

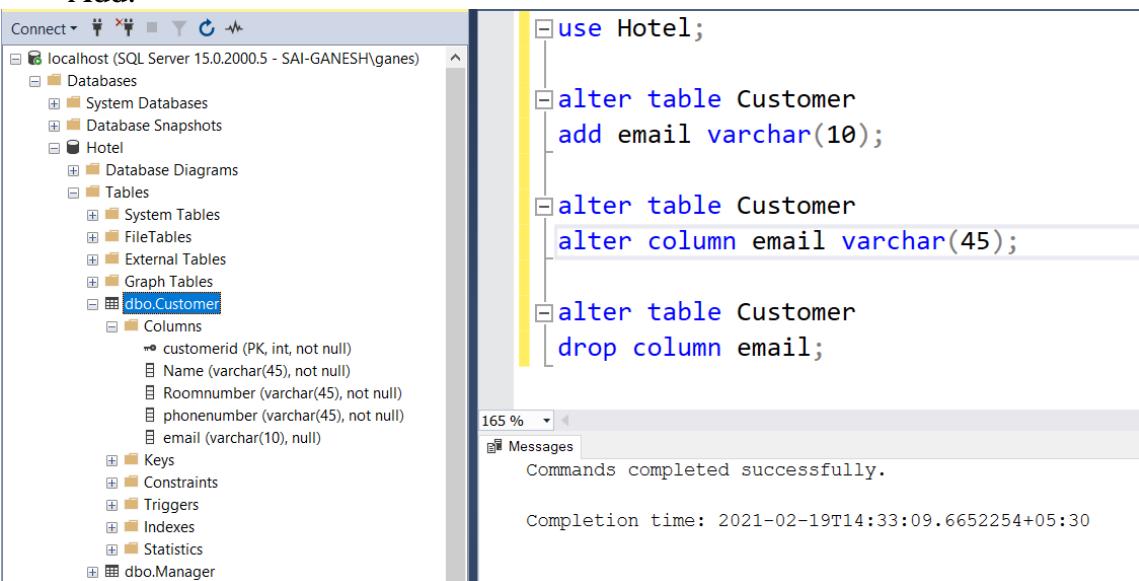
DBMS LAB ASSIGNEMT

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REG.: 19BCS060

1.) Add, Modify and Delete column using alter command.

Add:

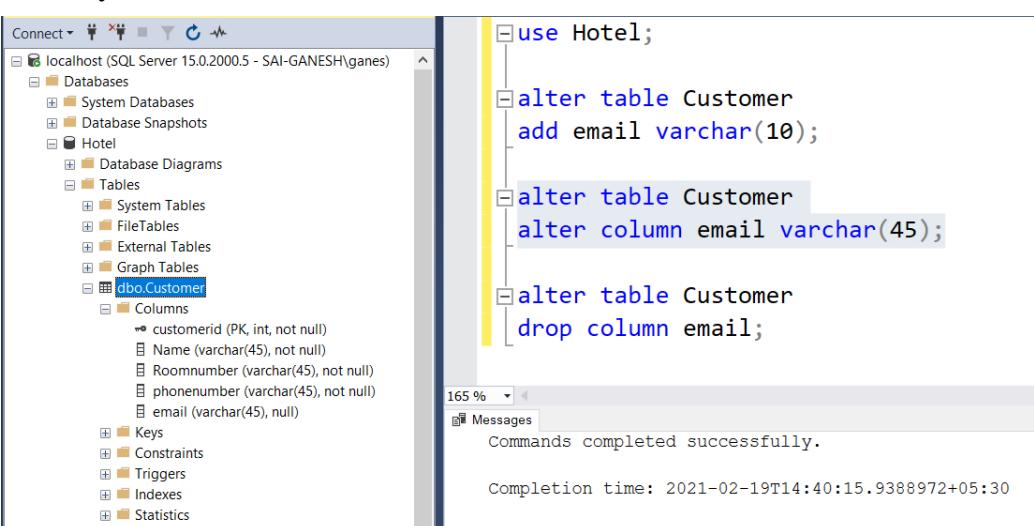


The screenshot shows the Object Explorer on the left with the database 'Hotel' selected. Under 'Tables', the 'dbo.Customer' table is selected. In the 'Columns' node, a new column 'email' is being added with a data type of 'varchar(10)'. The script pane on the right contains the following SQL code:

```
use Hotel;
alter table Customer
add email varchar(10);
```

The 'Messages' pane at the bottom shows the message "Commands completed successfully." and the completion time: 2021-02-19T14:33:09.6652254+05:30.

