

Ex.No.: 4	WORKING WITH CONSTRAINTS
Date: 6/8/24	

### OBJECTIVE

After the completion of this exercise the students should be able to do the following

- Describe the constraints
- Create and maintain the constraints

What are Integrity constraints?

- Constraints enforce rules at the table level.
- Constraints prevent the deletion of a table if there are dependencies

The following types of integrity constraints are valid

a) Domain Integrity

- ✓ NOT NULL
- ✓ CHECK

b) Entity Integrity

- ✓ UNIQUE
- ✓ PRIMARY KEY

c) Referential Integrity

- ✓ FOREIGN KEY

Constraints can be created in either of two ways

1. At the same time as the table is created
2. After the table has been created.

### Defining Constraints

Create table tablename (column\_name1 data\_type constraints, column\_name2 data\_type constraints ...);

### Example:

Create table employees ( employee\_id number(6), first\_name varchar2(20), ..job\_id varchar2 (10), CONSTRAINT emp\_emp\_id\_pk PRIMARY KEY (employee\_id));

(OR)

ALTER TABLE test 1 DROP(pk, fk, col1) CASCADE CONSTRAINTS;

### VIEWING CONSTRAINTS

Query the USER\_CONSTRAINTS table to view all the constraints definition and names.

Example:

```
SELECT constraint_name, constraint_type, search_condition FROM user_constraints  
WHERE table_name='employees';
```

### Viewing the columns associated with constraints

```
SELECT constraint_name, constraint_type, FROM user_cons_columns  
WHERE table_name='employees';
```

### 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 Employees (Emp-Id number(8), First-name  
varchar(20), Job-ID number(20), constraint my-Emp-Id -  
primary key (Emp-Id));

2. Create a PRIMAY KEY constraint to the DEPT table using the ID colum. The constraint should be named at creation. Name the constraint my\_dept\_id\_pk.

Create table Department (Dept-Id Number(10),  
constraint my-dept-Id PK primary key (Dept-Id));

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 deparment. Name the constraint my\_emp\_dept\_id\_fk.

Alter Table employee Add Dept-Id number(10)  
Alter table employee Add constraint my-emp-dept,  
Id - PK, Foreign Key (Dept-Id) refourne  
employee (emp-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 Employees Add commission number(2,2);  
Alter table Employees Add constraint HK-commission  
positive check (commission > 0);

Evaluation Procedure	Marks awarded
Query(5)	5
Execution (5)	5
Viva(5)	5
Total (15)	15
Faculty Signature	