# Command line PostgreSQL: Takeaways

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## Syntax

- Starting the PostgreSQL command line tool:

```
psql
```

- Exiting the PostGreSQL command line tool:

```
\q
```

- Creating a database:

```
CREATE DATABASE dbName;
```

- Listing databases:

```
\l
```

- Listing all tables in the current database:

```
\dt
```

- Listing the users that have access to the database:

```
\du
```

- Connecting to a specified database:

```
psql -d dbName
```

- Creating a user:

```
CREATE ROLE userName;
```

- Allowing a user to login to PostgreSQL and run queries:

```
CREATE ROLE userName WITH LOGIN;
```

- Creating a password for a user:

```
CREATE ROLE userName WITH LOGIN PASSWORD `password`:
```

- Allowing a user to create databases:

```
CREATE ROLE userName WITH CREATEDB LOGIN PASSWORD 'password`;
```

- Allowing a user to create other users:

```
CREATE ROLE userName WITH CREATEROLE LOGIN PASSWORD 'password`;
```

- Making the user a superuser:

```
CREATE ROLE userName WITH LOGIN PASSWORD 'password` SUPERUSER;
```

- Granting a user permissions to access a table:

```
GRANT SELECT ON tableName TO userName;
```

- Granting a user complete control of a table:

```
GRANT ALL PRIVILEGES ON tableName to userName;
```

- Displaying what privileges have been granted to users:

```
\dp tableName
```

- Removing permissions from a user:

```
REVOKE SELECT ON tableName FROM userName;
```

- Removing all permissions from a user:

```
REVOKE ALL PRIVILEGES on tableName FROM userName;
```

## Concepts

- The PostgreSQL command line tool is called `psql` .
- `psql` connects to a running PostgreSQL server process, which enables you to:
    - Run queries.
    - Manage users and permissions.
    - Manage databases.
    - See PostgreSQL system information.
- Queries in `psql` must end with a semicolon ( `;` ) or they won't be performed.
- When users are created, they don't have any ability, or permissions, to access tables in existing databases.
- You can grant or revoke multiple permissions by separating them with commas.
- You can grant or revoke users ability to use the `SELECT` , `INSERT` , `UPDATE` , or `DELETE` clauses on a table.
- A superuser can perform any function in a database.

## Resources

- psql documentation
- 17 Practical psql commands

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