

**Group Activity for 321 CSM Lab****Section #: 8678****Group #: CS-2****Team Number + ID: CS-2****441814250****Mark Distribution Agreement**

It is important to know that this part must be filled with a percentage of %100 according to your contributions to the activity. All of team members must discuss and agree on these percentages.

ID	Clearly list your work	Signature
441814250	All tasks	Omar Adel badawy عمر عادل بدوي علي

## Answer Sheet Section

### Step 1: Analysis and Design

Answers:

1. Data dictionary for table name:

Table Name: JOBS_XYZHOTEL				
Column Name	Data type	Size	Constraint Type	IS NULL? [Yes   No]
Job_Id	number	3	Primary key	no
Job_name	Varchar2	(20 char)	Not null	no
Table Name: Employees_XYZHOTEL				
Column Name	Data type	Size	Constraint Type	IS NULL? [Yes   No]
Emp_id	number	4	Primary key	no
First_Name	Varchar2	(20 char)	Not null	no
Last_Name	Varchar2	(20 char)	Not null	no
Hire_Date	date	YYYY-MM-DD	Not null	no
Sex	Varchar2	(10 char)	Not null	no
Salary_in_SR	number	(12,2)	Not null	no
Email	Varchar2	(50 char)	Not null , unique	no
Phone_number	varchar	10	Null	yes
Mobile_Number	varchar	10	Not null , unique	no
Job_id	number	3	Foreign key	no
Table Name: Room_Types_XYZHOTEL				
Column Name	Data type	Size	Constraint Type	IS NULL? [Yes   No]
Room_Type_ID	number	2	Primary key	no
room_type	Varchar2	(25 char)	Not null	no
room_Capacity	number	2	Not null	no
Price_in_SR	number	(12,2)	Not null	no

Description_of_room	Varchar2(200)		null	yes
<b>Table Name: Rooms_XYZHOTEL</b>				
Column Name	Data type	Size	Constraint Type	IS NULL? [Yes   No]
Room_no	number	4	Primry key	no
Floor_number	number	2	Not null	no
Room_Type_ID	number	2	Foreign key	no
Room_Extension	number	4	Not null	no
Status	Varchar2	(50 char)	Not null	no
Services	Varchar2	(150 char)	null	yes

<b>Table Name: Employees_and_Rooms_XYZHOTEL</b>				
Column Name	Data type	Size	Constraint Type	IS NULL? [Yes   No]
Room_no	number	4	primary key	no
Employee_id	number	4	Foreign key	no
IS_Cleaned	Varchar2	(20 char)	Not null	no
<b>Table Name: Guests_XYZHOTEL</b>				
Column Name	Data type	Size	Constraint Type	IS NULL? [Yes   No]
National_ID	number	10	Primary key	no
Full_Name	Varchar2	(50 char)	Not null	no
Registration_Date	date	YY-MM-DD	Not null	no
Email	Varchar2	(50 char)	Not null , unique	no
Phone_number	number	7	null	yes
Mobile_Number	number	9	Not null , unique	no
Address	Varchar2	(100 char)	null	yes
<b>Table Name: Reservation_XYZHOTEL</b>				
Column Name	Data type	Size	Constraint Type	IS NULL? [Yes   No]
Reservation_no	number	5	Primary key	no
Date_of_reservation	date	YY-MM-DD	Not null	no
Room_Type_ID	number	2	Foreign key	no

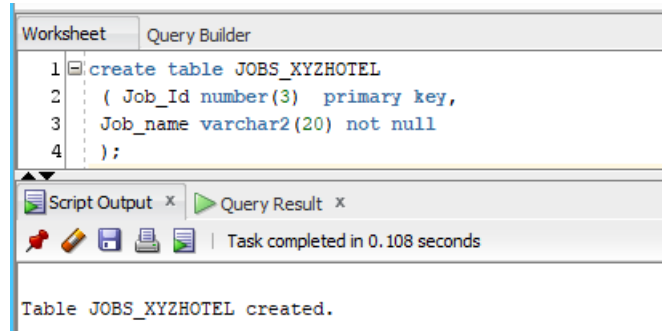
Room_No	number	4	Foreign key	No
Entry_date	date	YY-MM-DD	Not null	No
Leave_date	date	YY-MM-DD	Not null	No
Guest_National_Id	number	10	Foreign key	No
<b>Table Name: Bills_XYZHOTEL</b>				
<b>Column Name</b>	<b>Data type</b>	<b>Size</b>	<b>Constraint Type</b>	<b>IS NULL? [Yes   No]</b>
Invoice_No	number	5	Primary key	no
Reservation_no	number	5	Foreign key	no
Date_of _payment	date	YY-MM-DD	Not null	no
Room_Type_ID	number	2	Foreign key	no
Room_no	number	4	Foreign key	no
Total	number	(12,2)	Not null	no
Payment_method	Varchar2	(50 char)	Not null	no

