

230701014

Exp no : 04

WORKING WITH CONSTRAINTS

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DATE :21.08.2024

Find the Solution for the following:

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.

ALTER TABLE EMP ADD CONSTRAINT my_emp_id_pk PRIMARY KEY (ID);

Object Type **TABLE** Object **EMPSS**

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|-------|--------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| EMPSS | NAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | ID | NUMBER | 22 | - | - | 1 | - | - | - |
| 1 - 2 | | | | | | | | | |

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.

ALTER TABLE DEPT ADD CONSTRAINT my_dept_id_pk PRIMARY KEY (ID);

Object Type **TABLE** Object **DEPTS**

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|-------|--------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| DEPTS | NAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | ID | NUMBER | 22 | - | - | 1 | - | - | - |
| 1 - 2 | | | | | | | | | |

3. Add a column DEPT_ID to the EMP table.

ALTER TABLE EMPSS
ADD DEPT_ID NUMBER;

Object Type **TABLE** Object **EMPSS**

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|-------|---------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| EMPSS | NAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | ID | NUMBER | 22 | - | - | 1 | - | - | - |
| | DEPT_ID | NUMBER | 22 | - | - | - | ✓ | - | - |
| 1 - 3 | | | | | | | | | |

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

```
ALTER TABLE EMPSS
ADD CONSTRAINT my_emp_dept_id_fk
FOREIGN KEY (DEPT_ID)
REFERENCES DEPTS(ID);
```

4. 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.

```
ALTER TABLE EMP ADD COMMISSION NUMBER(2,2);
```

| Object Type | TABLE | Object | EMPSS | | | | | | |
|-------------|------------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
| EMPSS | NAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | ID | NUMBER | 22 | - | - | 1 | - | - | - |
| | DEPT_ID | NUMBER | 22 | - | - | - | ✓ | - | - |
| | COMMISSION | NUMBER | - | 2 | 2 | - | ✓ | - | - |
| | | | | | | | | | 1 - 4 |

```
ALTER TABLE EMP ADD CONSTRAINT chk_commission_positive CHECK (COMMISSION > 0);
```

| Object Type | TABLE | Object | EMPSS | | | | | | |
|-------------|------------|-----------|--------|-----------|-------|-------------|----------|---------|---------|
| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
| EMPSS | NAME | VARCHAR2 | 50 | - | - | - | ✓ | - | - |
| | ID | NUMBER | 22 | - | - | 1 | - | - | - |
| | DEPT_ID | NUMBER | 22 | - | - | - | ✓ | - | - |
| | COMMISSION | NUMBER | - | 2 | 2 | - | ✓ | - | - |
| | | | | | | | | | 1 - 4 |