Hotel Databases .Group : 5

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439016214	سالمه سالم الهذلي

Tasks of Phase 1:	سالمه سالم الهذلي	ريم هاشم الشريف	رهام محمد باخشوين	ثراء عامر الشريف
Description:	*	*	*	*
Chen's Notation → Entites and attributes:		*		
Chen's Notation → Relationship:			*	
UML Notation → Entites and attributes:				*
UML Notation → Relationship:	*			

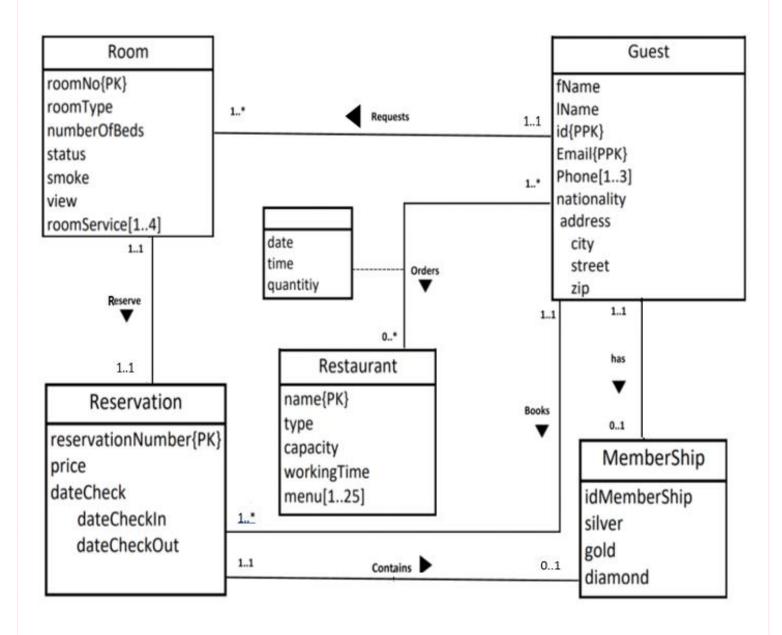
Phase 1:

Description of Hotel Databases:

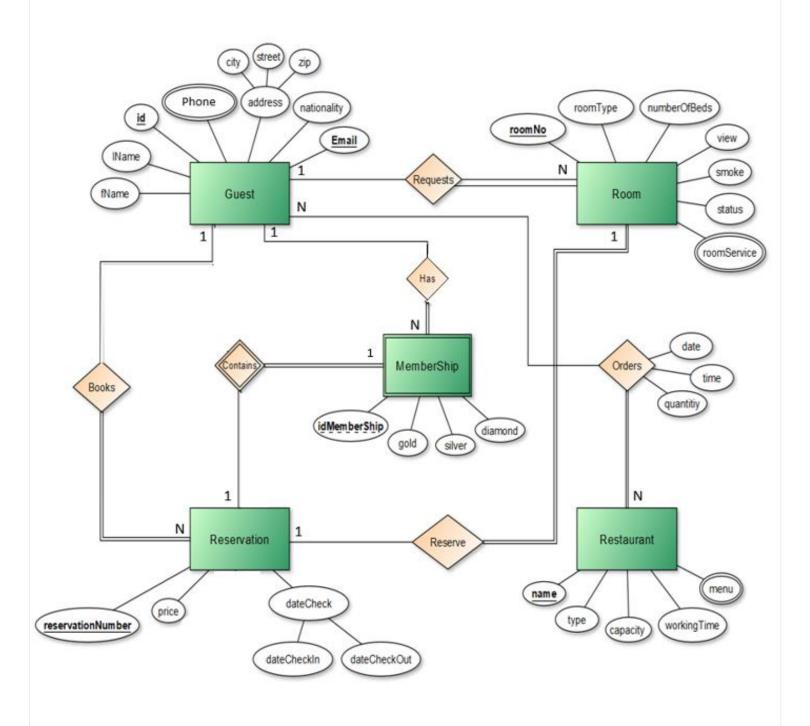
The hotel plans to creat a database system, to keep track of the information about it's guests and The other services.

- The identifier for a Guest is fName , lName , id ,1-3 Phone , address (that contains city , street , zip) , Nationality , and Email .
- The main serve that the hotel offers its supplies rooms to the guests.
- The identifier for a room is a roomNo, room type, number of Beds, 1-4 room service, status, view, and smoke.
- Each guest can Requests for one or more room, and the room may be Requested by one guest, and the hotel must tracks the current state of each room it is empty or not.
- Each Reservations has a reservation number, datae check (contains date check in, date check out), and price.
- Each Reservations may Reserve for one and only one Room or may not, each room has reserved must belog to one and only one Reservation.
- Reservations can Contains Membership .
- Each Reservation may contain 1 or 0 Memberships, and each Membership must contain only one Reservation.
- Each membership has an id membership, silver, gold, and diamond.
- Each Guset can has a Memberships ,The Membership must belong to exactly one Guest , and the Guest may be has a Membership , and may be not.
- Guest may Books one or more of a Reservations , each Reservations must belong to exactly one guest .
- The identifier for a restaurant is a name, type, capacity (of restaurant), working time, and 1-25 menu.
- Each Guest may Orders one or more orders from the Restaurant, or may not orders any thing.
- each orders in the Restaurant must belong to one or more Guest.
- An attributes associated with each Guest and Restaurant are date, time, and quantitiy.

UML Notation Diagram:



Chen's Notation Diagram:



Phase 2:

Tasks of Phase 2:	سالمه سالم الهذلي	ريم هاشم الشريف	رهام محمد باخشوين	ثراء عامر الشريف
STEP 1: Mapping of Regular Entity Types	*	*	*	*
STEP 2: Mapping of Weak Entity Types	*	*	*	*
STEP 3: Mapping of Binary 1:1 Relationship Types	*	*	*	*
STEP 4: Mapping of Binary 1:M Relationship Types	*	*	*	*
STEP 5: Mapping of Binary M:N Relationship Types	*	*	*	*
Step 6: Mapping of Multivalued Attributes	*	*	*	*
Step 7: Mapping of N-ary Relationship Types	*	*	*	*
Normalization : 1NF	*	*	*	*
Normalization : 2NF	*	*	*	*
Normalization : 3NF	*	*	*	*

Relational Schema:

STEP 1: Mapping of Regular Entity Types

Guest

fName	lName	id	city	street	zip	nationality	Email
-------	-------	----	------	--------	-----	-------------	-------

Room

roomNo roomType	numberOfBeds	view	smoke	status	
-----------------	--------------	------	-------	--------	--

Reservation

reservationNumber	price	dateCheckIn	dateCheckOut
-------------------	-------	-------------	--------------

Restaurant

Name	type	capacity	workinaTime
<u> 1 Varric</u>	Ly PC	capacity	Working mine

STEP 2: Mapping of Weak Entity Types

MemberShip

reservationNumber gu	guestID <u>guestEmail</u>	<u>idMemberShip</u>	gold	silver	diamond
----------------------	---------------------------	---------------------	------	--------	---------

STEP 3: Mapping of Binary 1:1 Relationship Types

- Reserve (Room, Reservation)

Reservation

- Contains (Reservation, MemberShip): Done in Step 2.