Modify:



The screenshot shows the same setup as the previous one. The 'Customer' table is selected in Object Explorer. In the 'Columns' node, the existing 'email' column is being modified to have a data type of 'varchar(45)'. The script pane on the right contains the following SQL code:

```
use Hotel;
alter table Customer
add email varchar(10);
alter table Customer
alter column email varchar(45);
```

The 'Messages' pane at the bottom shows the message "Commands completed successfully." and the completion time: 2021-02-19T14:40:15.9388972+05:30.

Delete:

```
use Hotel;

alter table Customer
add email varchar(10);

alter table Customer
alter column email varchar(45);

alter table Customer
drop column email;
```

165 %

Messages

Commands completed successfully.

Completion time: 2021-02-19T14:46:27.3283846+05:30

2.) Insert 20 employees Data into all the tables.

```
use Hotel;

insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (1, 'peter', '001', '8754321987');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (2, 'chen', '002', '9514863258');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (3, 'rosy', '003', '7531598526');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (4, 'gill', '004', '8524569631');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (5, 'rio', '005', '7896321456');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (6, 'professor', '006', '8426957130');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (7, 'langford', '007', '7254796318');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (8, 'justin', '008', '9571536293');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (9, 'bobby', '009', '7564218930');
insert into Customer(customerid, Name, Roomnumber, phonenumbers)
values (10, 'bob', '010', '9658741230');
```

```
insert into Customer
values (11, 'cristen', '011', '7895621301');
insert into Customer
values (12, 'kamal', '012', '4862159735');
insert into Customer
values (13, 'dinesh', '013', '6547893215');
insert into Customer
values (14, 'abcd', '014', '2589641375');
insert into Customer
values (15, 'mona', '015', '1258974631');
insert into Customer
values (16, 'raj', '016', '1589746238');
insert into Customer
values (17, 'kumar', '017', '8459761238');
insert into Customer
values (18, 'edfh', '018', '4879635428');
insert into Customer
values (19, 'mahesh', '019', '8796532485');
insert into Customer
values (20, 'dhoni', '020', '4897563215');
```

Output:

select * from Customer;

customerid	Name	Roomnumber	phonenumber
1	peter	001	8754321987
2	chen	002	9514863258
3	rosy	003	7531598526
4	gill	004	8524569631
5	rio	005	7896321456
6	professor	006	8426957130
7	langford	007	7254796318
8	justin	008	9571536293
9	bobby	009	7564218930
10	bob	010	9658741230
11	cristen	011	7895621301
12	kamal	012	4862159735
13	dinesh	013	6547893215
14	abcd	014	2589641375
15	mona	015	1258974631
16	raj	016	1589746238
17	kumar	017	8459761238
18	edfh	018	4879635428
19	mahesh	019	8796532485
20	dhoni	020	4897563215

3.) Show Violation of primary key, Unique not null and default key constraints through insertion.

Primary key violation:

```
use Hotel;
insert into Customer(customerid, Name, Roomnumber, phononenumber)
values (1, 'steve', '51', '9876543210');
```

```
6 ▾
Messages
Msg 2627, Level 14, State 1, Line 3
Violation of PRIMARY KEY constraint 'PK__Customer__B61ED7F594288BA1'. Cannot insert duplicate key in object 'dbo.Customer'. The duplicate key value
The statement has been terminated.

Completion time: 2021-02-19T15:44:49.1809528+05:30
```

Null key violation:

```
/* null key violation */
insert into Customer(customerid, Name, Roomnumber, phononenumber)
values (22, null, '150', '8796541230');

select * from Customer;
```

```
% ▾
Messages
Msg 515, Level 16, State 2, Line 7
Cannot insert the value NULL into column 'Name', table 'Hotel.dbo.Customer'; column does not allow nulls. INSERT fails.
The statement has been terminated.

Completion time: 2021-02-19T15:53:43.3520069+05:30
```

