

DATABASE MANAGEMENT SYSTEM

CS23332

EXERCISE 1

CREATING AND MANAGING TABLES

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

The screenshot shows a SQL editor window in Oracle SQL Developer. The code area contains the following SQL statement:

```
1  create table DEPT(
2      ID Number(7),
3      NAME varchar2(25)
4  );
```

Below the code, there is a toolbar with tabs: Results (which is selected), Explain, Describe, and Saved SQ. The results pane displays the message "Table created." and "0.02 seconds".

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

The screenshot shows a database management interface with the following details:

Top Bar: Language (SQL), Rows (10), Clear Command, Find Tables.

SQL Editor: Contains the following SQL code:

```
1 CREATE TABLE EMP(
2     ID Number(7),
3     LAST_NAME VARCHAR2(25),
4     FIRST_NAME VARCHAR2(25),
5     DEPT_ID NUMBER(7)
6 ); DESC EMP;
```

Bottom Navigation: Results, Explain, **Describe**, Saved SQL, History.

Object Type Filter: TABLE, Object: EMP.

Table Structure View: Shows the columns of the EMP table:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP	ID	NUMBER	-	7	0	-	✓	-	-
	LAST_NAME	VARCHAR2	25	-	-	-	✓	-	-
	FIRST_NAME	VARCHAR2	25	-	-	-	✓	-	-
	DEPT_ID	NUMBER	-	7	0	-	✓	-	-

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

```
1  ALTER TABLE EMP MODIFY LAST_NAME VARCHAR2(50);
```

Results Explain Describe Saved SQL History

Table altered.

0.04 seconds

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 column. Name the columns Id, First_name, Last_name, salary and Dept_id respectively.

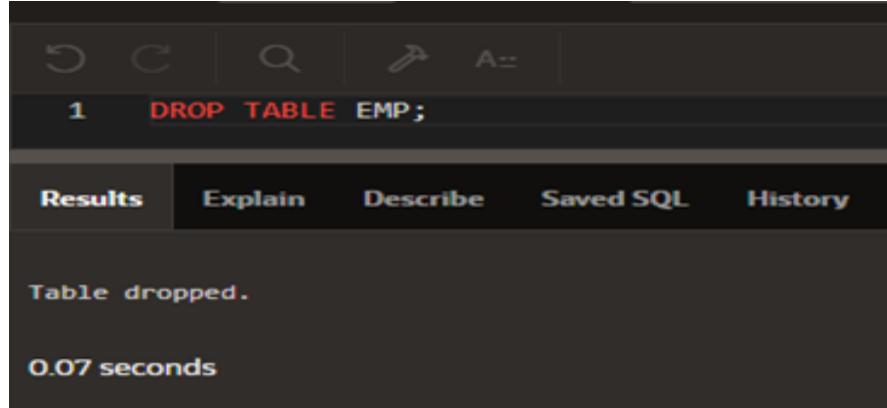
The screenshot shows a SQL interface with the following details:

- Language:** SQL
- Rows:** 10
- Toolbar:** Includes icons for Undo, Redo, Search, and Insert.
- SQL Editor:** Displays the SQL code for creating the EMPLOYEES2 table:

```
1 CREATE TABLE EMPLOYEES2(
2     EMPLOYEE_ID NUMBER,
3     FIRST_NAME VARCHAR2(25),
4     LAST_NAME VARCHAR(25),
5     SALARY NUMBER,
6     DEPT_ID NUMBER
7 );
```
- Results Tab:** Active tab, showing the output:

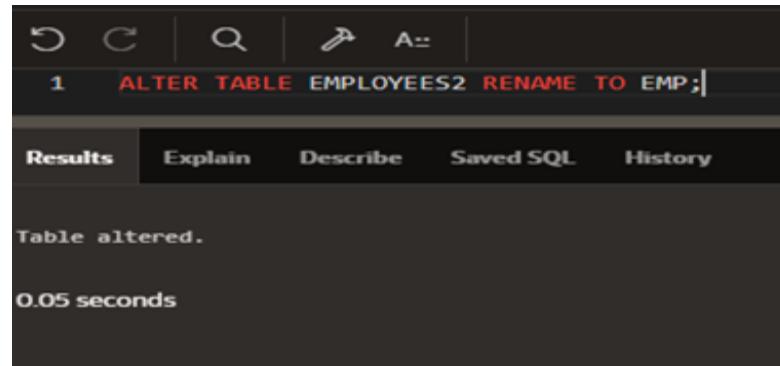
```
Table created.
```
- Timing:** 0.03 seconds

5. Drop the EMP table.



The screenshot shows a MySQL command-line interface. At the top, there are icons for back, forward, search, and help. Below the toolbar, a red line highlights the SQL command: `1 DROP TABLE EMP;`. The interface has tabs for Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The output area displays the message `Table dropped.` and a execution time of `0.07 seconds`.

6. Rename the EMPLOYEES2 table as EMP.



The screenshot shows a MySQL command-line interface. At the top, there are icons for back, forward, search, and help. Below the toolbar, a red line highlights the SQL command: `1 ALTER TABLE EMPLOYEES2 RENAME TO EMP;|`. The interface has tabs for Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. The output area displays the message `Table altered.` and a execution time of `0.05 seconds`.

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

Language SQL Rows 10 Clear Command Find Tables

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```
1 SELECT table_name, comments
2 FROM user_tab_comments
3 WHERE table_name IN ('DEPT', 'EMP');
4
```

Results Explain Describe Saved SQL History

TABLE_NAME	COMMENTS
DEPT	THIS TABLE CONTAINS DEPARTMENT DETAILS
EMP	THIS TABLE CONTAINS EMPLOYEES DETAILS

2 rows returned in 0.11 seconds Download

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

The screenshot shows a SQL developer interface with the following details:

- Language:** SQL
- Rows:** 10
- Commands:** ALTER TABLE EMP DROP COLUMN FIRST_NAME;
DESC EMP;
- Results Tab:** Shows the structure of the EMP table after the column was dropped. The table now has four columns: EMPLOYEE_ID, LAST_NAME, SALARY, and DEPT_ID. All columns are of type NUMBER, have a length of 22, and are nullable.
- Object Type:** TABLE
- Object:** EMP

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP	EMPLOYEE_ID	NUMBER	22	-	-	-	✓	-	-
	LAST_NAME	VARCHAR2	25	-	-	-	✓	-	-
	SALARY	NUMBER	22	-	-	-	✓	-	-
	DEPT_ID	NUMBER	22	-	-	-	✓	-	-

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