MemberShip

reservationNumber	auestID	auestEmail	LidMemberShip	aold	silver	diamond
	3	<u> </u>)		

STEP 4: Mapping of Binary 1:M Relationship Types

- Requests (Guest, Room):

Room

roomN	o roomTvpe	numberOfBeds	view	smoke	status	auestID	auestEmail
	_			0	0 00.00.0	9 5. 5 5 5. 5	9 5. 5 5 5 2

- Books (Guest, Reservation):

Reservation

reservationNumber	price	dateCheckIn	dateCheckOut	roomNo	guestID	guestEmail	
-------------------	-------	-------------	--------------	--------	---------	------------	--

- Has (Guest, MemberShip): Done in Step 2.

MemberShip

reservationNumber	auestID	l questEmail	lidMemberShin	laold	silver	diamond
reservation ranner	gaesab	gaesterrian	1011110C15111p	9014	3111	alairioria

STEP 5: Mapping of Binary M:N Relationship Types

- Orders (Guest, Restaurant):

GuestOrder

guestID gu	guestEmail <u>restaurantName</u>	date	time	quantitiy
------------	----------------------------------	------	------	-----------

Step 6: Mapping of Multivalued Attributes

GuestPhone

guestID guestEmail phone		
------------------------------	--	--

RoomService

roomNo	roomService

RestaurantMenu

restaurantName	menu
----------------	------

Step 7: Mapping of N-ary Relationship Types

None

FINAL MAPPING:

Guest

fName	lName	id	city	street	zip	nationality	Email
-------	-------	----	------	--------	-----	-------------	-------

GuestPhone

auestID	questEmail	nhone
guestio	guesterran	Priorie

GuestOrder

guestID	<u>guestEmail</u>	restaurantName	date	time	quantitiy
---------	-------------------	----------------	------	------	-----------

Room

roomNo	roomTvpe	numberOfBeds	view	smoke	status	auestID	auestEmail	
						9	9	ı

RoomService

roomNo	roomService
100111110	1001110011100

Reservation

reservationNumber price	dateCheckIn	dateCheckOut	roomNo	guestID	guestEmail	
-------------------------	-------------	--------------	--------	---------	------------	--

Restaurant

name	type	canacity	workinaTime
TIGITIC	type	capacity	WORKINGTITIC

RestaurantMenu

restaurantName	menu

MemberShip

r	reservationNumber	guestID	guestEmail	idMemberShip	gold	silver	diamond	
---	-------------------	---------	------------	--------------	------	--------	---------	--

Normalization:

```
Guest (fName , IName , id, city , street , zip , nationality , Email )

1NF (No Multivalued Attributes )

2NF (No Partial Dependency )

3NF (No Transitive Dependency )

Guest (id , Email , fName , IName , nationality , city )

GuestAddress (city , street , zip )

GuestPhone (guestID , guestEmail , phone )

1NF (No Multivalued Attributes )

2NF (No Partial Dependency )

3NF (No Transitive Dependency )
```

```
GuestOrder ( guestID , guestEmail , restaurantName , date , time , quantitiy )
1NF (No Multivalued Attributes)
GuestOrder ( <u>guestID</u> , <u>guestEmail</u> , <u>restaurantName</u> , quantitiy )
GuestOrderDate ( guestID , guestEmail , restaurantName , date , time )
2NF (No Partial Dependency)
3NF (No Transitive Dependency)
Room (roomNo, roomType, numberOfBeds, view, smoke, status, guestID, guestEmail)
1NF (No Multivalued Attributes)
2NF (No Partial Dependency)
3NF (No Transitive Dependency)
Room (roomNo, roomType, status)
RoomTyp ( roomType , numberOfBeds , view , smoke )
RoomStatus (status, questID, questEmail)
```

```
RoomService (roomNo, roomService)
1NF (No Multivalued Attributes)
2NF (No Partial Dependency)
3NF (No Transitive Dependency)
Reservation( reservationNumber ,price ,dateCheckIn , dateCheckOut , roomNo , guestID , guestEmail)
1NF (No Multivalued Attributes)
2NF (No Partial Dependency)
3NF (No Transitive Dependency)
Reservation (reservationNumber, roomNo, guestID, guestEmail)
DateCheck ( guestID , guestEmail , dateCheckIn , dateCheckOut )
RoomPrice (roomNo, price)
```

```
Restaurant ( Name , type , capacity , workingTime )
1NF (No Multivalued Attributes)
2NF (No Partial Dependency)
3NF (No Transitive Dependency)
Restaurant (Name, type)
RestaurantType ( type , capacity , workingTime )
RestaurantMenu ( restaurantName , menu )
1NF (No Multivalued Attributes)
2NF (No Partial Dependency)
3NF (No Transitive Dependency)
MemberShip (reservationNumber, guestID, guestEmail, idMemberShip, gold, silver, diamond)
1NF (No Multivalued Attributes)
2NF (No Partial Dependency)
3NF (No Transitive Dependency)
```

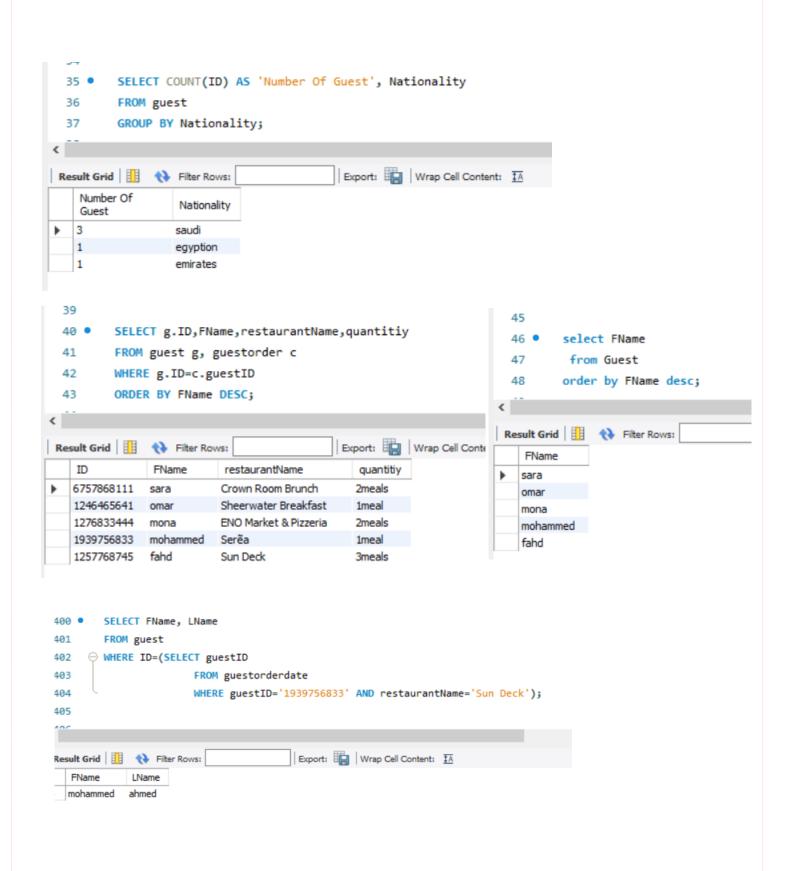
Phase 3:

