### **Lab 5- Primary Key Constraint in PostgreSQL**

Below is a lab exercise to practice primary key integrity constraints in PostgreSQL:

**Connect to PostgreSQL:**

* Open the PostgreSQL command-line interface or use a graphical client like pgAdmin.

**Create a Table with a Primary Key Constraint:**

* Create a sample table named employees with a primary key constraint:

CREATE TABLE employees (

id INTEGER PRIMARY KEY,

name VARCHAR(100) NOT NULL,

department VARCHAR(100)

);

**Insert Data with Duplicate Primary Key:**

* Try inserting data with a duplicate primary key to see how PostgreSQL handles it:

INSERT INTO employees (id, name, department) VALUES (101, 'John Doe', 'Sales');

INSERT INTO employees (id, name, department) VALUES (101, 'John Doe', 'Sales');

You should receive an error message indicating that the primary key constraint has been violated.

**Insert Data Meeting Constraints:**

* Insert data that adheres to the primary key constraint:

INSERT INTO employees (id, name, department) VALUES (102, 'Jane Smith', 'Marketing');

**View Data:**

* Retrieve and view the data from the employees table:

SELECT \* FROM employees;

**Update Data:**

* Update the data to ensure that the primary key remains unchanged:

UPDATE employees SET department = 'Finance' WHERE name = 'Jane Smith';

By performing these operations, you can familiarize yourself with the implementation and handling of primary key integrity constraints in PostgreSQL. You can execute these commands in the PostgreSQL command-line interface or any PostgreSQL client tool.