CHAPTER 8: DATA MANIPULATING LANGUAGE

2023

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Content:

ALTER

ALTER TABLE *table_name*
ADD *column_name datatype;*

ALTER TABLE *table_name*

ADD *(column_1 column_definition,*

    column_2 column_definition);

ALTER TABLE Customers
ADD Email varchar(255);

ALTER TABLE Customers
DROP COLUMN Email;

[SQL server]

ALTER TABLE *table_name*
ALTER COLUMN *column_name datatype;*

[MySQL]

ALTER TABLE *table_name*
CHANGE COLUMN *column_name datatype;*

ALTER

ALTER TABLE table_name

ALTER COLUMN column_name new_data_type(size);

ALTER TABLE Customers
ADD Email varchar(255);

ALTER TABLE listings

ALTER COLUMN listing_name VARCHAR (60) NOT NULL;

ALTER (ADDING IN A SPECIFIC POSITION)

ALTER table table_name

    Add column column_name integer AFTER column_name

ALTER table customers

    Add column quantity integer AFTER price

RENAME

ALTER TABLE old_table_name

RENAME new_table_name;

OR

RENAME TABLE old_table_name TO new_table_name;

RENAME TABLE products TO products_old, products_new TO products

MySQL

ALTER TABLE table_name RENAME **TO** new_table_name

Practice   CREATE / ALTER / DROP/TRUNCATE/RENAME

Create the *ShopPty* database

Create the following tables

- **Customers** – stores customer master data

- **Orders** – stores transaction sale orders from customers

- **OrderDetails** – stores line items of sale orders

- **Products** – stores products master data

1. Add a description column in Products table

2. Insert 1 row of data in each of these tables

3. Remove all the data inside the OrderDetails table

4. Delete the orderDetails table completely

customers
- CustomerID VARCHAR(5)
- CompanyName VARCHAR(40)
- ContactName VARCHAR(30)

products
- ProductID INT
- ProductName VARCHAR(40)
- SupplierID INT
- CategoryID INT
- QuantityPerUnit VARCHAR(20)
- UnitPrice DECIMAL(10,4)
- UnitsInStock SMALLINT(2)

orders
- OrderID INT
- CustomerID VARCHAR(5)
- EmployeeID INT
- OrderDate DATE
- RequiredDate DATE
- ShippedDate DATE

orderdetails
- OrderID INT
- ProductID INT(
- UnitPrice DECIMAL(10,4)
- Quantity SMALLINT(2)
- Discount DOUBLE(8,0)

AIRBNB

Practice

2. From the AirBnB database change the data type of birthdate in the Hosts table from DATETIME to only DATE

INSERT INTO *SELECT*

 INSERT INTO *table2 (column1 column2 column3 ...)*
SELECT *column1 column2 column3 ...*
FROM *table1*
WHERE *condition;*

 INSERT INTO Customers (CustomerName, ContactName, Address
City, PostalCode, Country)
SELECT SupplierName, ContactName, Address, City PostalCode
,Country FROM Suppliers;

INSERT INTO SELECT

INSERT INTO contacts

(contact_id , last_name, first_name)

SELECT employee_id , last_name , first_name

FROM employees

WHERE employee_id <= 100;

Practice SELECT INTO

1. Create a new table called HR_fulltime with the following fields: enrollee id, city and enrolled university.

2. By using the data from the HR_unknown table, of only for those who studied fulltime add this data into your newly created table.

HR

UPDATE

UPDATE *table_name*
SET *column1 = 'value1'*
    column2 = 'value2'
WHERE condition;

UPDATE Customers
SET ContactName = 'Alfred Schmidt'
    City= 'Frankfurt'
WHERE CustomerID = 1;

Practice UPDATE

1. Steps – Use listings table from AirBNB

   a. First show all the host_names sort this in ascending order → Which 2 options does not look right?

   b. How many entries are there with that value as host_name

   c. Change the NULL value to "Not completed" and change the (Email hidden by Airbnb) to Hidden

2. Fix the international code from the phone number column so that it reads as +27

AIRBNB

DELETE

DELETE FROM *table_name* WHERE *condition*;

DELETE FROM Customers WHERE CustomerName= 'Albert Smith' ;

Note: *Be careful when deleting records in a table*

Notice the WHERE clause in the DELETE statement. The WHERE clause specifies which record(s) should be deleted. If you omit the WHERE clause all records in the table will be deleted

MYSQL: DESC STATEMENT (DESCRIBE TABLE)

SQL DESC statement use for describe the list of column definitions for specified table. You can use either **DESC** or **DESCRIBE** statement. both are return same result.

DESCRIBE statement to get following information:

- Column Name

- Column allow NULL or NOT NULL

- Datatype of the Column

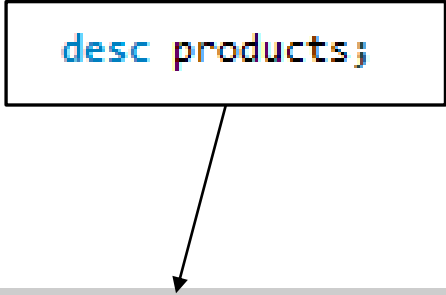- With database size precision and If NUMERIC datatype scale.