Tasks of Phase 3:	سالمه سالم الهذلي	ريم هاشم الشريف	رهام محمد باخشوين	ثراء عامر الشريف
CREATE SCHEMA, CREATE TABLE	*	*	*	*
INSERT command	*	*	*	*
UPDATE command	*	*	*	*
DELETE command	*	*	*	*
WHERE command	*	*	*	*
GROUP BY command	*	*	*	*
HAVING command	*	*	*	*
ORDER BY command	*	*	*	*
Subqueries command	*	*	*	*
join operations command	*	*	*	*

1 • CREATE SCHEMA Hotel;

Guest:

```
3 • ⊖ CREATE TABLE Guest(
        ID
 4
                      VARCHAR(20) NOT NULL,
                      VARCHAR(20) NOT NULL,
 5
        Email
 6
        FName
                       VARCHAR(45) NULL,
        LName
                       VARCHAR(45) NULL,
        Nationality
                       VARCHAR(20) NULL,
 9
                      VARCHAR(15) NULL,
        CONSTRAINT Guest_PK PRIMARY KEY (ID, Email),
 LØ
        CONSTRAINT Guest FK FOREIGN KEY (City) REFERENCES GuestAddress(City)ON DELETE CASCADE
 11
      );
 12
 13
 14
 18
         INSERT INTO guest (ID, Email, FName, LName, Nationality, City)
 19
         VALUES ('1939756833', 'moh@ hotmail.com', 'mohammed', 'ahmed', 'egyption', 'cairo');
 20
 21 •
         INSERT INTO guest (ID, Email, FName, LName, Nationality, City)
         VALUES ('6757868111', 'sara@gmail.com', 'sara', 'ali', 'emirates', 'dubai');
 22
         INSERT INTO guest (ID, Email, FName, LName, Nationality, City)
 23 •
 24
         VALUES ('1257768745', 'fahd@gmail.com', 'fahd', 'yasir', 'saudi', 'makkah');
         INSERT INTO guest (ID, Email, FName, LName, Nationality, City)
 25 •
         VALUES ('1246465641', 'omar@hotmail.com', 'omar', 'faisal', 'saudi', 'jeddah');
 26
         INSERT INTO guest (ID, Email, FName, LName, Nationality, City)
 27 •
         VALUES ('1276833444', 'mona@gmail.com', 'mona', 'hamza', 'saudi', 'riyadh');
 28
 29
 30
 31 •
         SELECT *
 32
         FROM guest;
Result Grid
             Filter Rows:
                                          | Edit: 🚄 🖶 | Export/Import: 🏣 👸 | Wrap Cell Content: 🖽
                               FName
                                          LName
                                                 Nationality
                                                            City
  1246465641
              omar@hotmail.com
                               omar
                                          faisal
                                                 saudi
                                                           jeddah
                                                           makkah
  1257768745 fahd@gmail.com
                              fahd
                                          yasir
                                                 saudi
  1276833444 mona@gmail.com
                                                 saudi
                                                           rivadh
                              mona
                                         hamza
  1939756833 moh@ hotmail.com
                              mohammed
                                                           cairo
                                         ahmed
                                                 egyption
  6757868111 sara@gmail.com
                              sara
                                          ali
                                                 emirates
                                                           dubai
                              NULL
                                         NULL
                                                 NULL
                                                           NULL
```



```
DELETE FROM guest
         WHERE ID='6757868111';
  5
  6
                                             Edit: 🚄 🖶 🖶 | Export/Import: 识 🐻
Email
                                                    Nationality
                                 FName
                                            LName
                                                               City
  1246465641
             omar@hotmail.com
                                omar
                                            faisal
                                                   saudi
                                                              jeddah
   1257768745 fahd@gmail.com
                                fahd
                                                   saudi
                                                              makkah
                                            vasir
   1276833444
               mona@gmail.com
                                mona
                                            hamza
                                                   saudi
                                                              riyadh
   1939756833
              moh@ hotmail.com
                                mohammed
                                           ahmed
                                                              cairo
                                                   egyption
  NULL
                                NULL
                                           NULL
                                                              NULL
               NULL
                                                   NULL
guest 3
          guest 4 ×
Action Output
        Time
                 Action
     94 21:29:27 DELETE FROM guest WHERE ID='6757868111'
     95 21:29:27 SELECT * FROM db1_project.guest LIMIT 0, 1000
```

GuestAddress:

```
59 ● ○ CREATE TABLE GuestAddress(
60
       City
                      VARCHAR(15) NOT NULL,
       Street
                      VARCHAR(20) NUll,
61
       Zip
                      INT(7) NULL,
62
      CONSTRAINT GuestAddress_PK PRIMARY KEY (City));
63
64
64
        INSERT INTO guestaddress (City, Street, Zip)
65 •
        VALUES ('cairo', 'Al-azhar', '78912');
66
67 •
        INSERT INTO guestaddress (City, Street, Zip)
        VALUES ('dubai', 'El-shikh zayed', '33445');
68
        INSERT INTO guestaddress (City, Street, Zip)
69 •
        VALUES ('makkah', 'Al-marg', '6432');
70
        INSERT INTO guestaddress (City, Street, Zip)
71 •
72
        VALUES ('jeddah', 'hira', '7371');
        INSERT INTO guestaddress (City, Street, Zip)
73 •
        VALUES ('riyadh', 'alia', '4118');
74
75
76
77 •
        SELECT *
78
        FROM guestaddress;
Edit: 🚄 🖶 🖶 Expo
                      Zip
   City
          Street
                      78912
  cairo
          Al-azhar
  dubai
         El-shikh zayed
                      33445
  jeddah
         hira
                      7371
  makkah
         Al-marg
                      6432
          alia
  riyadh
                      4118
  NULL
```

GuestPhone:

```
82
 83 • 

CREATE TABLE guestphone (
 84
         guestID
                     VARCHAR(20) NOT NULL,
                      VARCHAR(20) NOT NULL,
 85
         guestEmail
 86
                      VARCHAR(15) NOT NULL,
 87
         CONSTRAINT guestphone_PK PRIMARY KEY (guestID, guestEmail, phone),
 88
         CONSTRAINT guestphone_FK1 FOREIGN KEY (guestID) REFERENCES Guest (ID) ,
         CONSTRAINT guestphone_FK2 FOREIGN KEY (guestEmail) REFERENCES Guest (Email));
 89
 90
90
         INSERT INTO guestphone (guestID, guestEmail, phone)
91 •
         VALUES ('1939756833', 'moh@ hotmail.com', '+966 554437959');
92
         INSERT INTO guestphone (guestID, guestEmail, phone)
93 •
         VALUES ('6757868111', 'sara@gmail.com', '+966 509948664');
94
95 0
         INSERT INTO guestphone (guestID, guestEmail, phone)
         VALUES ('1257768745', 'fahd@gmail.com', '+966 566788345');
96
97 •
         INSERT INTO guestphone (guestID, guestEmail, phone)
         VALUES ('1246465641', 'omar@hotmail.com', '+966 509988811');
98
         INSERT INTO guestphone (guestID, guestEmail, phone)
99 •
         VALUES ('1276833444', 'mona@gmail.com', '+966 577099666');
100
101
102
         SELECT *
103 •
104
         FROM guestphone;
105
                                             Edit: 6 Export/Import:
Result Grid
              Filter Rows:
   questID
              questEmail
                                phone
  1257768745
              fahd@gmail.com
                               +966 566788345
  1939756833
              moh@ hotmail.com
                               +966 554437959
              mona@gmail.com
                               +966 577099666
  1276833444
  1246465641
              omar@hotmail.com
                               +966 509988811
  6757868111 sara@gmail.com
                               +966 509948664
  NULL
                               NULL
```

```
UPDATE guestphone
111 •
112
        SET phone='+966 450743011'
         WHERE guestID='1276833444';
113
114
         SELECT *
115 •
116
         FROM guestphone;
<
                                         Edit: 🚄 🖶
guestID
             guestEmail
                             phone
   1257768745 fahd@gmail.com
                            +966 566788345
   1939756833 moh@ hotmail.com +966 554437959
   1276833444 mona@gmail.com
                            +966 450743011
   1246465641 omar@hotmail.com +966 509988811
   6757868111 sara@gmail.com
                            +966 509948664
             NULL
  NULL
```

