available)
16. Any invalid input returns back to AppRRPSS main page

Class Diagram

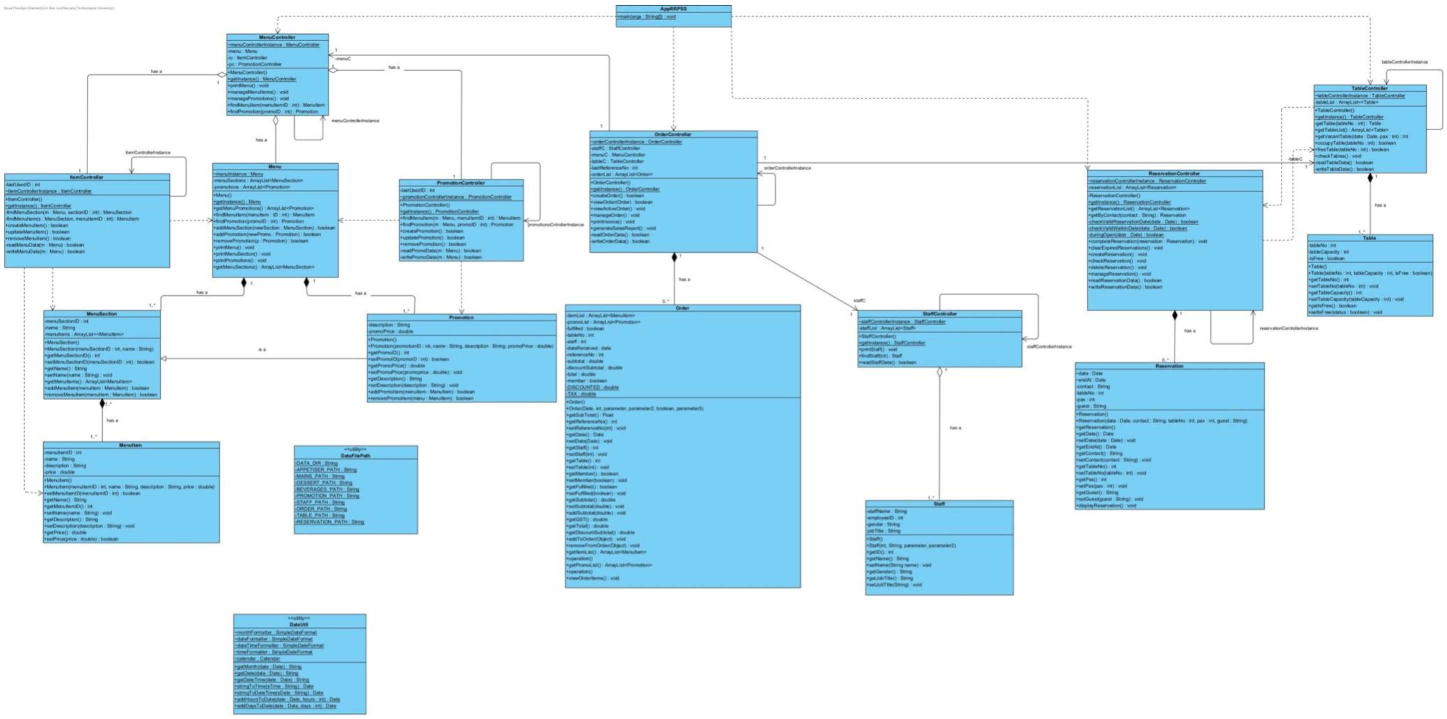


Figure 3: UML Class Diagram

(Please refer to RRPSS-UMLClassDiagram.jpg file in the zip folder for a clearer image)

Notes for Class Diagram:

This diagram represents a static view of our application. It helps to visualise, describe, and document different aspects of a system and help to construct executable code for the application. Attributes and operations of every class as well as their relationships and multiplicities between classes are indicated as shown above.