DESC table_name

```
SQL> DESCRIBE users_info;

Name                             Null?     Type
-------------------------------  --------  ---------------

NO                               NOT NULL  NUMBER(3)
NAME                                       VARCHAR2(30)
ADDRESS                                    VARCHAR2(70)
CONTACT_NO                                 VARCHAR2(12)
```
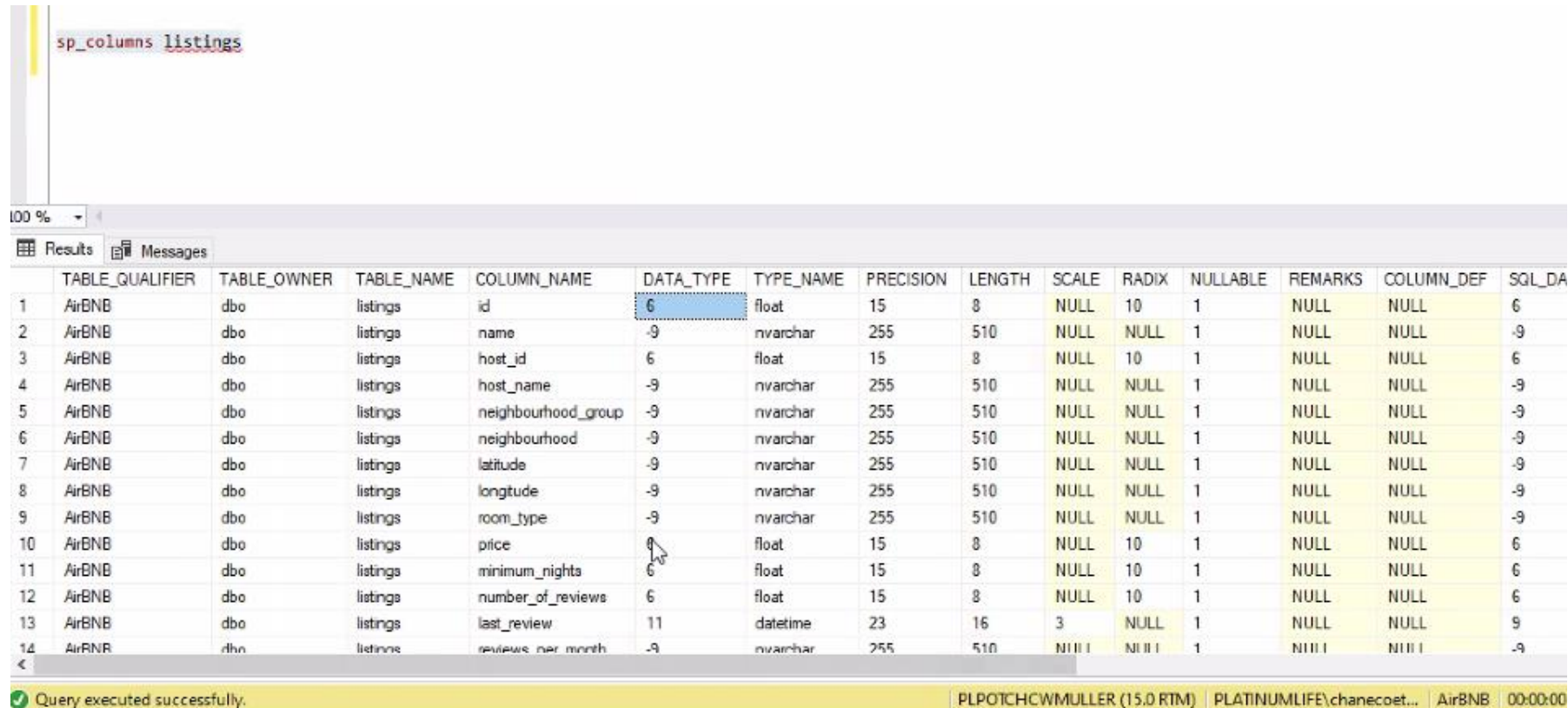
DESC

```
1 •    use aw;
2 •    desc products;
```

	Field	Type	Null	Key	Default	Extra
▶	ProductKey	int	YES		NULL	
	ProductSubcategoryKey	int	YES		NULL	
	ProductSKU	text	YES		NULL	
	ProductName	text	YES		NULL	
	ModelName	text	YES		NULL	
	ProductDescription	text	YES		NULL	
	ProductColor	text	YES		NULL	
	ProductSize	text	YES		NULL	

Result Grid | Filter Rows: | Export: | Wrap Cell

SQL SERVER

Sp_columns tableName

```
sp_columns listings
```

100 %

☐ Results ☐ Messages

	TABLE_QUALIFIER	TABLE_OWNER	TABLE_NAME	COLUMN_NAME	DATA_TYPE	TYPE_NAME	PRECISION	LENGTH	SCALE	RADIX	NULLABLE	REMARKS	COLUMN_DEF	SQL_DA
1	AirBNB	dbo	listings	id	6	float	15	8	NULL	10	1	NULL	NULL	6
2	AirBNB	dbo	listings	name	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9
3	AirBNB	dbo	listings	host_id	6	float	15	8	NULL	10	1	NULL	NULL	6
4	AirBNB	dbo	listings	host_name	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9
5	AirBNB	dbo	listings	neighbourhood_group	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9
6	AirBNB	dbo	listings	neighbourhood	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9
7	AirBNB	dbo	listings	latitude	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9
8	AirBNB	dbo	listings	longitude	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9
9	AirBNB	dbo	listings	room_type	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9
10	AirBNB	dbo	listings	price	6	float	15	8	NULL	10	1	NULL	NULL	6
11	AirBNB	dbo	listings	minimum_nights	6	float	15	8	NULL	10	1	NULL	NULL	6
12	AirBNB	dbo	listings	number_of_reviews	6	float	15	8	NULL	10	1	NULL	NULL	6
13	AirBNB	dbo	listings	last_review	11	datetime	23	16	3	NULL	1	NULL	NULL	9
14	AirBNB	dbo	listings	reviews_per_month	-9	nvarchar	255	510	NULL	NULL	1	NULL	NULL	-9