GuestOrder:

```
113
114 • 

CREATE TABLE GuestOrder (
115
        guestID VARCHAR(20) NOT NULL,
        guestEmail VARCHAR(20) NOT NULL,
116
        restaurantName VARCHAR(45) NOT NULL,
117
        quantitiy VARCHAR(15) NULL,
118
        CONSTRAINT GuestOrder PK PRIMARY KEY (guestID, guestEmail, restaurantName),
119
        CONSTRAINT guestID FOREIGN KEY (guestID) REFERENCES Guest (ID),
120
121
        CONSTRAINT guestEmail FOREIGN KEY (guestEmail) REFERENCES Guest (Email),
        CONSTRAINT restaurantName FOREIGN KEY (restaurantName) REFERENCES restaurant (name)
122
123
        );
124
         INSERT INTO guestorder (guestID, guestEmail, restaurantName, quantitiy)
126 •
         VALUES ('1939756833', 'moh@ hotmail.com', 'Serea', '1meal');
127
128 .
         INSERT INTO guestorder (guestID, guestEmail, restaurantName, quantitiy)
         VALUES ('6757868111', 'sara@gmail.com', 'Crown Room Brunch', '2meals');
129
130 •
         INSERT INTO guestorder (guestID, guestEmail, restaurantName, quantitiy)
131
         VALUES ('1257768745', 'fahd@gmail.com', 'Sun Deck', '3meals');
132 •
         INSERT INTO guestorder (guestID, guestEmail, restaurantName, quantitiy)
         VALUES ('1246465641', 'omar@hotmail.com', 'Sheerwater Breakfast', '1meal');
133
         INSERT INTO guestorder (guestID, guestEmail, restaurantName, quantitiy)
134 •
         VALUES ('1276833444', 'mona@gmail.com', 'ENO Market & Pizzeria', '2meals');
135
136
137 •
         SELECT *
138
         FROM guestorder ;
130
                                           Edit: A B Export/Import: A Wrap Cell Con
Result Grid
              Filter Rows:
   guestID
                                    restaurantName
                                                         quantitiy
                 guestEmail
  1246465641
                 omar@hotmail.com
                                    Sheerwater Breakfast
                                                        1meal
  1257768745
                 fahd@gmail.com
                                    Sun Deck
                                                        3meals
  1276833444
                 mona@gmail.com
                                   ENO Market & Pizzeria
                                                        2meals
  1939756833
                 moh@hotmail.com
                                   Serea
                                                        1meal
  6757868111
                 sara@gmail.com
                                   Crown Room Brunch
                                                        2meals
  NULL
                 MULL
                                   NULL
                                                        MULL
```

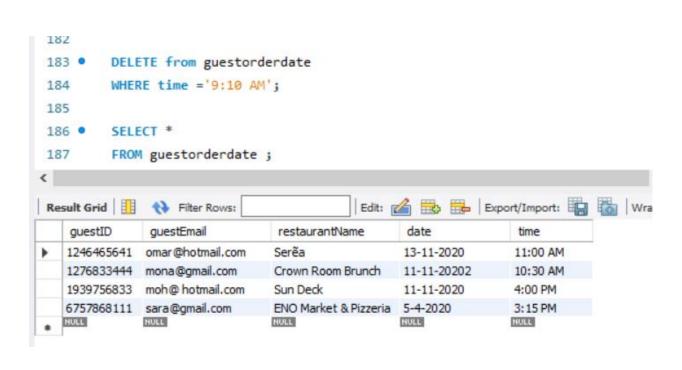
```
143
144 •
         UPDATE guestorder
145
         SET quantitiy='3meal'
146
         WHERE guestID='1246465641';
147
148 •
         SELECT *
149
         FROM guestorder;
Result Grid
                                              Edit: 🚄 🖶 🖶 Export/In
               Filter Rows:
                   guestEmail
   guestID
                                       restaurantName
                                                              quantitiy
                  omar@hotmail.com
                                       Sheerwater Breakfast
   1246465641
                                                             3meal
                  fahd@gmail.com
                                       Sun Deck
                                                             3meals
   1257768745
                  mona@gmail.com
                                       ENO Market & Pizzeria
                                                             2meals
   1276833444
   1939756833
                  moh@hotmail.com
                                       Serea
                                                             1meal
   6757868111
                  sara@gmail.com
                                       Crown Room Brunch
                                                             2meals
                  NULL
                                      NULL
  NULL
                                                             NULL
```

