

User and Database Management: Takeaways



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Syntax

- Connecting to the Postgres server with a secured user:

```
import psycopg2  
conn = psycopg2.connect(dbname='dq', user='postgres', password='abc123')
```

- Creating a user with a password that can create other users and databases:

```
conn = psycopg2.connect(dbname='dq', user = 'postgres', password='password')  
cur = conn.cursor()  
cur.execute("CREATE USER data_viewer WITH CREATEUSER CREATEDB PASSWORD 'secret';")  
conn.commit()
```

- Revoking privileges from a user on a table:

```
conn = psycopg2.connect(dbname='dq', user='dq')  
cur = conn.cursor()  
cur.execute("REVOKE ALL ON users FROM data_viewer;")  
conn.commit()
```

- Granting the privileges to a user on a table:

```
conn = psycopg2.connect(dbname='dq', user='dq')  
cur = conn.cursor()  
cur.execute("GRANT SELECT ON users TO data_viewer;")  
conn.commit()
```

- Targeting all tables inside a given schema:

```
REVOKE DELETE ON ALL TABLES IN schema_name TO user_name;  
GRANT SELECT ON ALL TABLES IN schema_name TO user_name;
```

- Creating a group:

```
CREATE GROUP readonly NOLOGIN;
```

- Assigning a user to a group:

```
GRANT readonly TO data_viewer;
```

- Creating a database with a specified owner:

```
CREATE DATABASE my_database OWNER postgres;
```

- Listing users:

```
SELECT * FROM pg_user;
```

- Listing table privileges:

```
SELECT grantor, grantee, privilege_type  
FROM information_schema.table_privileges;
```

Concepts

- A superuser is like an administrator who has full access to the Postgres engine, and can issue any command on every database, table, and user. You must enter a password when using a superuser to connect to the Postgres server.
- Privileges are rules that allow a user to run commands such as `SELECT`, `INSERT`, `DELETE`. Privileges can either be granted or revoked by the server owner or by database superusers.

- Not revoking certain privileges allows unaware users to issue the wrong command and destroy the entire database.
- The most common practice when creating users is to create them, revoke all privileges, then choose the privileges you want to grant to them.

Resources

- [User privileges](#)
- [Groups](#)
- [Schemas](#)



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