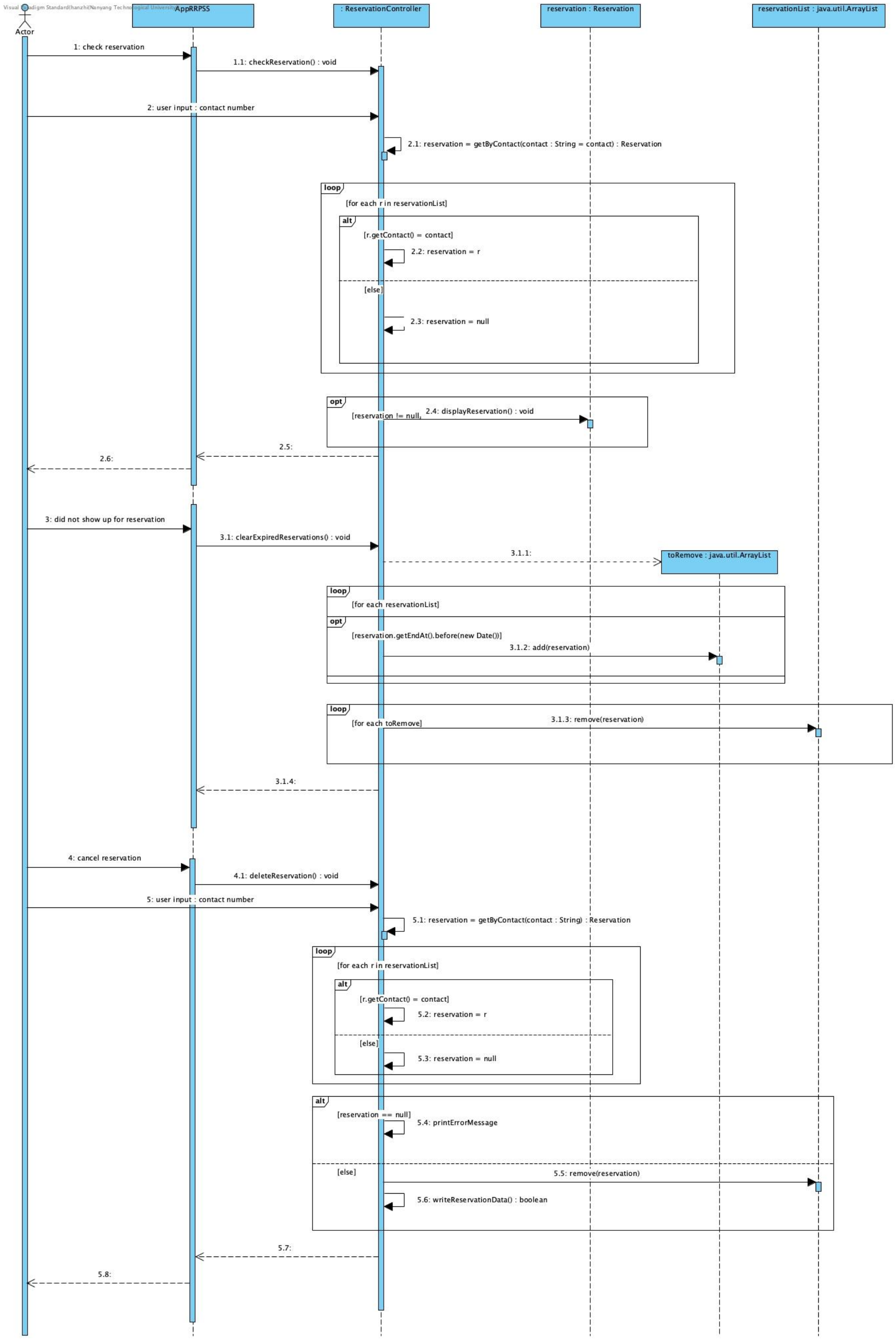
Class Stereotypes

Entity Class : Menu, MenuSection, Promotion, MenuItem, Order, Staff, Reservation, Table

Control Class : MenuController, ItemController, PromotionController, OrderController, StaffController, TableController

Boundary Class : AppRRPSS

Sequence Diagram



Visual Paradigm Standard(hanzhi(Nanyang Technological University))
Actor
AppRRPSS
: ReservationController
reservation : Reservation
reservationList : java.util.ArrayList
1: check reservation
1.1: checkReservation() : void
2: user input : contact number
2.1: reservation = getByContact(contact : String = contact) : Reservation
loop
[for each r in reservationList]
alt
[r.getContact() = contact]
2.2: reservation = r
[else]
2.3: reservation = null
opt
[reservation != null]
2.4: displayReservation() : void
2.5:
2.6:
3: did not show up for reservation
3.1: clearExpiredReservations() : void
3.1.1:
toRemove : java.util.ArrayList
loop
[for each reservationList]
opt
[reservation.getEndAt().before(new Date())]
3.1.2: add(reservation)
loop
[for each toRemove]
3.1.3: remove(reservation)
3.1.4:
4: cancel reservation
4.1: deleteReservation() : void
5: user input : contact number
5.1: reservation = getByContact(contact : String) : Reservation
loop
[for each r in reservationList]
alt
[r.getContact() = contact]
5.2: reservation = r
[else]
5.3: reservation = null
alt
[reservation == null]
5.4: printErrorMessage
[else]
5.5: remove(reservation)
5.6: writeReservationData() : boolean
5.7:
5.8:

Figure 4: Reservation Sequence Diagram

(Please refer to reservation-UMLSequenceDiagram.jpg file in the zip folder for a clearer image)

Notes for Sequence Diagram:

User input – Refers to input from the actual staff

Actor – Refers to the staff using the application

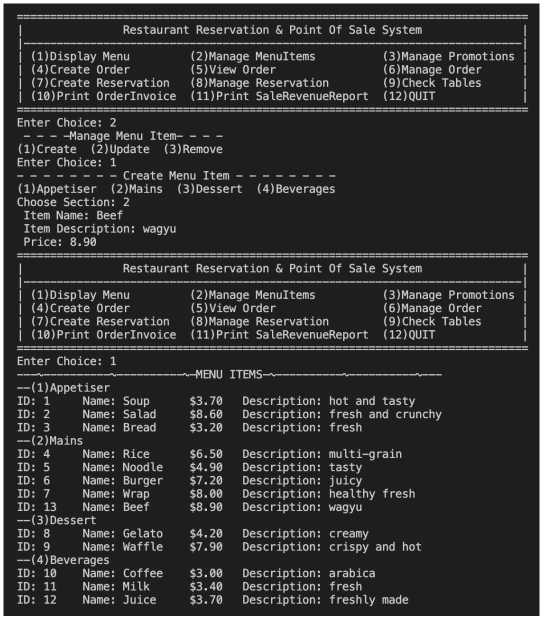
checkReservation() – Method that allows the staff to check on the existing reservation. This is achieved by inputting the customer mobile number when getByContact() is called, if reservation exists, information regarding the reservation will be printed using displayReservation()

clearExpiredReservations() – Method that auto clears the expired reservation (a situation where customers do not show up within the reservation timing – within 1 hour after their reservation timing) by removing the reservation from the reservationList using toRemove(). This function is called whenever createReservation() (when staff creates a reservation) and manageReservation()(when staff check, remove or display a reservation) is called.

deleteReservation() – Method that deletes existing reservation. Function calls getByContact() and scans for the customer phone number, if it is found that they have an existing reservation, it will be deleted from reservationList. Reservation txt file is then updated using writeReservationData().

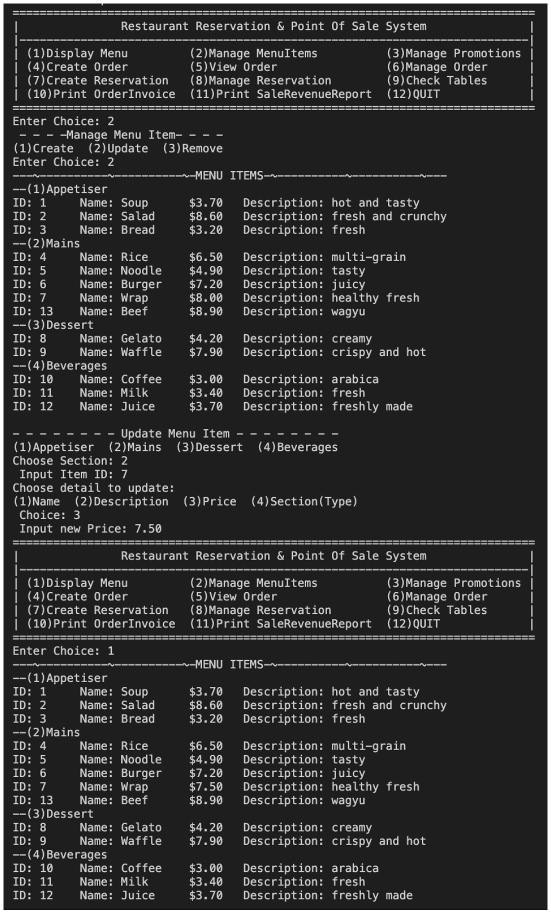
Sample Test Case:

TEST CASE 1: Create MenuItem (Mains)