Guestorderdate

```
146
147 • 

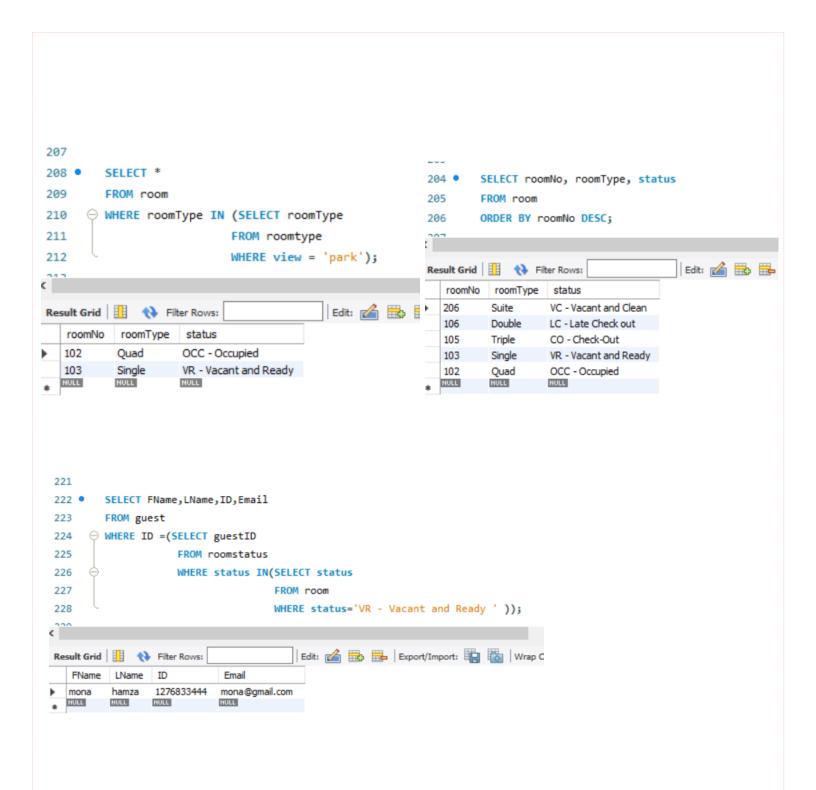
CREATE TABLE guestorderdate (
                                 varchar(20) NOT NULL,
148
          guestID
149
          guestEmail
                                 varchar(20) NOT NULL,
150
          restaurantName
                                 varchar(45) NOT NULL,
          date
                                 varchar(20) NOT NULL,
151
152
                                 varchar(20) DEFAULT NULL,
153
          PRIMARY KEY (guestID, guestEmail, restaurantName, date),
          CONSTRAINT guestorderdate_FK1 FOREIGN KEY (guestID) REFERENCES Guest (ID) ,
154
          CONSTRAINT guestorderdate_FK2 FOREIGN KEY (guestEmail) REFERENCES Guest (Email),
155
          CONSTRAINT guestorderdate_FK3 FOREIGN KEY (restaurantName) REFERENCES restaurant (name));
156
157
154 •
         INSERT INTO guestorderdate
        VALUES ('1939756833', 'moh@ hotmail.com', 'Sun Deck', '11-11-2020', '4:00 PM');
155
156 •
         INSERT INTO guestorderdate
        VALUES ('6757868111', 'sara@gmail.com', 'ENO Market & Pizzeria', '5-4-2020', '3:15 PM');
157
158 •
        INSERT INTO guestorderdate
        VALUES ('1257768745', 'fahd@gmail.com', 'Sheerwater Breakfast', '7-9-2020', '9:10 AM');
159
         INSERT INTO guestorderdate
160 •
        VALUES ('1246465641', 'omar@hotmail.com', 'Serea', '13-11-2020', '11:00 AM');
161
162 •
        INSERT INTO guestorderdate
        VALUES ('1276833444', 'mona@gmail.com', 'Crown Room Brunch', '11-11-20202', '10:30 AM');
163
164
165 •
        SELECT *
166
         FROM guestorderdate;
                                           | Edit: 🚄 🖶 | Export/Import: 🏣 👸 | Wrap Cell Content: 🖽
Result Grid
              Filter Rows:
   guestID
              guestEmail
                                restaurantName
  1246465641
             omar@hotmail.com
                                                  13-11-2020
                                                                 11:00 AM
  1257768745 fahd@gmail.com
                               Sheerwater Breakfast 7-9-2020
                                                                 9:10 AM
  1276833444 mona@gmail.com
                                                                 10:30 AM
                                Crown Room Brunch
                                                  11-11-20202
  1939756833 moh@ hotmail.com
                               Sun Deck
                                                 11-11-2020
                                                                 4:00 PM
  6757868111 sara@gmail.com
                               ENO Market & Pizzeria 5-4-2020
                                                                 3:15 PM
 NULL
```

```
168
169 •
         SELECT *
170
         FROM guestorderdate
         HAVING date = '11-11-2020';
171
172
                                             Edit: 🚄 🖶 🖶 Export/Import: 📳
Result Grid
               Filter Rows:
   guestID
               questEmail
                                  restaurantName
                                                     date
                                                                     time
  1939756833
              moh@ hotmail.com
                                 Sun Deck
                                                    11-11-2020
                                                                     4:00 PM
 NULL
              NULL
                                 NULL
                                                    NULL
                                                                    NULL
```



Room:

```
185 ● ○ CREATE TABLE room (
           roomNo INT NOT NULL,
186
           roomType VARCHAR(45) DEFAULT NULL,
187
188
           status VARCHAR(45) DEFAULT NULL,
           PRIMARY KEY (roomNo),
189
           KEY status_idx (roomType , status),
190
191
           KEY status_idx1 (status),
192
           CONSTRAINT roomType FOREIGN KEY (roomType)REFERENCES roomtype (roomType)ON DELETE CASCADE ,
           CONSTRAINT status FOREIGN KEY (status) REFERENCES roomstatus (status) ON DELETE CASCADE
193
194
       );
105
180
181 •
         INSERT INTO room
         VALUES ('105', 'Triple', 'CO - Check-Out');
182
         INSERT INTO room
183 •
         VALUES ('106', 'Double', 'LC - Late Check out');
184
185 •
         INSERT INTO room
         VALUES ('206', 'Suite', 'VC - Vacant and Clean');
186
         INSERT INTO room
187 •
         VALUES ('103', 'Single', 'VR - Vacant and Ready ');
188
         INSERT INTO room
189 •
         VALUES ('102', 'Quad', 'OCC - Occupied');
190
191
192 •
         SELECT *
193
         FROM room;
10/
                                             Edit: 🚄 🖶 🖶 Export/Impo
Result Grid Filter Rows:
   roomNo
           roomType
                      status
  106
           Double
                      LC - Late Check out
  102
           Quad
                      OCC - Occupied
   103
           Single
                      VR - Vacant and Ready
  206
           Suite
                      VC - Vacant and Clean
  105
           Triple
                      CO - Check-Out
           NULL
  NULL
```

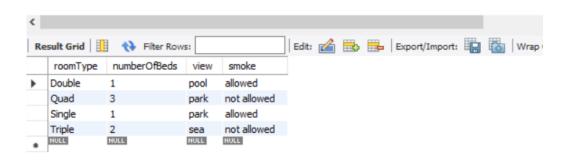


```
231
232 •
          SELECT g.FName,g.LName,g.ID,g.Email,r.roomNo,r.roomType,r.status
233
          FROM guest g, room r, roomstatus s
234
         WHERE g.ID=s.guestID AND r.status=s.status
235
         ORDER BY g.FName ;
236
                                            Export: Wrap Cell Content: IA
Result Grid
              Filter Rows:
    FName
              LName
                      ID
                                  Email
                                                  roomNo
                                                          roomType
                                                                    status
   fahd
                                 fahd@gmail.com
                                                  105
                                                                    CO - Check-Out
                      1257768745
                                                          Triple
              yasir
   mohammed
                      1939756833
                                 moh@hotmail.com
                                                  102
                                                          Quad
                                                                    OCC - Occupied
              ahmed
                                                          Single
                                                                    VR - Vacant and Ready
   mona
              hamza
                      1276833444
                                 mona@gmail.com
                                                  103
                                 omar@hotmail.com
                                                          Suite
                                                                    VC - Vacant and Clean
   omar
              faisal
                      1246465641
                                                  206
                      6757868111
                                 sara@gmail.com
                                                  106
                                                          Double
                                                                    LC - Late Check out
   sara
 203
 204 •
           UPDATE room
 205
           SET status = 'OCC - Occupied'
           WHERE status = 'VR - Vacant and Ready';
 206
 207
 208 •
           SELECT *
 209
           FROM room ;
<
                                                 Edit: 🚄 🖶 🖶 E
 roomNo
             roomType
                         status
             Double
                        LC - Late Check out
    106
                        OCC - Occupied
    102
             Quad
    103
             Single
                        VR - Vacant and Ready
    206
             Suite
                        VC - Vacant and Clean
    105
                        CO - Check-Out
             Triple
            HULL
                        NULL
   NULL
room 103 ×
```