## Step 2: Implementation

Answers:

### a. Create commands

Table 1

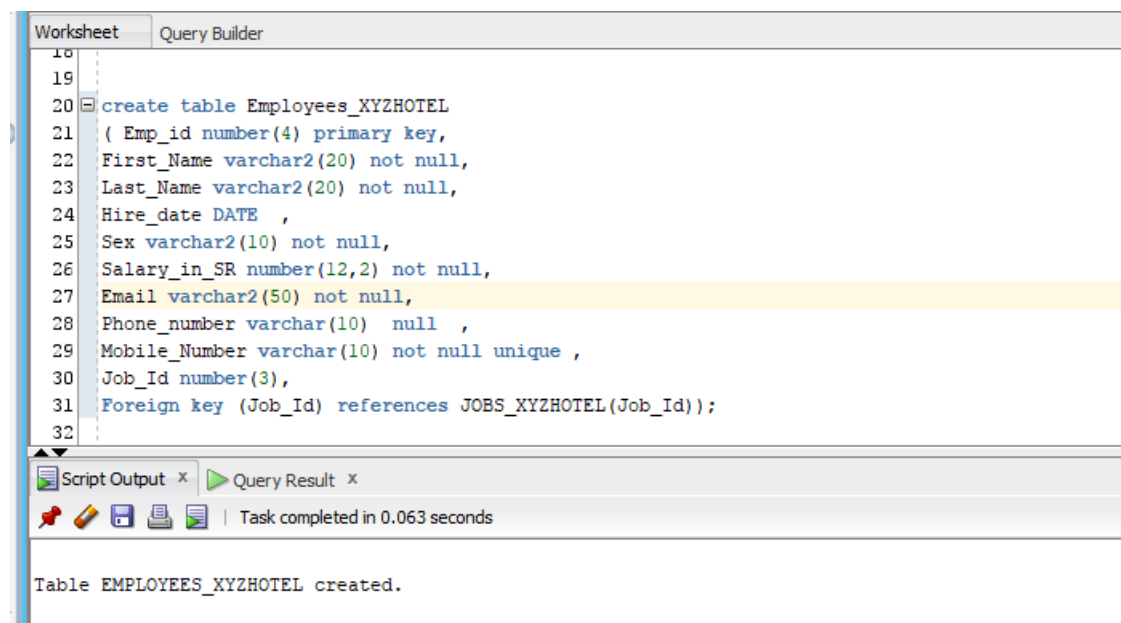


The screenshot shows the SQL Developer interface with the 'Query Builder' tab selected. The SQL editor contains the following code:

```
1 create table JOBS_XYZHOTEL
2 ( Job_Id number(3) primary key,
3   Job_name varchar2(20) not null
4 );
```

Below the editor, the 'Script Output' tab shows the message: 'Table JOBS\_XYZHOTEL created.' The status bar indicates 'Task completed in 0.108 seconds'.