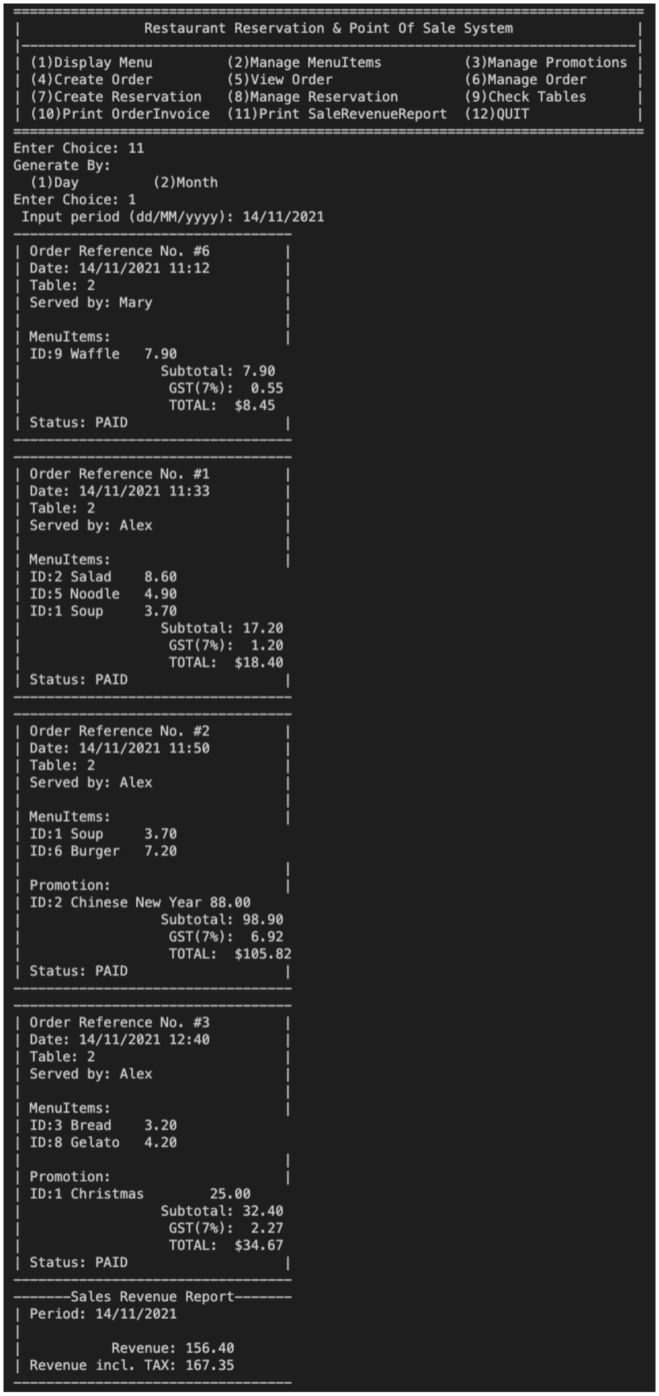
```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 2
 - - - -Manage Menu Item- - - -
(1)Create  (2)Update  (3)Remove
Enter Choice: 1
- - - - - - - - Create Menu Item - - - - - - - -
(1)Appetiser  (2)Mains  (3)Dessert  (4)Beverages
Choose Section: 2
 Item Name: Beef
 Item Description: wagyu
 Price: 8.90
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 1
---~----------~----------~-MENU ITEMS-~----------~----------~---
--(1)Appetiser
ID: 1     Name: Soup      $3.70   Description: hot and tasty
ID: 2     Name: Salad     $8.60   Description: fresh and crunchy
ID: 3     Name: Bread     $3.20   Description: fresh
--(2)Mains
ID: 4     Name: Rice      $6.50   Description: multi-grain
ID: 5     Name: Noodle    $4.90   Description: tasty
ID: 6     Name: Burger    $7.20   Description: juicy
ID: 7     Name: Wrap      $8.00   Description: healthy fresh
ID: 13    Name: Beef      $8.90   Description: wagyu
--(3)Dessert
ID: 8     Name: Gelato    $4.20   Description: creamy
ID: 9     Name: Waffle    $7.90   Description: crispy and hot
--(4)Beverages
ID: 10    Name: Coffee    $3.00   Description: arabica
ID: 11    Name: Milk      $3.40   Description: fresh
ID: 12    Name: Juice     $3.70   Description: freshly made
```

TEST CASE 2: Update MenuItem (Price)



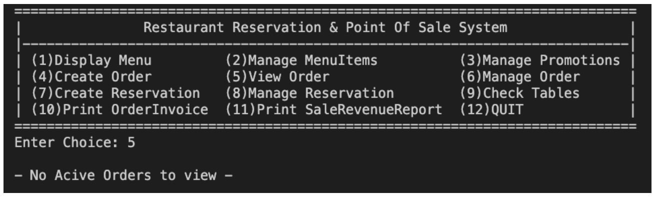
```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 2
 - - - -Manage Menu Item- - - -
(1)Create  (2)Update  (3)Remove
Enter Choice: 2
---~----------~----------~-MENU ITEMS-~----------~----------~---
--(1)Appetiser
ID: 1     Name: Soup      $3.70   Description: hot and tasty
ID: 2     Name: Salad     $8.60   Description: fresh and crunchy
ID: 3     Name: Bread     $3.20   Description: fresh
--(2)Mains
ID: 4     Name: Rice      $6.50   Description: multi-grain
ID: 5     Name: Noodle    $4.90   Description: tasty
ID: 6     Name: Burger    $7.20   Description: juicy
ID: 7     Name: Wrap      $8.00   Description: healthy fresh
ID: 13    Name: Beef      $8.90   Description: wagyu
--(3)Dessert
ID: 8     Name: Gelato    $4.20   Description: creamy
ID: 9     Name: Waffle    $7.90   Description: crispy and hot
--(4)Beverages
ID: 10    Name: Coffee    $3.00   Description: arabica
ID: 11    Name: Milk      $3.40   Description: fresh
ID: 12    Name: Juice     $3.70   Description: freshly made

- - - - - - - - Update Menu Item - - - - - - - -
(1)Appetiser  (2)Mains  (3)Dessert  (4)Beverages
Choose Section: 2
 Input Item ID: 7
Choose detail to update:
(1)Name  (2)Description  (3)Price  (4)Section(Type)
 Choice: 3
 Input new Price: 7.50
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 1
---~----------~----------~-MENU ITEMS-~----------~----------~---
--(1)Appetiser
ID: 1     Name: Soup      $3.70   Description: hot and tasty
ID: 2     Name: Salad     $8.60   Description: fresh and crunchy
ID: 3     Name: Bread     $3.20   Description: fresh
--(2)Mains
ID: 4     Name: Rice      $6.50   Description: multi-grain
ID: 5     Name: Noodle    $4.90   Description: tasty
ID: 6     Name: Burger    $7.20   Description: juicy
ID: 7     Name: Wrap      $7.50   Description: healthy fresh
ID: 13    Name: Beef      $8.90   Description: wagyu
--(3)Dessert
ID: 8     Name: Gelato    $4.20   Description: creamy
ID: 9     Name: Waffle    $7.90   Description: crispy and hot
--(4)Beverages
ID: 10    Name: Coffee    $3.00   Description: arabica
ID: 11    Name: Milk      $3.40   Description: fresh
ID: 12    Name: Juice     $3.70   Description: freshly made
```