Roomtype:

```
196 • ⊖ CREATE TABLE roomtype (
197
            roomType
                                  varchar(45) NOT NULL,
198
            numberOfBeds
                                  int DEFAULT NULL,
199
            view
                                  varchar(45) DEFAULT NULL,
200
            smoke
                                  varchar(45) DEFAULT NULL,
201
            PRIMARY KEY (roomType)
202
        - );
        INSERT INTO roomtype
204 •
205
        VALUES ('Single', '1', 'park', 'allowed');
        INSERT INTO roomtype
206 •
        VALUES ('Double', '1', 'pool', 'allowed');
207
        INSERT INTO roomtype
208 •
        VALUES ('Triple', '2', 'sea', 'not allowed');
209
        INSERT INTO roomtype
210 •
211
        VALUES ('Quad', '3', 'park', 'not allowed');
212 •
        INSERT INTO roomtype
213
        VALUES ('Suite', '4', 'sea', 'not allowed');
214
215 •
        SELECT *
216
        FROM roomtype;
                                        Edit: 🕍 📆 📙 Export/I
roomType
            numberOfBeds
                                  smoke
                        view
 Double
            1
                        pool
                                 allowed
  Quad
           3
                        park
                                 not allowed
  Single
                        park
                                 allowed
           4
  Suite
                                 not allowed
                        sea
  Triple
                                 not allowed
 NULL
           NULL
```

```
262 •
        SELECT r.roomNo,s.status,t.roomType,t.smoke
263
        FROM
                 room r, roomstatus s, roomtype t
264
        WHERE
                 s.status=r.status AND t.roomType=r.roomType AND t.smoke='allowed'
265
        ORDER BY r.roomNo ;
266
267
Export: Wrap Cell Content: IA
   roomNo
                             roomType
                                       smoke
  103
          VR - Vacant and Ready
                             Single
                                       allowed
  106
          LC - Late Check out
                             Double
                                      allowed
      DELETE FROM roomtype
3 •
      WHERE roomType='Suite';
 5
```





Roomstatus:

```
) ● ⊖ CREATE TABLE roomstatus (
                             varchar(45) NOT NULL,
          status
                             varchar(20) DEFAULT NULL,
          guestID
                             varchar(20) DEFAULT NULL,
          guestEmail
          PRIMARY KEY (status),
          CONSTRAINT roomstatus_FK1 FOREIGN KEY (guestID) REFERENCES Guest (ID) ,
          CONSTRAINT roomstatus_FK2 FOREIGN KEY (guestEmail) REFERENCES Guest (Email)
        );
290 •
        INSERT INTO roomstatus
        VALUES ('OCC - Occupied', '1939756833', 'moh@ hotmail.com');
291
        INSERT INTO roomstatus
292 •
        VALUES ('LC - Late Check out', '6757868111', 'sara@gmail.com');
293
294 •
        INSERT INTO roomstatus
        VALUES ('CO - Check-Out', '1257768745', 'fahd@gmail.com');
295
       INSERT INTO roomstatus
296
        VALUES ('VC - Vacant and Clean', '1246465641', 'omar@hotmail.com');
297
298 •
        INSERT INTO roomstatus
        VALUES ('VR - Vacant and Ready ', '1276833444', 'mona@gmail.com');
299
300
301
302 •
        SELECT *
303
        FROM roomstatus;
Edit: 🕍 📆 Export/Import: 📳 👸 Wrap
   status
                    guestID
                                  guestEmail
  CO - Check-Out
                     1257768745
                                 fahd@gmail.com
  LC - Late Check out 6757868111
                                 sara@gmail.com
  OCC - Occupied
                                 moh@ hotmail.com
                    1939756833
  VC - Vacant and Clean 1246465641
                                 omar@hotmail.com
  VR - Vacant and Ready 1276833444
                                 mona@gmail.com
 NULL
                                 NULL
```

Roomservice:

```
252 ● ⊖ CREATE TABLE roomservice (
                            int NOT NULL,
253
         roomNo
                            varchar(45) NOT NULL,
254
          roomService
          CONSTRAINT roomservice_PK PRIMARY KEY (roomService, roomNo),
255
         CONSTRAINT roomservice_FK FOREIGN KEY (roomNo) REFERENCES room(roomNo));
256
257
258
         INSERT INTO roomservice (roomNo, roomService)
        VALUES (105, 's12');
260 •
        INSERT INTO roomservice (roomNo, roomService)
        VALUES (106, 's13');
261
262 •
        INSERT INTO roomservice (roomNo, roomService)
263
        VALUES (206, 's14');
264
        INSERT INTO roomservice (roomNo, roomService)
        VALUES (103, 's15');
265
266 •
        INSERT INTO roomservice (roomNo, roomService)
        VALUES (102, 's16');
267
268
269 •
        SELECT *
        FROM roomservice;
                                      | Edit: 🚄 🖶 🖶 | Export/Import: 识 🐻 | Wrap Cell C
roomNo roomService
  102
         s16
  103
       s15
  105
  106
         s13
  206
```

```
315
316 •
         SELECT g.FName,g.LName,g.ID,r.roomNo,s.roomService
         FROM guest g,room r,roomservice s,roomstatus t
317
         WHERE g.ID=t.guestID AND t.status=r.status AND s.roomNo=r.roomNo
318
319
         ORDER BY g.FName;
<
Result Grid Filter Rows:
                                         Export: Wrap Cell Content: IA
   FName
             LName ID
                               roomNo roomService
  fahd
                    1257768745
                               105
             yasir
                                       s12
  mohammed ahmed 1939756833 102
                                       s16
   mona
             hamza 1276833444
                               103
                                       s15
   omar
             faisal 1246465641 206
                                       s14
                    6757868111 106
  sara
                                       s13
```

Reservation:

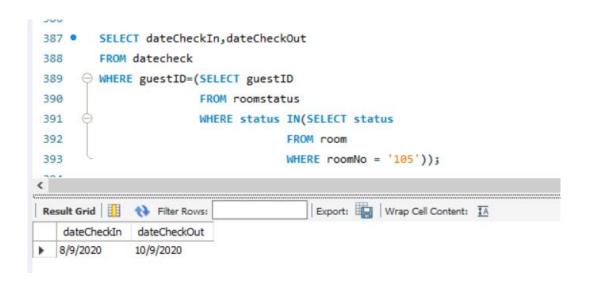
```
271
272 • CREATE TABLE reservation (
273
           reservationNumber
                                       int NOT NULL,
274
           roomNo
                                       int DEFAULT NULL,
275
           guestID
                                       varchar(20) DEFAULT NULL,
276
           guestEmail
                                      varchar(20) DEFAULT NULL,
277
          CONSTRAINT reservation PK PRIMARY KEY (reservationNumber),
          CONSTRAINT reservation FK1 FOREIGN KEY (roomNo) REFERENCES room(roomNo),
278
          CONSTRAINT reservation FK2 FOREIGN KEY (guestID) REFERENCES Guest (ID),
279
280
          CONSTRAINT reservation_FK3 FOREIGN KEY (guestEmail) REFERENCES Guest (Email)
281
         );
283
284 •
         INSERT INTO reservation (reservationNumber, roomNo, guestID, guestEmail)
         VALUES (123, 105,1257768745 , 'fahd@gmail.com');
285
         INSERT INTO reservation (reservationNumber, roomNo, guestID, guestEmail)
286
287
         VALUES (124, 106, 6757868111, 'sara@gmail.com');
288
         INSERT INTO reservation (reservationNumber, roomNo, guestID, guestEmail)
289
         VALUES (125, 206, 1246465641, 'omar@hotmail.com');
         INSERT INTO reservation (reservationNumber, roomNo, guestID, guestEmail)
290 •
291
         VALUES (126, 103, 1276833444, 'mona@gmail.com');
         INSERT INTO reservation (reservationNumber, roomNo, guestID, guestEmail)
292
         VALUES (127, 102, 1939756833, 'moh@ hotmail.com');
293
294
        SELECT *
295 •
296
        FROM reservation;
297
                                        Edit: 🔏 🖶 🖶 Export/Import: 🙀 🐻 | Wrap Cell Cont
guestEmail
   reservationNumber
                  roomNo
                          guestID
  123
                  105
                          1257768745
                                    fahd@gmail.com
  124
                  106
                          6757868111 sara@gmail.com
  125
                  206
                          1246465641 omar@hotmail.com
  126
                  103
                          1276833444 mona@gmail.com
  127
                  102
                          1939756833 moh@ hotmail.com
  HULL
```

