



پوهنتون کاردان
KARDAN UNIVERSITY

Database Administration

Lecture 06



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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ
وَالصَّلَاةُ وَالسَّلَامُ عَلَى سَيِّدِنَا مُحَمَّدٍ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ



Overview

Table Creation using Sub-query

Alter Command

- Add a new column
- Modify an existing column definition
- Define a default value for the new column
- Drop a column
- Rename a column



Alter Status

- Read only
- Read Write



Creating a Table Using a Subquery

```
CREATE TABLE dept80
AS
SELECT  employee_id, last_name,
        salary*12 ANNSAL,
        hire_date
FROM    employees
WHERE   department id = 80;
```



```
CREATE TABLE succeeded.
```

```
DESCRIBE dept80
```

Name	Null	Type

EMPLOYEE_ID		NUMBER(6)
LAST_NAME	NOT NULL	VARCHAR2(25)
ANNSAL		NUMBER
HIRE_DATE	NOT NULL	DATE

ALTER TABLE Statement

- Use the ALTER TABLE statement to:
 - Add a new column
 - Modify an existing column definition
 - Define a default value for the new column
 - Rename a column
 - Drop a column



```
ALTER TABLE table_name ADD column_name column-definition;
```

```
ALTER TABLE table_name MODIFY column_name column_type;
```

```
ALTER TABLE table_name DROP COLUMN column_name;
```

```
ALTER TABLE customers ADD (customer_name varchar2(45), city varchar2(40) DEFAULT 'Kabul');
```



ALTER TABLE Statement

Table to consider

```
CREATE
TABLE
tblstd
(
  SID NUMBER,
  SNAME VARCHAR2(10)
)
```

```
1 CREATE
2 TABLE
3 tblstd
4 (
5   SID NUMBER,
6   SNAME VARCHAR2(10)
7* )
SQL> /
```



Table created.

```
SQL> desc tblstd;
```

Name	Null?	Type
SID		NUMBER
SNAME		VARCHAR2(10)

```
SQL>
```



ALTER TABLE Statement...

Add Colum

```
ALTER TABLE tblstd ADD  
(  
|saddress varchar2(10),  
scontac varchar2(10)  
)
```

```
1* ALTER TABLE tblstd ADD (saddress varchar2(10), scontac varchar2(10))  
SQL> /
```

Table altered.



```
SQL> desc tblstd;
```

Name	Null?	Type
SID		NUMBER
SNAME		VARCHAR2(10)
SADDRESS		VARCHAR2(10)
SCONTAC		VARCHAR2(10)

```
SQL>
```



ALTER TABLE Statement...

Modify Colum

```
SQL> ed
Wrote file afiedt.buf

 1  ALTER TABLE tblstd Modify
 2  (
 3  saddress varchar2(12),
 4  scontac varchar2(13)
 5* )
SQL> /
```



Table altered.

```
SQL> desc tblstd;
```

Name	Null?	Type
SID		NUMBER
SNAME		VARCHAR2(10)
SADDRESS		VARCHAR2(12)
SCONTAC		VARCHAR2(13)

ALTER TABLE Statement...

Default values:

if we don't provide a value to a column in insert query the default will be taken if assigned.

```
1 ALTER TABLE tblstd Modify
2 (
3   saddress varchar2(12) DEFAULT 'KABUL',
4   scontac varchar2(13)
5* )
SQL> /
```

Table altered.

```
SQL> insert into tblstd(sid,sname) values(1,'asif');
```

1 row created.

```
SQL> select * from tblstd;
```

SID	SNAME	SADDRESS	SCONTAC
1	asif	KABUL	

```
SQL>
```



ALTER TABLE Statement...

Rename Column

```
1 ALTER TABLE tblstd Rename column  
2*      saddress TO sadd  
SQL> /
```

Table altered.



```
SQL> desc tblstd;
```

Name	Null?	Type

SID		NUMBER
SNAME		VARCHAR2(10)
SADD		VARCHAR2(12)
SCONTAC		VARCHAR2(13)



ALTER TABLE Statement...

Drop Column

```
SQL> ed
Wrote file afiedt.buf

  1* ALTER TABLE tblstd Drop column scontac
SQL> /

Table altered.

SQL> desc tblstd
Name                                     Null?      Type
-----
SID                                     NUMBER
SNAME                                  VARCHAR2(10)
SADD                                   VARCHAR2(12)

SQL>
```



Alter Status

- Use the ALTER TABLE syntax to put a table into the read-only mode:
 - Prevents changes during table maintenance
 - Change it back into read/write mode



```
ALTER TABLE employees READ ONLY;

-- perform table maintenance and then
-- return table back to read/write mode

ALTER TABLE employees READ WRITE;
```





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Group Discussions / Scenario Workshop



Work out the scenario (Discuss and solve)

Scenario:

- A retail company serve their customers. Each sale transaction includes product details and purchase information. Customers can make multiple transactions. TechWorld also buys products from different suppliers, with each purchase recorded along with supplier details.
 - Identify the key entities and relationships in this scenario. Also, create the ERD.
 - Write an Oracle script to create the necessary database structures.
 - Prepare a data entry script for inserting sample records



Work out the scenario (Discuss and solve)

Scenario

- You are working as a database associate in a company where customer privacy is a high priority. One of your tasks is to *partially mask phone numbers* in the database before displaying these in public reports. For example, if the number is '0791234333', the output should look like 079*****33.
Now, you are required to:
- *Use Oracle SQL string functions* like SUBSTR(), LPAD(), RPAD(), and CONCAT() to achieve the result. Write a SQL queries that takes the phone number and transforms it into the masked format.
- *Completely explain the role of each function* in your solution.





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Thank You