TEST CASE 3: SaleRevenueReport by Day



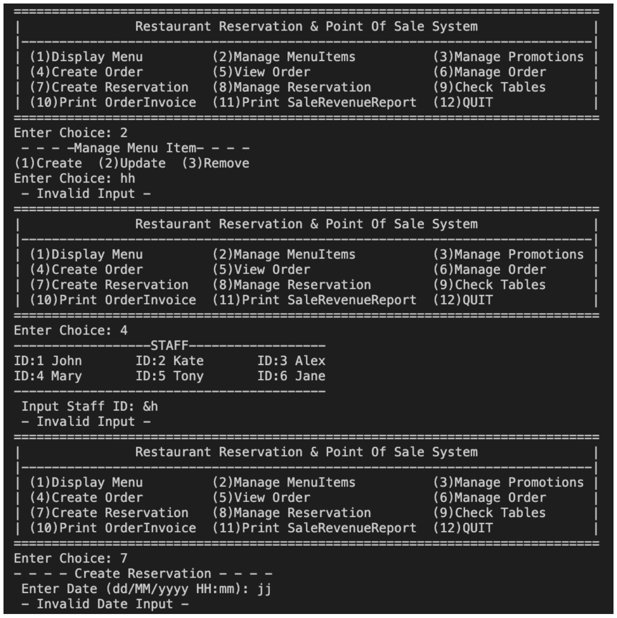
```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 11
Generate By:
  (1)Day         (2)Month
Enter Choice: 1
 Input period (dd/MM/yyyy): 14/11/2021
----------------------------------
| Order Reference No. #6         |
| Date: 14/11/2021 11:12         |
| Table: 2                       |
| Served by: Mary                |
|                                |
| MenuItems:                     |
| ID:9 Waffle   7.90
|                 Subtotal: 7.90
|                  GST(7%):  0.55
|                  TOTAL:  $8.45
| Status: PAID                   |
----------------------------------

----------------------------------
| Order Reference No. #1         |
| Date: 14/11/2021 11:33         |
| Table: 2                       |
| Served by: Alex                |
|                                |
| MenuItems:                     |
| ID:2 Salad    8.60
| ID:5 Noodle   4.90
| ID:1 Soup     3.70
|                 Subtotal: 17.20
|                  GST(7%):  1.20
|                  TOTAL:  $18.40
| Status: PAID                   |
----------------------------------

----------------------------------
| Order Reference No. #2         |
| Date: 14/11/2021 11:50         |
| Table: 2                       |
| Served by: Alex                |
|                                |
| MenuItems:                     |
| ID:1 Soup     3.70
| ID:6 Burger   7.20
|                                |
| Promotion:                     |
| ID:2 Chinese New Year 88.00
|                 Subtotal: 98.90
|                  GST(7%):  6.92
|                  TOTAL:  $105.82
| Status: PAID                   |
----------------------------------

----------------------------------
| Order Reference No. #3         |
| Date: 14/11/2021 12:40         |
| Table: 2                       |
| Served by: Alex                |
|                                |
| MenuItems:                     |
| ID:3 Bread    3.20
| ID:8 Gelato   4.20
|                                |
| Promotion:                     |
| ID:1 Christmas        25.00
|                 Subtotal: 32.40
|                  GST(7%):  2.27
|                  TOTAL:  $34.67
| Status: PAID                   |
----------------------------------
-------Sales Revenue Report-------
| Period: 14/11/2021
|
|          Revenue: 156.40
| Revenue incl. TAX: 167.35
----------------------------------
```

