

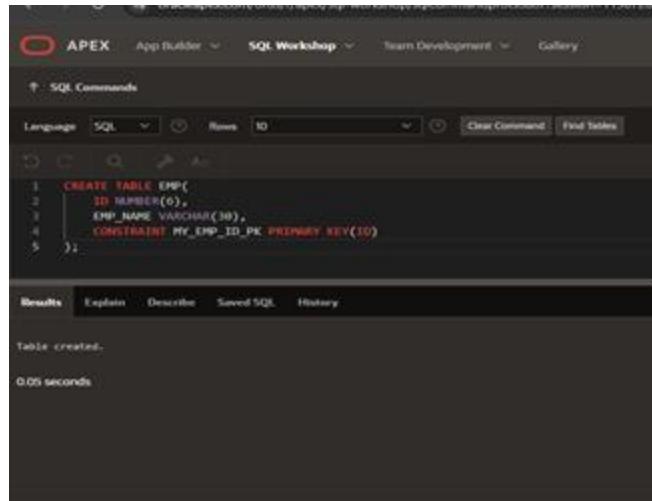
DATABASE MANAGEMENT SYSTEM

CS23332

EXERCISE 3
INCLUDING CONSTRAINTS

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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.



The screenshot shows the Oracle SQL Workshop interface. In the SQL Commands tab, the following SQL code is entered:

```
CREATE TABLE EMP{
    ID NUMBER(6),
    EMP_NAME VARCHAR(30),
    CONSTRAINT MY_EMP_ID_PK PRIMARY KEY(10)
};
```

The code is highlighted with syntax coloring. The Results tab shows the output:

Table created.
0.05 seconds

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_dept_id_pk.

The screenshot shows an SQL command window with the following details:

- Language:** SQL
- Rows:** 10
- SQL Editor Content:**

```
1 ALTER TABLE DEPT
2 ADD CONSTRAINT my_dept_id_pk PRIMARY KEY (ID);
3 |
```
- Results Tab:** The tab is selected and shows the output:

```
Table altered.
```
- Timing:** 0.10 seconds

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 nonexistent department. Name the constraint my_emp_dept_id_fk.

The screenshot shows a SQL command window with the following details:

- SQL Commands** tab is selected.
- Language**: SQL
- Rows**: 10
- Toolbar icons: Undo, Redo, Search, Insert, and Paste.
- Code Area** (Numbered Lines):
 - 1 ALTER TABLE EMP ADD DEPT_ID NUMBER;
 - 2
 - 3 ALTER TABLE EMP ADD CONSTRAINT my_emp_dept_id_fk
 - 4 FOREIGN KEY (DEPT_ID)
 - 5 REFERENCES DEPT(ID);
 - 6
- Results Tab** is selected.
- Output**: Table altered.
- Performance**: 0.09 seconds

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

The screenshot shows a SQL query editor interface with a dark theme. At the top, there are several icons: a refresh, a copy, a search, a refresh, and a help. Below the toolbar, the SQL code is displayed in a text area:

```
1  ALTER TABLE EMP
2  ADD COMMISSION NUMBER(2,2);
3
4  ALTER TABLE EMP
5  ADD CONSTRAINT chk_commission_positive
6  CHECK (COMMISSION > 0);
7
8
```

Below the code, there are five tabs: Results (which is selected), Explain, Describe, Saved SQL, and History. The results section displays the output of the executed queries:

Table altered.
0.08 seconds