Table 2

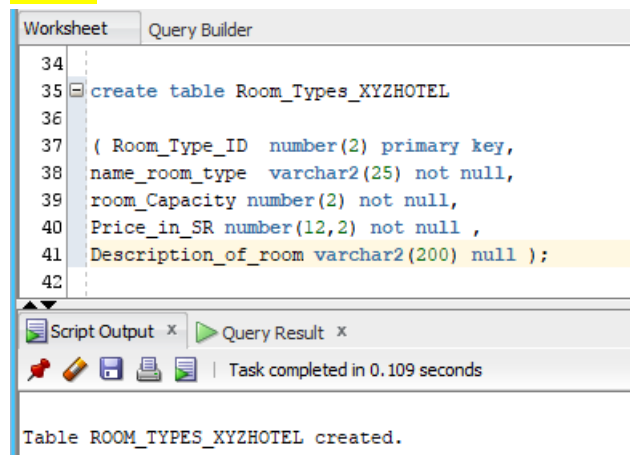


The screenshot shows the SQL Developer interface with the 'Query Builder' tab selected. The SQL editor contains the following code:

```
18
19
20 create table Employees_XYZHOTEL
21 ( Emp_id number(4) primary key,
22   First_Name varchar2(20) not null,
23   Last_Name varchar2(20) not null,
24   Hire_date DATE ,
25   Sex varchar2(10) not null,
26   Salary_in_SR number(12,2) not null,
27   Email varchar2(50) not null,
28   Phone_number varchar(10) null ,
29   Mobile_Number varchar(10) not null unique ,
30   Job_Id number(3),
31   Foreign key (Job_Id) references JOBS_XYZHOTEL(Job_Id));
32
```

Below the editor, the 'Script Output' tab shows the message: 'Table EMPLOYEES\_XYZHOTEL created.' The status bar indicates 'Task completed in 0.063 seconds'.

Table 3



The screenshot shows the SQL Developer interface with the 'Query Builder' tab selected. The SQL editor contains the following code:

```
34
35 create table Room_Types_XYZHOTEL
36
37 ( Room_Type_ID number(2) primary key,
38   name_room_type varchar2(25) not null,
39   room_Capacity number(2) not null,
40   Price_in_SR number(12,2) not null ,
41   Description_of_room varchar2(200) null );
42
```

Below the editor, the 'Script Output' tab shows the message: 'Table ROOM\_TYPES\_XYZHOTEL created.' The status bar indicates 'Task completed in 0.109 seconds'.

Table 4

Worksheet	Query Builder
52	
53	<code>create table Rooms_XYZHOTEL</code>
54	<code>( Room_no number(4) primary key ,</code>
55	<code>Floor_number number(2) not null ,</code>
56	<code>Room_Type_ID number(2) not null ,</code>
57	<code>Room_Extension number(4) not null ,</code>
58	<code>status varchar2(50) not null ,</code>
59	<code>Services varchar2(150) null ,</code>
60	<code>Foreign key (Room_Type_ID) references Room_Types_XYZHOTEL(Room_Type_ID));</code>
61	

Script Output x	Query Result x
Task completed in 0.102 seconds	

Table ROOMS\_XYZHOTEL created.

Table 5

Worksheet	Query Builder
67	
68	<code>create table Employees_and_Rooms_XYZHOTEL</code>
69	<code>( Room_no number(4) primary key ,</code>
70	<code>Employee_id number(4) not null ,</code>
71	<code>IS_Cleaned varchar2(20) not null ,</code>
72	<code>Foreign key (Employee_id) references Employees_XYZHOTEL(Emp_id);</code>
73	

Script Output x	Query Result x
Task completed in 0.052 seconds	

Table EMPLOYEES\_AND\_ROOMS\_XYZHOTEL created.

Table 6

Worksheet	Query Builder
109	
110	<code>create table Guests_XYZHOTEL</code>
111	<code>( National_ID number(10) Primary key ,</code>
112	<code>Full_Name varchar2(50) not null ,</code>
113	<code>Registration_Date date ,</code>
114	<code>Email varchar2(50) not null unique ,</code>
115	<code>Phone_number number(7) null ,</code>
116	<code>Mobile_Number number(9) not null unique,</code>
117	<code>Address varchar2(100) null );</code>
118	

Script Output x	Query Result 6 x
Task completed in 0.101 seconds	

Table GUESTS\_XYZHOTEL created.

Table 7

Worksheet	Query Builder
93	
94	create table Reservation_XYZHOTEL
95	( Reservation_no number(5) primary key ,
96	Date_of_reservation date ,
97	Room_Type_ID number(2) not null ,
98	Room_no number(4) ,
99	Entry_date date ,
100	Leave_date date ,
101	Guest_National_Id number(10) not null ,
102	Foreign key (Room_Type_ID) references Room_Types_XYZHOTEL(Room_Type_ID),
103	Foreign key (Room_no) references Rooms_XYZHOTEL(Room_no),
104	Foreign key (Guest_National_Id) references Guests_XYZHOTEL(National_ID));
105	

Script Output	Query Result
Task completed in 0.085 seconds	

Table RESERVATION\_XYZHOTEL created.