TEST CASE 4: No active Order to view



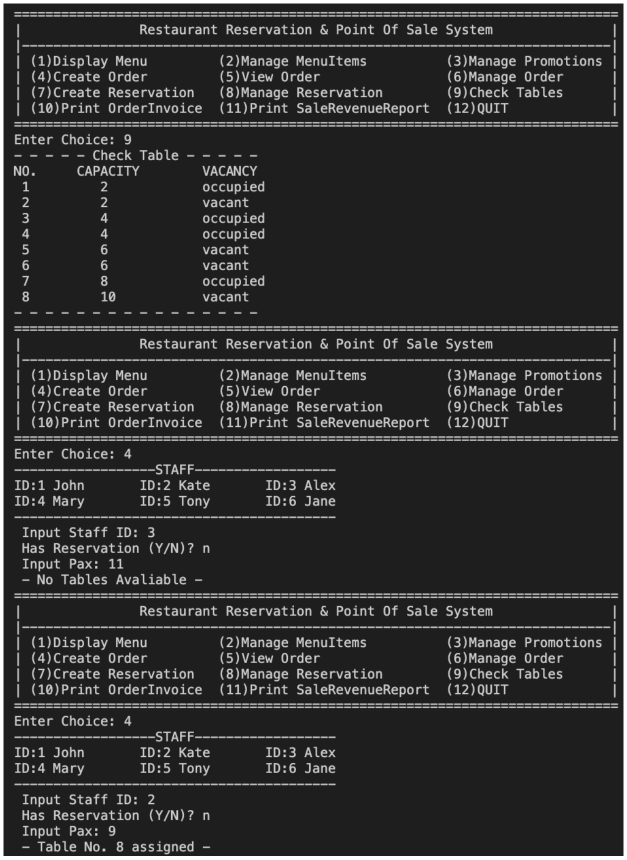
```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 5

- No Acive Orders to view -
```

TEST CASE 5: Invalid Inputs



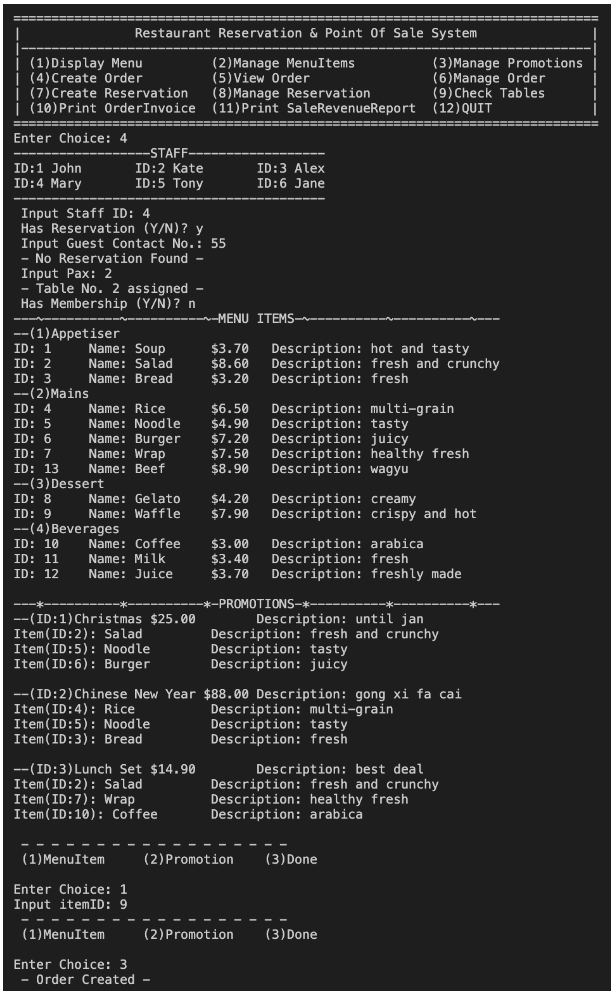
```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 2
 - - - -Manage Menu Item- - - -
(1)Create  (2)Update  (3)Remove
Enter Choice: hh
 - Invalid Input -
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 4
------------------STAFF------------------
ID:1 John       ID:2 Kate       ID:3 Alex
ID:4 Mary       ID:5 Tony       ID:6 Jane
-----------------------------------------
 Input Staff ID: &h
 - Invalid Input -
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 7
- - - - Create Reservation - - - -
 Enter Date (dd/MM/yyyy HH:mm): jj
 - Invalid Date Input -
```

