

## WORKING WITH CONSTRAINTS

### EXPERIMENT:4

**DATE:14-08-2024**

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.

```
CREATE TABLE EMP2 (  
  ID NUMBER(7),  
  LAST_NAME VARCHAR2(25) NOT NULL,  
  FIRST_NAME VARCHAR2(25) NOT NULL,  
  CONSTRAINT my_emp_id_pk PRIMARY KEY (ID));
```

Object Type **TABLE** Object **EMP2**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP2	ID	NUMBER	-	7	0	1	-	-	-
	LAST_NAME	VARCHAR2	25	-	-	-	-	-	-
	FIRST_NAME	VARCHAR2	25	-	-	-	-	-	-
1 - 3									

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.

```
CREATE TABLE DEPT2(  
  ID NUMBER(7) NOT NULL,  
  DEPT_NAME VARCHAR2(50),  
  CONSTRAINT my_dept_id_pk PRIMARY KEY (ID));
```

Object Type **TABLE** Object **DEPT2**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DEPT2	ID	NUMBER	-	7	0	1	-	-	-
	DEPT_NAME	VARCHAR2	50	-	-	-	✓	-	-
1 - 2									

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.

**ALTER TABLE EMP2**

**ADD DEPT\_ID NUMBER(7);**

**ALTER TABLE**

**ADD CONSTRAINT my\_emp\_dept\_id\_fk FOREIGN KEY (DEPT\_ID)**

**REFERENCES DEPT2(ID);**

Constraint	Type	Search Condition	Related Constraint	Columns	Delete Rule	Status	Last Change	Index	Invalid
SYS_C008241	Check	"LAST_NAME" IS NOT NULL	-	-	-	ENABLED	08/21/2024 08:51:44 AM	-	-
SYS_C008242	Check	"FIRST_NAME" IS NOT NULL	-	-	-	ENABLED	08/21/2024 08:51:44 AM	-	-
MY_EMP_ID_PK	Primary	-	-	ID	-	ENABLED	08/21/2024 08:51:44 AM	MY_EMP_ID_PK	-
MY_EMP_DEPT_ID_FK	Foreign	-	037.DEPT2.MY_DEPT_ID_PK	DEPT_ID	NO ACTION	ENABLED	08/21/2024 09:04:46 AM	-	-
1 - 4									

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 EMP2**

**ADD COMMISSION NUMBER(2, 2);**

**ALTER TABLE EMP2**

**ADD CONSTRAINT check\_commission\_positive CHECK (COMMISSION > 0);**

Constraint	Type	Search Condition	Related Constraint	Columns	Delete Rule	Status	Last Change	Index	Invalid
SYS_C008241	Check	"LAST_NAME" IS NOT NULL	-	-	-	ENABLED	08/21/2024 08:51:44 AM	-	-
SYS_C008242	Check	"FIRST_NAME" IS NOT NULL	-	-	-	ENABLED	08/21/2024 08:51:44 AM	-	-
MY_EMP_ID_PK	Primary	-	-	ID	-	ENABLED	08/21/2024 08:51:44 AM	MY_EMP_ID_PK	-
MY_EMP_DEPT_ID_FK	Foreign	-	037.DEPT2.MY_DEPT_ID_PK	DEPT_ID	NO ACTION	ENABLED	08/21/2024 09:04:46 AM	-	-
CHECK_COMMISSION_POSITIVE	Check	COMMISSION > 0	-	-	-	ENABLED	08/21/2024 09:08:31 AM	-	-
1 - 5									