Table 8

Worksheet	Query Builder
108	
109	create table Bills_XYZHOTEL
110	( Invoice_No number(5) primary key ,
111	Reservation_no number(5) not null ,
112	Date_of_payment date ,
113	Room_Type_ID number(2) not null ,
114	Room_no number(4) not null ,
115	Total number(12,2) not null ,
116	Payment_method varchar2(50) not null ,
117	Foreign key (Reservation_no) references Reservation_XYZHOTEL(Reservation_no),
118	Foreign key (Room_Type_ID) references Room_Types_XYZHOTEL(Room_Type_ID),
119	Foreign key (Room_no) references Rooms_XYZHOTEL(Room_no));
120	

Script Output	Query Result
Task completed in 0.086 seconds	

Table BILLS\_XYZHOTEL created.

## b. Insert commands

Table 1

Worksheet	Query Builder
13	insert into JOBS_XYZHOTEL values( 1 , ' Manager' );
14	insert into JOBS_XYZHOTEL values( 2 , ' Recipient' );
15	insert into JOBS_XYZHOTEL values( 3 , 'Room Service' );
16	select * from JOBS_XYZHOTEL;
17	

Script Output	Query Result
SQL   All Rows Fetched: 3 in 0.005 seconds	
JOB_ID	JOB_NAME
1	1 Manager
2	2 Recipient
3	3 Room Service

Table 2

Worksheet

Query Builder

35

36

37

38

39

40

41

42

insert into Employees\_XYZHOTEL values('1000', 'Ali', 'saad', TO\_DATE('2000-12-02', 'YYYY-MM-DD'), 'male', '3000.50', '1000@gmail.com', '0125975455', '0554721591', '3');

insert into Employees\_XYZHOTEL values('1100', 'Omar', 'Adel', TO\_DATE('2009-08-04', 'YYYY-MM-DD'), 'male', '10500.50', '1100@gmail.com', '', '0552135784', '1');

insert into Employees\_XYZHOTEL values('2000', 'mahmed', 'Hassan', TO\_DATE('2010-05-17', 'YYYY-MM-DD'), 'male', '2000', '2000@gmail.com', '', '0556879248', '3');

insert into Employees\_XYZHOTEL values('2500', 'Fahed', 'Omran', TO\_DATE('2012-01-16', 'YYYY-MM-DD'), 'male', '12000', '2500@gmail.com', '', '0557982457', '2');

insert into Employees\_XYZHOTEL values('3500', 'waleed', 'Naseer', TO\_DATE('2017-05-02', 'YYYY-MM-DD'), 'male', '2000', '3500@gmail.com', '0125973471', '0559730249', '3');

select \* from Employees\_XYZHOTEL;

Script Output

Query Result 1

SQL

All Rows Fetched: 5 in 0.012 seconds

EMP_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	SEX	SALARY_IN_SR	EMAIL	PHONE_NUMBER	MOBILE_NUMBER	JOB_ID
1	1000 Ali	saad	02-DEC-00	male	3000.5	1000@gmail.com	0125975455	0554721591	3
2	1100 Omar	Adel	04-AUG-09	male	10500.5	1100@gmail.com (null)		0552135784	1
3	2000 mahmed	Hassan	17-MAY-10	male	2000	2000@gmail.com (null)		0556879248	3
4	2500 Fahed	Omran	16-JAN-12	male	12000	2500@gmail.com (null)		0557982457	2
5	3500 waleed	Naseer	02-MAY-17	male	2000	3500@gmail.com	0125973471	0559730249	3

Table 3

Worksheet

Query Builder

55

56 insert into Room\_Types\_XYZHOTEL values(1,' single',1, 100 , 'A room assigned to one person. May have one or more beds.' );

57 insert into Room\_Types\_XYZHOTEL values(2,' Double',2, 200 , 'A room assigned to two people. May have one or more beds.' );

58 insert into Room\_Types\_XYZHOTEL values(3,' Triple',3, 300 , 'A room assigned to three people. May have two or more beds..' );

59 insert into Room\_Types\_XYZHOTEL values(4,' Studioe',2, 500 , '' );

60 select \* from Room\_Types\_XYZHOTEL;