TEST CASE 6: Table Occupancy



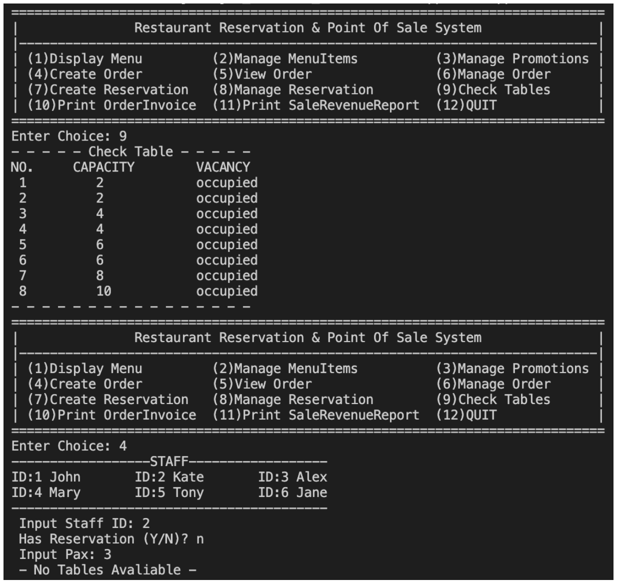
```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 9
- - - - - Check Table - - - - -
NO.     CAPACITY        VACANCY
 1         2            occupied
 2         2            vacant
 3         4            occupied
 4         4            occupied
 5         6            vacant
 6         6            vacant
 7         8            occupied
 8         10           vacant
- - - - - - - - - - - - - - - -
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 4
------------------STAFF------------------
ID:1 John       ID:2 Kate       ID:3 Alex
ID:4 Mary       ID:5 Tony       ID:6 Jane
-----------------------------------------
 Input Staff ID: 3
 Has Reservation (Y/N)? n
 Input Pax: 11
 - No Tables Avaliable -
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 4
------------------STAFF------------------
ID:1 John       ID:2 Kate       ID:3 Alex
ID:4 Mary       ID:5 Tony       ID:6 Jane
-----------------------------------------
 Input Staff ID: 2
 Has Reservation (Y/N)? n
 Input Pax: 9
 - Table No. 8 assigned -
```

TEST CASE 7: Create Order with invalid Reservation



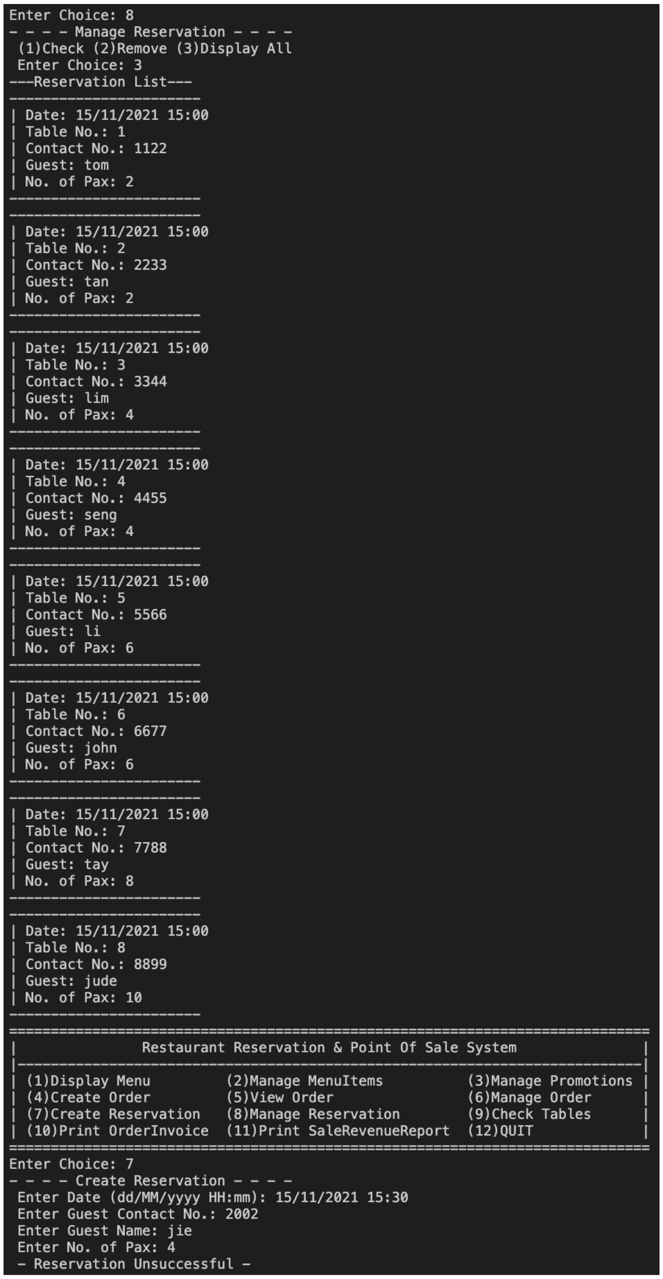
```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 4
------------------STAFF------------------
ID:1 John       ID:2 Kate       ID:3 Alex
ID:4 Mary       ID:5 Tony       ID:6 Jane
-----------------------------------------
 Input Staff ID: 4
 Has Reservation (Y/N)? y
 Input Guest Contact No.: 55
 - No Reservation Found -
 Input Pax: 2
 - Table No. 2 assigned -
 Has Membership (Y/N)? n
---~----------~----------~-MENU ITEMS-~----------~----------~---
--(1)Appetiser
ID: 1     Name: Soup      $3.70   Description: hot and tasty
ID: 2     Name: Salad     $8.60   Description: fresh and crunchy
ID: 3     Name: Bread     $3.20   Description: fresh
--(2)Mains
ID: 4     Name: Rice      $6.50   Description: multi-grain
ID: 5     Name: Noodle    $4.90   Description: tasty
ID: 6     Name: Burger    $7.20   Description: juicy
ID: 7     Name: Wrap      $7.50   Description: healthy fresh
ID: 13    Name: Beef      $8.90   Description: wagyu
--(3)Dessert
ID: 8     Name: Gelato    $4.20   Description: creamy
ID: 9     Name: Waffle    $7.90   Description: crispy and hot
--(4)Beverages
ID: 10    Name: Coffee    $3.00   Description: arabica
ID: 11    Name: Milk      $3.40   Description: fresh
ID: 12    Name: Juice     $3.70   Description: freshly made

---*----------*----------*-PROMOTIONS-*----------*----------*---
--(ID:1)Christmas $25.00        Description: until jan
Item(ID:2): Salad         Description: fresh and crunchy
Item(ID:5): Noodle        Description: tasty
Item(ID:6): Burger        Description: juicy

--(ID:2)Chinese New Year $88.00 Description: gong xi fa cai
Item(ID:4): Rice          Description: multi-grain
Item(ID:5): Noodle        Description: tasty
Item(ID:3): Bread         Description: fresh

--(ID:3)Lunch Set $14.90        Description: best deal
Item(ID:2): Salad         Description: fresh and crunchy
Item(ID:7): Wrap          Description: healthy fresh
Item(ID:10): Coffee       Description: arabica

 - - - - - - - - - - - - - - - - - -
 (1)MenuItem     (2)Promotion    (3)Done

Enter Choice: 1
Input itemID: 9
 - - - - - - - - - - - - - - - - - -
 (1)MenuItem     (2)Promotion    (3)Done

Enter Choice: 3
 - Order Created -
```

