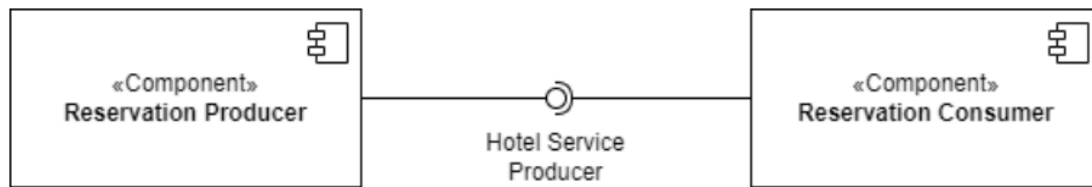


## Restaurant Reservation Consumer / Restaurant Reservation Producer Service Implementation

In this restaurant, there are two roles: the Restaurant Manager and the Reservation Agent. The Manager can check the day's report and adjust table arrangements. The Reservation Agent handles table reservations for customers. If there aren't enough tables available, a message notifies about the shortage for specific table types.



### 1. Manifest implementation

Restaurant Reservation Consumer Manifest file

```
OSGI_RestaurantReservationConsumer x
1 Manifest-Version: 1.0
2 Bundle-ManifestVersion: 2
3 Bundle-Name: OSGI_RestaurantReservationConsumer
4 Bundle-SymbolicName: OSGI_RestaurantReservationConsumer
5 Bundle-Activator: osgi_restaurantreservationconsumer.Activator
6 Bundle-Version: 1.0.0.qualifier
7 Bundle-RequiredExecutionEnvironment: JavaSE-1.8
8 Import-Package: org.osgi.framework;version="1.3.0",
9   osgi_restaurantreservationproducer
10 Require-Bundle: org.eclipse.osgi
11
```

Restaurant Reservation Producer Manifest file

```
OSGI_RestaurantReservationProducer x
1 Manifest-Version: 1.0
2 Bundle-ManifestVersion: 2
3 Bundle-Name: OSGI_RestaurantReservationProducer
4 Bundle-SymbolicName: OSGI_RestaurantReservationProducer
5 Bundle-Version: 1.0.0.qualifier
6 Bundle-Activator: osgi_restaurantreservationproducer.Activator
7 Export-Package: osgi_restaurantreservationproducer
8 Import-Package: org.osgi.framework;version="1.3.0"
9 Bundle-RequiredExecutionEnvironment: JavaSE-1.8
10
```

## 2. All commands of bundle install and run in OSGi framework.

2: Restaurant Reservation Consumer

3: Restaurant Reservation Producer

```
OSGi_RestaurantReservationConsumer [OSGi Framework] C:\Users\bhanu\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220903-1038\jre\bin\javaw.exe (1
912 ACTIVE org.tukaani.xz 1.9.0
913 ACTIVE org.uddi4j_2.0.5.v200805270300
914 ACTIVE org.w3c.css.sac 1.3.1.v200903091627
915 ACTIVE org.w3c.dom.events_3.0.0.draft20060413_v201105210656
916 ACTIVE org.w3c.dom.smil 1.0.1.v200903091627
917 ACTIVE org.w3c.dom.svg 1.1.0.v201011041433
918 ACTIVE org.yaml.snakeyaml 1.27.0.v20201111-1638
g! stop 3
Restaurant Reservation Producer Service stopped successfully

g! stop 2
Restaurant Consumer Service stopped successfully

g! start 3
Restaurant Reservation Producer Service registered and started successfully
g! start 2
Restaurant Consumer Service start successfully

~~~~~ Login ~~~~~
Enter UserName :
```

## 3. Behaviours & Outputs

### 3.1 Admin [Manager]

As an administrator/manager, you have the ability to add tables to different types based on the establishment's needs. In this scenario, there are four table types: standard, outdoor, family, and private, each with its unique characteristics and costs.