61

Script Output x

Query Result 1 x

Query Result 2 x

SQL | All Rows Fetched: 4 in 0.005 seconds

	ROOM_TYPE_ID	NAME_ROOM_TYPE	ROOM_CAPACITY	PRICE_IN_SR	DESCRIPTION_OF_ROOM
1	1	single	1	100	A room assigned to one person. May have one or more beds.
2	2	Double	2	200	A room assigned to two people. May have one or more beds.
3	3	Triple	3	300	A room assigned to three people. May have two or more beds..
4	4	Studioe	2	500	(null)



Table 4


Worksheet

Query Builder

```
71
72 insert into Rooms_XYZHOTEL values(101,1,1, 101 , 'Reserved' , '' );
73 insert into Rooms_XYZHOTEL values(102,1,2, 102 , 'Reserved' , '' );
74 insert into Rooms_XYZHOTEL values(201,2,3, 201 , 'free' , '' );
75 insert into Rooms_XYZHOTEL values(202,2,4, 202 , 'free' , '' );
76 insert into Rooms_XYZHOTEL values(301,3,1, 301 , 'Reserved' , '' );
77 insert into Rooms_XYZHOTEL values(302,3,2, 302 , 'Reserved' , '' );
78 insert into Rooms_XYZHOTEL values(401,4,3, 401 , 'free' , '' );
79 insert into Rooms_XYZHOTEL values(402,4,4, 402 , 'Reserved' , '' );
80 select * from Rooms_XYZHOTEL;
81
```

Script Output x

Query Result 4 x

 All Rows Fetched: 8 in 0.006 seconds

	ROOM_NO	ROOM_TYPE_ID	ROOM_EXTENSI...	FLOOR_NUM...	STATUS	SERVICES
1	101	1	101	1	Reserved	(null)
2	102	2	102	1	Reserved	(null)
3	201	3	201	2	free	(null)
4	202	4	202	2	free	(null)
5	301	1	301	3	Reserved	(null)
6	302	2	302	3	Reserved	(null)
7	401	3	401	4	free	(null)
8	402	4	402	4	Reserved	(null)

Table 5





Worksheet

Query Builder

```
91 insert into Employees_and_Rooms_XYZHOTEL values(101,1000, 'Yes' );
92 insert into Employees_and_Rooms_XYZHOTEL values(102,1000, 'No' );
93 insert into Employees_and_Rooms_XYZHOTEL values(201,2500, 'Yes' );
94 insert into Employees_and_Rooms_XYZHOTEL values(202,2500, 'yes' );
95 insert into Employees_and_Rooms_XYZHOTEL values(301,3500, 'No' );
96 insert into Employees_and_Rooms_XYZHOTEL values(302,1000, 'Yes' );
97 insert into Employees_and_Rooms_XYZHOTEL values(401,2500, 'Yes' );
98 insert into Employees_and_Rooms_XYZHOTEL values(401,1000, 'No' );
99 insert into Employees_and_Rooms_XYZHOTEL values(401,3500, 'No' );
100 insert into Employees_and_Rooms_XYZHOTEL values(402,3500, 'Yes' );
101 insert into Employees_and_Rooms_XYZHOTEL values(402,3500, 'Yes' );
102 insert into Employees_and_Rooms_XYZHOTEL values(402,2500, 'yes' );
103 select * from Employees_and_Rooms_XYZHOTEL;
104
105
```

Script Output x

Query Result 6 x

    SQL | All Rows Fetched: 8 in 0.023 seconds

	ROOM_NO	EMPLOYEE_ID	IS_CLEANED
1	101	1000	Yes
2	102	1000	No
3	201	2500	Yes
4	202	2500	yes
5	301	3500	No
6	302	1000	Yes
7	401	2500	Yes
8	402	3500	Yes

Table 6

Worksheet

Query Builder

119

insert into Guests\_XYZHOTEL values(1234567891,'Guest1xxxxxx', TO\_DATE('01-11-10', 'YY-MM-DD'), 'guest1@gmail.com', 2218888,555012344,'abha street 12378' );

120

insert into Guests\_XYZHOTEL values(1234567892,'Guest2xxxxxx', TO\_DATE('02-11-10', 'YY-MM-DD'), 'guest2@gmail.com', 2218889,555012346,'abha street 6595' );

121

insert into Guests\_XYZHOTEL values(1234567893,'Guest3xxxxxxl', TO\_DATE('03-11-10', 'YY-MM-DD'), 'guest3@gmail.com', '',555012347,'' );