4.) Insert tuples into the table and see how foreign key constraint works if you try to insert into dependent table first.

```
use Hotel;
insert into Receptionist
values (1, 'kidinesh', '9654178235', 1, null);
select * from Manager;
```

```
% ▾
Messages
Msg 547, Level 16, State 0, Line 3
The INSERT statement conflicted with the FOREIGN KEY constraint "FR__Reception__roomi__403a8c7d". The conflict occurred in database "Hotel", table '
The statement has been terminated.

Completion time: 2021-02-19T16:38:35.4984113+05:30
```

- 5.) Show violation of foreign key constraint when you try to delete from a base table. If you get an error explain why deletion gives an error.

The screenshot shows a SQL query window with the following code:

```
use Hotel;
delete from Stock where stockid = 2;
select * from Stock;
```

Below the code, the results pane displays an error message:

Msg 547, Level 16, State 0, Line 3
The DELETE statement conflicted with the REFERENCE constraint "FK_Room_stockid_38996AB5". The conflict occurred in database "Hotel",
The statement has been terminated.

The error occurs because when we delete a record from the base table, we should make sure that all the related dependent tables records are deleted prior. Otherwise, there will be redundant data all over the database.

- 6.) Try to update a non-existing entity data and check for error.

The screenshot shows a SQL query window with the following code:

```
use Hotel;
update Customer
set Name = 'kidnesh'
where customerid = 30
```

Below the code, the results pane displays the output:

% ▾ ◀ Messages

(0 rows affected)

Completion time: 2021-02-19T17:00:27.7906657+05:30

7.) Add a column which has default value.

```
use Hotel;

alter table Customer
add email varchar(45) default 'test@gmail.com';

insert into Customer(customerid, Name, Roomnumber, phonenumer)
values (21, 'bobby', '021', '7896541230');

select * from Customer where customerid = 21;
```

Results				
Messages				
customerid	Name	Roomnumber	phonenumer	email
21	bobby	021	7896541230	test@gmail.com

8.) 5 Simple select queries to retrieve data from your database.

Results																								
Messages																								
<pre>use Hotel; select * from Stock; select * from Room where stockid = 1; select roomid, customerid from Receptionist where Name = 'priya'; select Name, customerid from Manager; select * from Customer where customerid in (select customerid from Manager where Name = 'daniel');</pre>																								
<table border="1"><thead><tr><th>stockid</th><th>status</th><th>status_string</th></tr></thead><tbody><tr><td>1</td><td>1</td><td>yes</td></tr><tr><td>2</td><td>0</td><td>no</td></tr></tbody></table>					stockid	status	status_string	1	1	yes	2	0	no											
stockid	status	status_string																						
1	1	yes																						
2	0	no																						
<table border="1"><thead><tr><th>roomid</th><th>stockid</th><th>roomnumber</th></tr></thead><tbody><tr><td>1</td><td>1</td><td>050</td></tr><tr><td>2</td><td>1</td><td>051</td></tr><tr><td>3</td><td>1</td><td>052</td></tr></tbody></table>					roomid	stockid	roomnumber	1	1	050	2	1	051	3	1	052								
roomid	stockid	roomnumber																						
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roomid	customerid																							
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2	6																							
3	4																							
<table border="1"><thead><tr><th>Name</th><th>customerid</th></tr></thead><tbody><tr><td>daniel</td><td>2</td></tr><tr><td>robin</td><td>19</td></tr><tr><td>daniel</td><td>9</td></tr><tr><td>daniel</td><td>16</td></tr></tbody></table>					Name	customerid	daniel	2	robin	19	daniel	9	daniel	16										
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customerid	Name	Roomnumber	phonenumer	email																				
1	2	002	9514863258	NULL																				
2	bobby	009	7564218930	NULL																				
3	raj	016	1589746238	NULL																				

- 9.) Show how foreign key constraint effects updating a dependent table when value not existing and in base table where the value is referred and you want to update it.

The screenshot shows a MySQL command-line interface window. The SQL command entered is:

```
use Hotel;
update Room set stockid = 1 where roomid = 7;
```

The output window below shows the results:

```
150 % < Messages
(0 rows affected)
Completion time: 2021-02-20T13:40:02.3820183+05:30
```