

EXERCISE-1

Creating and Managing Tables

OBJECTIVE

After the completion of this exercise, students should be able to do the following:

- Create tables
- Describing the data types that can be used when specifying column definition
- Alter table definitions
- Drop, rename, and truncate tables

NAMING RULES

Table names and column names:

- Must begin with a letter
- Must be 1-30 characters long
- Must contain only A-Z, a-z, 0-9, _, \$, and #
- Must not duplicate the name of another object owned by the same user
- Must not be an oracle server reserve words
- 2 different tables should not have same name.
- Should specify a unique column name.
- Should specify proper data type along with width
- Can include "not null" condition when needed. By default it is 'null'.

The CREATE TABLE Statement

Table: Basic unit of storage; composed of rows and columns

Syntax: 1 Create table table_name (column_name1 data_type (size)
column_name2 data_type (size)....);

Syntax: 2 Create table table_name (column_name1 data_type (size) constraints,
column_name2 data_type constraints ...);

Example:

```
Create table employees ( employee_id number(6), first_name varchar2(20), ..job_id varchar2(10),
CONSTRAINT emp_emp_id_pk PRIMARY KEY (employee_id));
```

Tables Used in this course

Creating a table by using a Sub query

SYNTAX

```
// CREATE TABLE table_name(column_name type(size)...);
```

```
Create table table_name as select column_name1,column_name2,.....column_namen from
table_name where predicate;
```

AS Subquery

Subquery is the select statement that defines the set of rows to be inserted into the new table.

Example

```
Create table dept80 as select employee_id, last_name, salary*12 Annsal, hire_date
from employees where dept_id=80;
```

The ALTER TABLE Statement

The ALTER statement is used to

- Drop a column
- To include or drop integrity constraint.

SYNTAX

```
ALTER TABLE table_name ADD /MODIFY(Column_name type(size));
```



TRUNCATING A TABLE

Removes all rows from the table.

Releases the storage space used by that table.

Syntax

TRUNCATE TABLE *table_name*;

Example:

TRUNCATE TABLE copy_emp;

Find the Solution for the following:

Create the following tables with the given structure.

EMPLOYEES TABLE

NAME	NULL?	TYPE
Employee_id	Not null	Number(6)
First_Name		Varchar(20)
Last_Name	Not null	Varchar(25)
Email	Not null	Varchar(25)
Phone_Number		Varchar(20)
Hire_date	Not null	Date
Job_id	Not null	Varchar(10)
Salary		Number(8,2)
Commission_pct		Number(2,2)
Manager_id		Number(6)
Department_id		Number(4)

DEPARTMENT TABLE

NAME	NULL?	TYPE
Dept_id	Not null	Number(6)
Dept_name	Not null	Varchar(20)
Manager_id		Number(6)
Location_id		Number(4)

JOB_GRADE TABLE

NAME	NULL?	TYPE
Grade_level		Varchar(2)
Lowest_sal		Number

Highest_sal	Number
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LOCATION TABLE

NAME	NULL?	TYPE
Location_id	Not null	Number(4)
St_addr		Varchar(40)
Postal_code		Varchar(12)
City	Not null	Varchar(30)
State_province		Varchar(25)
Country_id		Char(2)

1. Create the DEPT table based on the DEPARTMENT following the table instructions below. Confirm that the table is created.

Column name	ID	NAME
Key Type		
Nulls/Unique		
FK table		
FK column		
Data Type	Number	Varchar2
Length	7	25



Highest_sal	Number
-------------	--------

LOCATION TABLE

NAME	NULL?	TYPE
Location_id	Not null	Number(4)
St_addr		Varchar(40)
Postal_code		Varchar(12)
City	Not null	Varchar(30)
State_province		Varchar(25)
Country_id		Char(2)

1. Create the DEPT table based on the DEPARTMENT following the table instance chart below. Confirm that the table is created.

Column name	ID	NAME
Key Type		
Nulls/Unique		
FK table		
FK column		
Data Type	Number	Varchar2
Length	7	25

2. Create the EMP table based on the following instance chart. Confirm that the table is created.

Column name	ID	LAST_NAME	FIRST_NAME	DEPT_ID
Key Type				
Nulls/Unique				
FK table				
FK column				
Data Type	Number	Varchar2	Varchar2	Number
Length	7	25	25	7

3. Modify the EMP table to allow for longer employee last names. Confirm the modification.(Hint: Increase the size to 50)

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4. Create the EMPLOYEES2 table based on the structure of EMPLOYEES table. Include Only the Employee_id, First_name, Last_name, Salary and Dept_id columns. Name the columns Id, First_name, Last_name, salary and Dept_id respectively.

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5. Drop the EMP table.



6. Rename the EMPLOYEES2 table as EMP.

4. Create the EMPLOYEES2 table based on the structure of EMPLOYEES table. Include Only the Employee_id, First_name, Last_name, Salary and Dept_id coloumns. Name the columns Id, First_name, Last_name, salary and Dept_id respectively.

5. Drop the EMP table.

6. Rename the EMPLOYEES2 table as EMP.

7. Add a comment on DEPT and EMP tables. Confirm the modification by describing the table.

8. Drop the First_name column from the EMP table and confirm it.

Evaluation Procedure	Marks awarded
Query(5)	
Execution (5)	
Viva(5)	
Total (15)	
Faculty Signature	