122

insert into Guests\_XYZHOTEL values(1234567894,'Guest4xxxxxxl', TO\_DATE('03-11-10', 'YY-MM-DD'), 'guest4@gmail.com', 2218891,555012348,'abha street 12378' );

123

insert into Guests\_XYZHOTEL values(1234567895,'Guest5xxxxxxl', TO\_DATE('04-11-10', 'YY-MM-DD'), 'guest5@gmail.com', '',555012349,'' );

124

insert into Guests\_XYZHOTEL values(1234567896,'Guest6xxxxxxl', TO\_DATE('05-11-10', 'YY-MM-DD'), 'guest6@gmail.com', '',555012350,'' );

125

insert into Guests\_XYZHOTEL values(1234567897,'Guest7xxxxxxl', TO\_DATE('06-11-10', 'YY-MM-DD'), 'guest7@gmail.com', 2218894,555012351,'Riyadh street 3788' );

126

insert into Guests\_XYZHOTEL values(1234567898,'Guest8xxxxxxl', TO\_DATE('07-11-10', 'YY-MM-DD'), 'guest8@gmail.com', '',555012352,'' );

127

insert into Guests\_XYZHOTEL values(1234567899,'Guest9xxxxxxl', TO\_DATE('08-11-10', 'YY-MM-DD'), 'guest9@gmail.com', 2218896,555012353,'Jeddah street 8929' );

128

insert into Guests\_XYZHOTEL values(1234567900,'Guest10xxxxxxl', TO\_DATE('09-11-10', 'YY-MM-DD'), 'guest10@gmail.com', 2218897,555012354,'Riyadh street 3052' );

129

insert into Guests\_XYZHOTEL values(1234567901,'Guest11xxxxxxl', TO\_DATE('10-11-10', 'YY-MM-DD'), 'guest11@gmail.com', '',555012356,'abha street 12378' );

130

insert into Guests\_XYZHOTEL values(1234567902,'Guest12xxxxxxl', TO\_DATE('11-11-10', 'YY-MM-DD'), 'guest12@gmail.com', 2218899,555012357,'abha street 12378' );

131

insert into Guests\_XYZHOTEL values(1234567903,'Guest13xxxxxxl', TO\_DATE('12-11-10', 'YY-MM-DD'), 'guest13@gmail.com', '',555012358,'khamis street 2658' );

132

insert into Guests\_XYZHOTEL values(1234567904,'Guest14xxxxxxl', TO\_DATE('13-11-10', 'YY-MM-DD'), 'guest14@gmail.com', 22189001,555012359,'abha street 6458' );

133

select \* from Guests\_XYZHOTEL;

134

Script Output

Query Result 6

Query Result 7

SQL

All Rows Fetched: 13 in 0.004 seconds

	NATIONAL_ID	FULL_NAME	REGISTR...	EMAIL	PHONE_NUMBER	MOBILE_NU...	ADDRESS
1	1234567891	Guest1xxxxxx	10-NOV-01	guest1@gmail.com	2218888	555012344	abha street 12378
2	1234567892	Guest2xxxxxx	10-NOV-02	guest2@gmail.com	2218889	555012346	abha street 6595
3	1234567893	Guest3xxxxxxl	10-NOV-03	guest3@gmail.com	(null)	555012347	(null)
4	1234567894	Guest4xxxxxxl	10-NOV-03	guest4@gmail.com	2218891	555012348	abha street 12378
5	1234567895	Guest5xxxxxxl	10-NOV-04	guest5@gmail.com	(null)	555012349	(null)
6	1234567896	Guest6xxxxxxl	10-NOV-05	guest6@gmail.com	(null)	555012350	(null)
7	1234567897	Guest7xxxxxxl	10-NOV-06	guest7@gmail.com	2218894	555012351	Riyadh street 3788
8	1234567898	Guest8xxxxxxl	10-NOV-07	guest8@gmail.com	(null)	555012352	(null)
9	1234567899	Guest9xxxxxxl	10-NOV-08	guest9@gmail.com	2218896	555012353	Jeddah street 8929
10	1234567900	Guest10xxxxxxl	10-NOV-09	guest10@gmail.com	2218897	555012354	Riyadh street 3052
11	1234567901	Guest11xxxxxxl	10-NOV-10	guest11@gmail.com	(null)	555012356	abha street 12378
12	1234567902	Guest12xxxxxxl	10-NOV-11	guest12@gmail.com	2218899	555012357	abha street 12378
13	1234567903	Guest13xxxxxxl	10-NOV-12	guest13@gmail.com	(null)	555012358	khamis street 2658