Datecheck:

```
299 • 

CREATE TABLE datecheck (
300
          guestID
                                varchar(20) NOT NULL,
          guestEmail
                                varchar(20) NOT NULL,
301
          dateCheckIn
                                varchar(45) DEFAULT NULL,
302
          dateCheckOut
                                varchar(45)DEFAULT NULL,
303
        CONSTRAINT datecheck PK PRIMARY KEY (guestID, guestEmail),
304
        CONSTRAINT datecheck_FK1 FOREIGN KEY (guestID) REFERENCES Guest (ID),
305
        CONSTRAINT datecheck_FK2 FOREIGN KEY (guestEmail) REFERENCES Guest (Email)
306
307
       );
309
310 •
        INSERT INTO datecheck(guestID, guestEmail, dateCheckIn, dateCheckOut)
        VALUES (1939756833, 'moh@ hotmail.com', '10/11/2020', '15/11/2020');
311
312 •
        INSERT INTO datecheck(guestID, guestEmail, dateCheckIn, dateCheckOut)
        VALUES (6757868111, 'sara@gmail.com', '5/4/2020', '8/4/2020');
313
314 ·
        INSERT INTO datecheck(guestID, guestEmail, dateCheckIn, dateCheckOut)
        VALUES (1257768745, 'fahd@gmail.com', '8/9/2020', '10/9/2020');
315
        INSERT INTO datecheck(guestID, guestEmail, dateCheckIn, dateCheckOut)
316 •
        VALUES (1246465641, 'omar@hotmail.com', '12/11/2020', '16/11/2020');
317
318 •
        INSERT INTO datecheck(guestID, guestEmail, dateCheckIn, dateCheckOut)
        VALUES (1276833444, 'mona@gmail.com', '11/11/2020', '13/11/2020');
319
320
321
322 ·
        SELECT *
323
        FROM datecheck;
Result Grid
                                          Edit: 🌃 📆 Export/Import: 🙀 📸 Wrap C
              Filter Rows:
  questID
              guestEmail
                              dateCheckIn
                                          dateCheckOut
  1246465641
              omar@hotmail.com
                              12/11/2020
                                          16/11/2020
  1257768745
              fahd@gmail.com
                              8/9/2020
                                          10/9/2020
  1276833444
             mona@gmail.com
                              11/11/2020
                                          13/11/2020
  1939756833 moh@ hotmail.com 10/11/2020
                                          15/11/2020
                              5/4/2020
                                          8/4/2020
  6757868111 sara@gmail.com
  NULL
             NULL
                             NULL
                                         NULL
```

```
325
          SELECT guestID, guestEmail, dateCheckIn
326 •
327
          FROM datecheck
328
          WHERE dateCheckIn BETWEEN '10/11/2020' AND'12/11/2020';
329
330
<
                                            Edit: 🚄 🖶 🖶 Export/Import:
Result Grid
              ♦ Filter Rows:
    guestID
               guestEmail
                                dateCheckIn
   1246465641
                                12/11/2020
               omar@hotmail.com
   1276833444 mona@gmail.com
                               11/11/2020
   1939756833 moh@ hotmail.com
                               10/11/2020
   NULL
```



Roomprice:

```
332
333 • 

CREATE TABLE roomprice (
334
                             int NOT NULL,
          roomNo
                             double DEFAULT NULL,
335
          price
        CONSTRAINT roomprice_PK PRIMARY KEY (roomNo),
336
337
        CONSTRAINT roomprice_FK FOREIGN KEY (roomNo) REFERENCES room(roomNo));
338
         INSERT INTO roomprice (roomNo, price)
339 •
        VALUES (105, 350);
340
        INSERT INTO roomprice (roomNo, price)
341 •
342
        VALUES (106, 400);
343 •
        INSERT INTO roomprice (roomNo, price)
344
        VALUES (206, 200);
        INSERT INTO roomprice (roomNo, price)
345 •
        VALUES (103, 350);
346
         INSERT INTO roomprice (roomNo, price)
347 ·
         VALUES (102, 350);
348
349
350 ●
        SELECT *
        FROM roomprice;
351
Edit: 🕍 🖶 Export/Import: 🙀 🦝 Wrap
  roomNo price
  102
          350
  103
         350
  105
          350
  106
         400
  206
         200
  NULL
         NULL
```

```
SELECT r.roomNo, r.roomType, r.status, p.price
 396
 397
          FROM roomprice p ,room r,roomstatus s
 398
          WHERE r.status=s.status AND r.roomNo=p.roomNo
          ORDER BY p.price DESC;
 399
400
<
                                             Export: Wrap Cell Content
Result Grid | Filter Rows:
    roomNo roomType status
                                          price
   106
            Double
                      LC - Late Check out
                                          400
   102
            Quad
                      OCC - Occupied
                                          350
   103
            Single
                      VR - Vacant and Ready 350
   105
                      CO - Check-Out
                                          350
            Triple
   206
            Suite
                      VC - Vacant and Clean
                                         200
```

Restaurant:

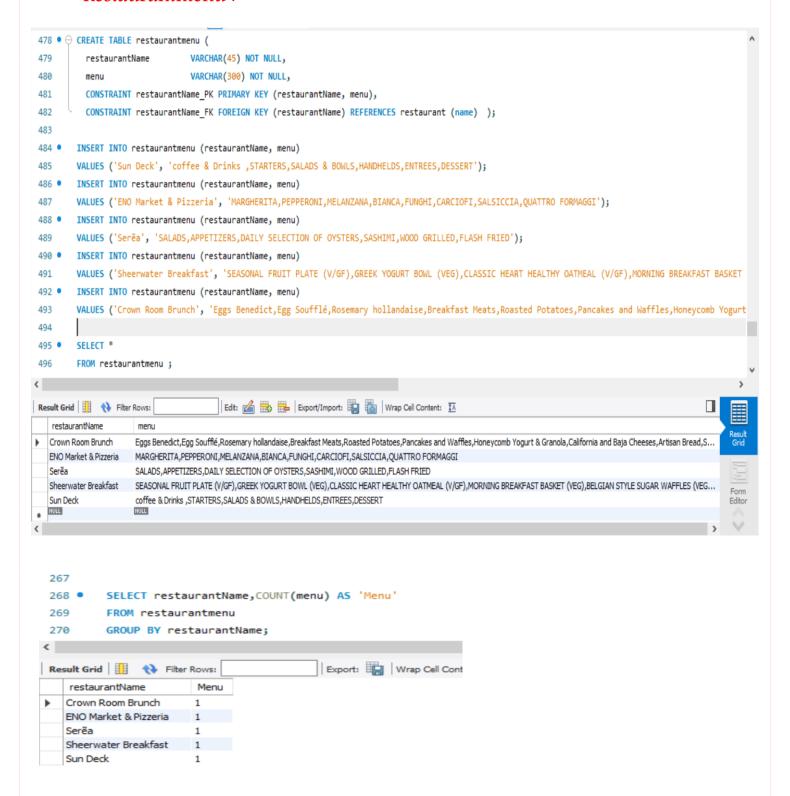
```
428
429 • ⊖
          CREATE TABLE restaurant (
430
                           VARCHAR(45) NOT NULL,
          name
431
                           VARCHAR(45) NULL,
          type
          CONSTRAINT restaurant_PK PRIMARY KEY (name),
432
          CONSTRAINT restaurant_FK FOREIGN KEY (type) REFERENCES restauranttype (type));
433
434
        INSERT INTO restaurant (name, type)
435 •
        VALUES ('Sun Deck', 'Café');
436
        INSERT INTO restaurant (name, type)
437 •
        VALUES ('ENO Market & Pizzeria', 'Italian');
438
439 •
        INSERT INTO restaurant (name, type)
        VALUES ('Serea', 'sea restaurant');
440
        INSERT INTO restaurant (name, type)
441 •
        VALUES ('Sheerwater Breakfast', 'Coronado Beach restaurant');
442
443 •
        INSERT INTO restaurant (name, type)
        VALUES ('Crown Room Brunch', 'buffet');
444
445
446 •
        SELECT *
447
        FROM restaurant;
                                         Edit: 🕍 📆 Export/Import: 📳 👸 | Wrap Cell Content: 🏗
name
                       type
                       buffet
  Crown Room Brunch
  Sun Deck
                       Café
  Sheerwater Breakfast
                       Coronado Beach res...
  ENO Market & Pizzeria
                       Italian
  Serea
                       sea restaurant
  NULL
                      NULL
```

Restauranttype:

```
376
          CREATE TABLE restauranttype (
377 • ⊖
                           VARCHAR(45) NOT NULL,
378
          type
                           INT NULL,
379
          capacity
          workingTime
                           VARCHAR(45) NULL,
380
381
          PRIMARY KEY (type));
382
383 •
        INSERT INTO restauranttype (type, capacity, workingTime)
        VALUES ('Café', '100', 'Daily 11:30am - 7pm');
384
385 •
        INSERT INTO restauranttype (type, capacity, workingTime)
        VALUES ('Italian', '400', 'Sun-Thu: 6am - 8pm');
387 •
        INSERT INTO restauranttype (type, capacity, workingTime)
        VALUES ('sea restaurant', '600', 'Sat - Sun : 11am - 2:30pm');
        INSERT INTO restauranttype (type, capacity, workingTime)
389 •
        VALUES ('Coronado Beach restaurant', '200', 'Fri - Sun 7 - 11am');
390
        INSERT INTO restauranttype (type, capacity, workingTime)
391 •
392
        VALUES ('Buffet', '1000', 'Sun-Thu: 10:30am - 5pm');
393
        SELECT *
394 •
395
        FROM restauranttype ;
Edit: 🕍 🖶 Export/Import: 📳 📸 Wr
                                 workingTime
   type
                        capacity
  Buffet
                        1000
                                 Sun-Thu: 10:30am - 5pm
                        100
                                 Daily 11:30am - 7pm
  Coronado Beach restaurant 200
                                 Fri - Sun 7 - 11am
  Italian
                        400
                                 Sun-Thu: 6am - 8pm
  sea restaurant
                        600
                                 Sat - Sun : 11am - 2:30pm
```

```
490
491 •
         UPDATE restauranttype
         SET workingTime='Fri - Sun 7 am- 11pm'
492
        WHERE type = 'Coronado Beach restaurant';
493
Edit:
                                  workingTime
   type
                        capacity
  Buffet
                                 Sun-Thu: 10:30am - 5pm
                        1000
   Café
                        100
                                 Daily 11:30am - 7pm
   Coronado Beach restaurant 200
                                 Fri - Sun 7 am- 11pm
  Italian
                        400
                                 Sun-Thu: 6am - 8pm
                                 Sat - Sun: 11am - 2:30pm
  sea restaurant
                        600
                        NULL
                                 NULL
  NULL
```

Restaurantmenu:



Membership:

```
505 • ⊖
        CREATE TABLE membership (
506
          reservationNumber
                               INT NOT NULL,
507
          guestID
                               VARCHAR(20) NOT NULL,
          guestEmail
                               VARCHAR(20) NOT NULL,
508
509
          idMemberShip
                               varchar(20) NOT NULL,
                               VARCHAR(1) NULL, CHECK (gold IN ('*')),
510
          gold
          silver
                               VARCHAR(1) NULL, CHECK (silver IN ('*')),
511
512
          diamond
                               VARCHAR(1) NULL, CHECK (diamond IN ('*')),
513
          CONSTRAINT membership_PK PRIMARY KEY (reservationNumber, guestID, guestEmail, idMemberShip),
          CONSTRAINT membership_FK1 FOREIGN KEY (reservationNumber) REFERENCES reservation (reservationNumber),
514
          CONSTRAINT membership FK2 FOREIGN KEY (guestID) REFERENCES Guest (ID) ,
515
          CONSTRAINT membership_FK3 FOREIGN KEY (guestEmail) REFERENCES Guest (Email)
516
517
          );
518
433
434 •
         INSERT INTO membership (reservationNumber, guestID, guestEmail, idMemberShip, diamond)
         VALUES ('123', '1939756833', 'moh@ hotmail.com', '3246957812', '*');
435
436
         INSERT INTO membership (reservationNumber, guestID, guestEmail, idMemberShip, silver)
         VALUES ('124', '6757868111', 'sara@gmail.com', '3268992455', '*');
437
         INSERT INTO membership (reservationNumber, guestID, guestEmail, idMemberShip, gold)
438 •
         VALUES ('125', '1257768745', 'fahd@gmail.com', '4521787231', '*');
439
440 •
         INSERT INTO membership (reservationNumber, guestID, guestEmail, idMemberShip, diamond)
        VALUES ('126', '1246465641', 'omar@hotmail.com', '4234742332', '*');
441
442
         INSERT INTO membership (reservationNumber, guestID, guestEmail, idMemberShip, gold)
         VALUES ('127', '1276833444', 'mona@gmail.com', '3548736245', '*');
443
444
         SELECT *
445
446
         FROM membership;
                                           Edit: 🍊 📆 🖶 Export/Import: 🗓 📸 Wrap Cell Content: 🖽
reservationNumber
                                                               gold silve dian
                                                 idMemberShip
                                guestEmail
                    guestID
                                                              NULL NULL *
                               moh@hotmail.com
                                                 3246957812
  123
                   1939756833
                                                              NULL * NULL
  124
                   6757868111
                               sara@gmail.com
                                                 3268992455
                                                                   NULL NULL
  125
                   1257768745
                               fahd@gmail.com
                                                 4521787231
                                                              NULL NULL *
  126
                               omar@hotmail.com
                                                4234742332
                   1246465641
                                                                   NULL NULL
  127
                   1276833444
                               mona@gmail.com
                                                3548736245
  NULL
                   NULL
                               NULL
                                                NULL
                                                              NULL NULL NULL
```

