

UNIVERSITY OF CHITTAGONG

Department of Computer Science and Engineering

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Assignment No. : 04

Course Title : Database Systems

Course Code No. : CSE-413

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Oracle9i SQL-I

Chapter 9

Practice 9

1. Create the DEPT table based on the following table instance chart. Place the syntax in a script called lab9_1.sql, then execute the statement in the script to create the table. 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

Name	Null?	Туре	
ID		NUMBER(7)	
NAME		VARCHAR2(25)	

Solution:

```
CREATE TABLE dept(
ID INT (7),
NAME VARCHAR(25)

;
DESCRIBE DEPT;
```

Output:

#	Field	Туре	Null
1	id	int	YES
2	name	varchar(25)	YES

2. Populate the DEPT table with data from the DEPARTMENTS table. Include only columns that you need.

Solution:

```
INSERT INTO dept
SELECT department_id, department_name
FROM departments;
```

3. Create the EMP table based on the following table instance chart. Place the syntax in a script called lab9_3.sql, and then execute the statement in the script to create the table. 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

Name	Null?	Туре
ID		NUMBER(7)
LAST_NAME		VARCHAR2(25)
FIRST_NAME		VARCHAR2(25)
DEPT_ID		NUMBER(7)

```
1 CREATE TABLE emp(
2   id int (7),
3   last_name varchar(25),
4   first_name varchar(25),
5   dept_id int (7)
6 );
7
8 DESCRIBE emp;
```

Output:

	#	Field	Туре	Null
	1	id	int	YES
	2	last_name	varchar(30)	YES
l	3	first_name	varchar(25)	YES
	4	dept_id	int	YES

4. Modify the EMP table to allow for longer employee last names. Confirm your modification.

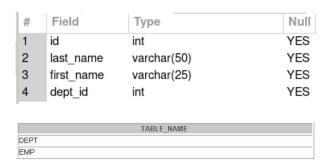
Name	Null?	Туре	
ID		NUMBER(7)	
LAST_NAME		VARCHAR2(50)	
FIRST_NAME		VARCHAR2(25)	
DEPT_ID		NUMBER(7)	

Solution:

```
ALTER TABLE emp
MODIFY last_name VARCHAR(50);

DESCRIBE emp;
```

Output:

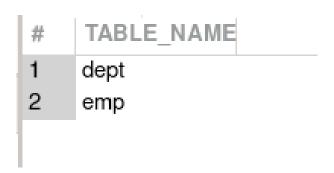


5. Confirm that both the DEPT and EMP tables are stored in the data dictionary. (Hint: USER_TABLES)

Solution:

```
SELECT table_name
FROM information_schema.tables
WHERE table_name IN ('dept', 'emp');
```

Output:



6. Create the EMPLOYEES2 table based on the structure of the EMPLOYEES table. Include only the EMPLOYEE_ID, FIRST_NAME, LAST_NAME, SALARY, and DEPARTMENT_ID columns. Name the columns in your new table ID, FIRST_NAME, LAST_NAME, SALARY, and DEPT_ID, respectively.

Solution:

```
CREATE TABLE employees2 AS
SELECT employee_id id, first_name, last_name, salary,
department_id dept_id
FROM employees;
```

7. Drop the EMP table.

Solution:

```
DROP TABLE emp;
```

8. Rename the EMPLOYEES2 table as EMP.

Solution:

1 RENAME TABLE employees2 TO emp;

9. Add a comment to the DEPT and EMP table definitions describing the tables. Confirm your additions in the data dictionary.

Solution:

```
ALTER TABLE dept

COMMENT = 'This table stores department information';

ALTER TABLE emp

COMMENT = 'This table stores employee information';

SELECT table name, table comment

FROM information schema. tables

WHERE table name IN ('dept', 'emp');
```

Output:

	#	TABLE_NAME	TABLE_COMMENT
ı	1	dept	This table stores department information
	2	emp	This table stores employee information

10. Drop the FIRST_NAME column from the EMP table. Confirm your modification by checking the description of the table.

Solution:

```
ALTER TABLE emp
DROP COLUMN first_name;

DESCRIBE emp;
```

Output:

#	Field	Туре	Null
1	id	int unsigned	NO
2	first_name	varchar(20)	YES
3	salary	decimal(8,2)	NO
4	dept_id	int unsigned	YES

11. In the EMP table, mark the <code>DEPT_ID</code> column as UNUSED. Confirm your modification by checking the description of the table.

```
1 ALTER TABLE emp
2 SET UNUSED COLUMN dept_id;
3
4 DESCRIBE emp;
```

12. Drop all the UNUSED columns from the EMP table. Confirm your modification by checking the description of the table.

Chapter 10

Practice 10

1. Add a table-level PRIMARY KEY constraint to the EMP table on the ID column. The constraint should be named at creation. Name the constraint my_emp_id_pk.

Hint: The constraint is enabled as soon as the ALTER TABLE command executes successfully.

Solution:

Output:

2. Create a PRIMARY KEY constraint to the DEPT table using the ID column. The constraint should be named at creation. Name the constraint my_deptid_pk.

Hint: The constraint is enabled as soon as the ALTER TABLE command executes successfully.

Solution:

3. Add a column DEPT_ID to the EMP table. Add a foreign key reference on the EMP table that ensures that the employee is not assigned to a nonexistent department. Name the constraint my_emp_dept_id_fk.

Solution:

4. Confirm that the constraints were added by querying the USER_CONSTRAINTS view. Note the types and names of the constraints. Save your statement text in a file called lab10_4.sql.

CONSTRAINT_NAME	C
MY_DEPT_ID_PK	P
SYS_C002541	C
MY_EMP_ID_PK	P
MY_EMP_DEPT_ID_FK	R

Solution:

5. Display the object names and types from the USER_OBJECTS data dictionary view for the EMP and DEPT tables. Notice that the new tables and a new index were created.

Solution:

6. Modify the EMP table. Add a COMMISSION column of NUMBER data type, precision 2, scale 2. Add a constraint to the commission column that ensures that a commission value is greater than zero.

Chapter 8

Practice 8