Table 7

Worksheet

Query Builder

155


```
156 insert into Reservation_XYZHOTEL values(10101,TO_DATE('16-02-10', 'YY-MM-DD'),1,101,TO_DATE('16-02-10', 'YY-MM-DD'),TO_DATE('16-02-12', 'YY-MM-DD'),1234567891);
157 insert into Reservation_XYZHOTEL values(10102,TO_DATE('16-02-11', 'YY-MM-DD'),2,102,TO_DATE('16-02-11', 'YY-MM-DD'),TO_DATE('16-02-13', 'YY-MM-DD'),1234567892);
158 insert into Reservation_XYZHOTEL values(10103,TO_DATE('16-02-12', 'YY-MM-DD'),3,201,TO_DATE('16-02-12', 'YY-MM-DD'),TO_DATE('16-02-14', 'YY-MM-DD'),1234567893);
159 insert into Reservation_XYZHOTEL values(10104,TO_DATE('16-02-13', 'YY-MM-DD'),4,202,TO_DATE('16-02-13', 'YY-MM-DD'),TO_DATE('16-02-17', 'YY-MM-DD'),1234567894);
160 insert into Reservation_XYZHOTEL values(10105,TO_DATE('16-02-14', 'YY-MM-DD'),3,401,TO_DATE('16-02-14', 'YY-MM-DD'),TO_DATE('16-02-19', 'YY-MM-DD'),1234567894);
161 insert into Reservation_XYZHOTEL values(10106,TO_DATE('16-02-15', 'YY-MM-DD'),4,402,TO_DATE('16-02-15', 'YY-MM-DD'),TO_DATE('16-02-24', 'YY-MM-DD'),1234567893);
162 select * from Reservation_XYZHOTEL;
163
```

Script Output x

Query Result 6 x

Query Result 7 x

Query Result 8 x

 SQL

All Rows Fetched: 6 in 0.008 seconds

	RESERVATION_NO	DATE_OF_RESERVATION	ROOM_TYPE_ID	ROOM_NO	ENTRY_DATE	LEAVE_DATE	GUEST_NATIONAL_ID
1	10101	10-FEB-16		1	101 10-FEB-16	12-FEB-16	1234567891
2	10102	11-FEB-16		2	102 11-FEB-16	13-FEB-16	1234567892
3	10103	12-FEB-16		3	201 12-FEB-16	14-FEB-16	1234567893
4	10104	13-FEB-16		4	202 13-FEB-16	17-FEB-16	1234567894
5	10105	14-FEB-16		3	401 14-FEB-16	19-FEB-16	1234567894
6	10106	15-FEB-16		4	402 15-FEB-16	24-FEB-16	1234567893





Table 8

Worksheet

Query Builder

```
insert into Bills_XYZHOTEL values(11000,10101, TO_DATE('16-02-10', 'YY-MM-DD'),1,101,400,'Cash');
insert into Bills_XYZHOTEL values(11001,10102, TO_DATE('16-02-11', 'YY-MM-DD'),2,102,500,'Cash');
insert into Bills_XYZHOTEL values(11002,10103, TO_DATE('16-02-13', 'YY-MM-DD'),3,201,200,'Credit card');
insert into Bills_XYZHOTEL values(11003,10104, TO_DATE('16-02-13', 'YY-MM-DD'),4,202,1500,'Cash');
insert into Bills_XYZHOTEL values(11004,10105, TO_DATE('16-02-15', 'YY-MM-DD'),3,401,600,'Credit card');
insert into Bills_XYZHOTEL values(11006,10106, TO_DATE('16-02-16', 'YY-MM-DD'),4,402,1300,'Credit card');
select * from Bills_XYZHOTEL;
```

Query Result x

    SQL | All Rows Fetched: 6 in 0.638 seconds

	INVOICE_NO	RESERVATION_NO	DATE_OF_PAYMENT	ROOM_TYPE_ID	ROOM_NO	TOTAL	PAYMENT_METHOD
1	11000	10101	10-FEB-16		1	101	400 Cash
2	11001	10102	11-FEB-16		2	102	500 Cash
3	11002	10103	13-FEB-16		3	201	200 Credit card
4	11003	10104	13-FEB-16		4	202	1500 Cash
5	11004	10105	15-FEB-16		3	401	600 Credit card
6	11006	10106	16-FEB-16		4	402	1300 Credit card