TEST CASE 8: No Table Vacancy



```
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 9
- - - - - Check Table - - - - -
NO.     CAPACITY        VACANCY
 1         2            occupied
 2         2            occupied
 3         4            occupied
 4         4            occupied
 5         6            occupied
 6         6            occupied
 7         8            occupied
 8         10           occupied
- - - - - - - - - - - - - - - -
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 4
------------------STAFF------------------
ID:1 John       ID:2 Kate       ID:3 Alex
ID:4 Mary       ID:5 Tony       ID:6 Jane
-----------------------------------------
 Input Staff ID: 2
 Has Reservation (Y/N)? n
 Input Pax: 3
 - No Tables Avaliable -
```

TEST CASE 9: Full Reservation



```
Enter Choice: 8
- - - - Manage Reservation - - - -
 (1)Check (2)Remove (3)Display All
 Enter Choice: 3
---Reservation List---
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 1
| Contact No.: 1122
| Guest: tom
| No. of Pax: 2
-----------------------
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 2
| Contact No.: 2233
| Guest: tan
| No. of Pax: 2
-----------------------
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 3
| Contact No.: 3344
| Guest: lim
| No. of Pax: 4
-----------------------
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 4
| Contact No.: 4455
| Guest: seng
| No. of Pax: 4
-----------------------
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 5
| Contact No.: 5566
| Guest: li
| No. of Pax: 6
-----------------------
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 6
| Contact No.: 6677
| Guest: john
| No. of Pax: 6
-----------------------
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 7
| Contact No.: 7788
| Guest: tay
| No. of Pax: 8
-----------------------
-----------------------
| Date: 15/11/2021 15:00
| Table No.: 8
| Contact No.: 8899
| Guest: jude
| No. of Pax: 10
-----------------------
=============================================================================
|               Restaurant Reservation & Point Of Sale System               |
|---------------------------------------------------------------------------|
| (1)Display Menu         (2)Manage MenuItems          (3)Manage Promotions |
| (4)Create Order         (5)View Order                (6)Manage Order      |
| (7)Create Reservation   (8)Manage Reservation        (9)Check Tables      |
| (10)Print OrderInvoice  (11)Print SaleRevenueReport  (12)QUIT             |
=============================================================================
Enter Choice: 7
- - - - Create Reservation - - - -
 Enter Date (dd/MM/yyyy HH:mm): 15/11/2021 15:30
 Enter Guest Contact No.: 2002
 Enter Guest Name: jie
 Enter No. of Pax: 4
 - Reservation Unsuccessful -
```

<u>Demo YouTube Video Links Available on:</u>

or tinyurl.com/ss9-grp2-demo

or youtu.be/Og0aoRvsh70