```
OSGi_RestaurantReservationConsumer [OSGi Framework] C:\Users\bhanu\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220903-1038\jre\bin\javaw.exe (1
Restaurant Consumer Service start successfully

~~~~~ Login ~~~~~
Enter UserName : Manager
Enter Password : Admin@restaurant

~~~~~ Welcome Manager ~~~~~

Type 'Report' For check day report | Type 'TableCtrl' For add or remove tables : TableCtrl

Type 'Add' to add new table | Type 'Remove' to remove a table : Add
Enter type of table you wish to add [Standard |Outdoor |Private |Family ] : Standard
Enter no. of tables you wish to add : 3

Added 3 table(s) to the standard table(s).
Available Standard Tables : [S01, S02, S03, S04, S05, S06, S07, S08]

~~~~~ Login ~~~~~
Enter UserName :
```

As an administrator/ Manager, can remove table from selected table type.

```
OSGi_RestaurantReservationConsumer [OSGi Framework] C:\Users\bhanu\eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220903-1038\jre\bin\javaw.exe (1
Restaurant Consumer Service start successfully

~~~~~ Login ~~~~~
Enter UserName : Manager
Enter Password : Admin@restaurant

~~~~~ Welcome Manager ~~~~~

Type 'Report' For check day report | Type 'TableCtrl' For add or remove tables : TableCtrl

Type 'Add' to add new table | Type 'Remove' to remove a table : Remove

Enter type of table you wish to remove [Standard |Outdoor |Private |Family ] : Standard
Enter no. of tables you wish to remove : 2

Removed 2 Standard Table(s).
Available Standard Tables : [S01, S02, S03]
```

As an administrator/ Manager, can view day report which include reserved tables and total income at the moment.

```
Console X
OSGi_RestaurantReservationConsumer [OSGi Framework] C:\Users\bhanu\workspace\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220903-1038\jre\bin\javaw.exe (10

***** Login *****
Enter UserName : Manager
Enter Password : Admin@restaurant

***** Welcome Manager *****

Type 'Report' For check day report | Type 'TableCtrl' For add or remove tables : Report
|
~~~ Day Report ~~~

~~~ Reserved Tables ~~~
Standard Tables: [S01]
Outdoor Tables: []
Private Tables: []
Family Tables: [F01, F02]

Total Sales: 11500.0
```

### 3.2 Reservation Agent

As an Reservation Agent, can make a reservation to the client. Here taking some information from the customer like the table type and numbers of tables that wishes to reserve. If there aren't any available tables of that particular type its showing that there aren't enough tables to complete the reservation..

```
Console X
OSGi_RestaurantReservationConsumer [OSGi Framework] C:\Users\bhanu\workspace\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220903-1038\jre\bin\javaw.exe (10

***** Login *****
Enter UserName : ResvAgent
Enter Password : ResvAgent@restaurnat

***** Welcome Reservation Agent *****

~~~ Prices ~~~
Standard Table      : Rs.2000.00
Outdoor Table      : Rs.2500.00
Private Dining Tables : Rs.4000.00
Family-style Tables : Rs.3500.00

~~~ Available Tables ~~~
Available Standard Tables : [S01, S02, S03, S04, S05, S06, S07, S08]
Available Outdoor Tables  : [OD01, OD02, OD03, OD04]
Available Private Dining Tables : [P01, P02]
Available Family-style Tables : [F01, F02, F03]

Type 'reservation' For make reservation | Type 'cancelation' For cancel reservation : reservation

Customer Name : bhanuka
Customer Contact : 0703015048
No of Guests: 2
Enter Table Type [Standard |Outdoor |Private |Family ] : outdoor
Enter No. of Tables : 1
Additional Note : -

~~~ Reservation Details ~~~
Customer Name      : bhanuka
Customer Contact Number : 703015048
No. of Guests      : 2
Special Requests   : -
Reserved Table(s)  : [OD01]
Total Amount       : 2500.0

~~~ Available Outdoor Tables ~~~
[OD03, OD02, OD04]
```

As an Reservation Agent, can cancel any reservation.

```
Console X
OSGi_RestaurantReservationConsumer [OSGi Framework] C:\Users\bhanu\workspace\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220903-1038\jre\bin\javaw.exe (10

***** Login *****
Enter UserName : ResvAgent
Enter Password : ResvAgent@restaurnat

***** Welcome Reservation Agent *****

~~~ Prices ~~~
Standard Table      : Rs.2000.00
Outdoor Table      : Rs.2500.00
Private Dining Tables : Rs.4000.00
Family-style Tables : Rs.3500.00

~~~ Available Tables ~~~
Available Standard Tables : [S01, S02, S03, S04, S05, S06, S07, S08]
Available Outdoor Tables  : [OD03, OD02, OD04]
Available Private Dining Tables : [P01, P02]
Available Family-style Tables : [F01, F02, F03]

Type 'reservation' For make reservation | Type 'cancelation' For cancel reservation : cancelation

Enter Table Type [Standard |Outdoor |Private |Family ] : Outdoor
Enter Table Number to Cancele The Reservation : OD01

Reservation for Outdoor Table OD01 has been canceled.
```