## c.Answer

Worksheet

Query Builder

80





81 update Rooms\_XYZHOTEL set status ='Free';

82 select \* from Rooms\_XYZHOTEL;

83



Script Output x

Query Result x

 SQL | All Rows Fetched: 8 in 0.004 seconds

	ROOM_NO	ROOM_TYPE_ID	ROOM_EXTENSI...	FLOOR_NUM...	STATUS	SERVICES
1	101	1	101	1 free	(null)	
2	102	2	102	1 free	(null)	
3	201	3	201	2 free	(null)	
4	202	4	202	2 free	(null)	
5	301	1	301	3 free	(null)	
6	302	2	302	3 free	(null)	
7	401	3	401	4 free	(null)	
8	402	4	402	4 free	(null)	

## d.Answer

Worksheet		Query Builder
		<pre> Alter table Reservation_XYZHOTEL add duration number(2) ; </pre>
Script Output		
		  Task completed in 0.097 seconds
		Table RESERVATION_XYZHOTEL altered.

e.Answer

Worksheet Query Builder

```

136
137 DELETE FROM Guests_XYZHOTEL
138 WHERE Registration_Date = TO_DATE('01-11-10', 'YY-MM-DD')
139
140

```

Script Output x Query Result x

Task completed in 0.043 seconds

1 row deleted.

Worksheet Query Builder

```

136
137 DELETE FROM Guests_XYZHOTEL
138 WHERE Registration_Date = TO_DATE('01-11-10', 'YY-MM-DD')
139 select * from Guests_XYZHOTEL;
140

```

Script Output x Query Result x

SQL | All Rows Fetched: 12 in 0.003 seconds

	NATIONAL_ID	FULL_NAME	REGISTR...	EMAIL	PHONE_NUMBER	MOBILE_NU...	ADDRESS
1	1234567892	Guest2xxxxxx	10-NOV-02	guest2@gmail.com	2218889	555012346	abha street 6595
2	1234567893	Guest3xxxxxx1	10-NOV-03	guest3@gmail.com	(null)	555012347	(null)
3	1234567894	Guest4xxxxxx1	10-NOV-03	guest4@gmail.com	2218891	555012348	abha street 12378
4	1234567895	Guest5xxxxxx1	10-NOV-04	guest5@gmail.com	(null)	555012349	(null)
5	1234567896	Guest6xxxxxx1	10-NOV-05	guest6@gmail.com	(null)	555012350	(null)
6	1234567897	Guest7xxxxxx1	10-NOV-06	guest7@gmail.com	2218894	555012351	Riyadh street 3788
7	1234567898	Guest8xxxxxx1	10-NOV-07	guest8@gmail.com	(null)	555012352	(null)
8	1234567899	Guest9xxxxxx1	10-NOV-08	guest9@gmail.com	2218896	555012353	Jeddah street 8929
9	1234567900	Guest10xxxxxx1	10-NOV-09	guest10@gmail.com	2218897	555012354	Riyadh street 3052
10	1234567901	Guest11xxxxxx1	10-NOV-10	guest11@gmail.com	(null)	555012356	abha street 12378
11	1234567902	Guest12xxxxxx1	10-NOV-11	guest12@gmail.com	2218899	555012357	abha street 12378
12	1234567903	Guest13xxxxxx1	10-NOV-12	guest13@gmail.com	(null)	555012358	khamis street 2658

### Step 3: Relational Algebra

Answers:

1.

$$\Pi_{Room\_no, Room\_Type\_ID, status}(Rooms\_XYZHOTEL) \cup \Pi_{Room\_Type\_ID, Price\_in\_SR, Description\_of\_room, status, room\_Capacity}(Rooms\_XYZHOTEL)$$

2.

$$\sigma_{Room\_no=102 \wedge Payment\_method="Cash"}(Bills\_XYZHOTEL)$$

3.

$$\Pi_{Reservation\_no, Date\_of\_reservation, Room\_no, duration}(\sigma_{Guest\_National\_Id=1234567894}(Reservation\_XYZHOTEL))$$