**PostgreSQL Basic Commands and Operations**

**Introduction**

PostgreSQL is a powerful, open-source relational database management system. This document provides a reference for basic PostgreSQL commands, including version checking, database listing, table creation, schema management, and connection information.

**1. Checking PostgreSQL Version**

To check the installed PostgreSQL version, use:

SELECT version();

**Output Example:**

PostgreSQL 17.4 on x86\_64-windows, compiled by msvc-19.42.34436, 64-bit

(1 row)

**2. Listing Available Databases**

To list all databases in your PostgreSQL instance, use:

\l

**Output Example:**

Name | Owner | Encoding | Locale Provider | Collate | Ctype | Locale | ICU Rules | Access privileges

-----------+----------+----------+-----------------+---------+-------+--------+-----------+-----------------------

postgres | postgres | UTF8 | libc | en-US | en-US | | |

template0 | postgres | UTF8 | libc | en-US | en-US | | | =c/postgres +

| | | | | | | | postgres=CTc/postgres

template1 | postgres | UTF8 | libc | en-US | en-US | | | =c/postgres +

| | | | | | | | postgres=CTc/postgres

(3 rows)

**3. Switching Databases**

To switch to another database, use:

\c database\_name;

Example:

\c template1;

**Output:**

You are now connected to database "template1" as user "postgres".

**4. Listing Tables in a Database**

To see all tables within a database:

\d

If no tables exist, you will get:

Did not find any relations.

**5. Creating a Table**

To create a table, use the CREATE TABLE statement:

CREATE TABLE test\_table(name VARCHAR(50));

After creating the table, list tables again using:

\d

**Output Example:**

List of relations

Schema | Name | Type | Owner

--------+------------+-------+---------

public | test\_table | table | postgres

(1 row)

**6. Listing Schemas**

To view available schemas:

\dn

**Output Example:**

List of schemas

Name | Owner

--------+-------------------

public | pg\_database\_owner

(1 row)

**7. Checking Table Details**

To get detailed information about tables:

\d+

**Output Example:**

List of relations

Schema | Name | Type | Owner | Persistence | Access method | Size | Description

--------+------------+-------+----------+-------------+---------------+---------+-------------

public | test\_table | table | postgres | permanent | heap | 0 bytes |

(1 row)

**8. Checking Connection Information**

To check database connection details, use:

\conninfo

**Output Example:**

You are connected to database "postgres" as user "postgres" on host "localhost" (address "::1") at port "5432".

This confirms the active database, user, host, and port information.

**Conclusion**

This document provides essential PostgreSQL commands to manage databases, schemas, tables, and connections effectively. Use these commands as a reference while working with PostgreSQL on your local or production environments.