# LiveSQL, PostgreSQL Installation

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1. Oracle LiveSQL (FreeSQL)
2. PostgreSQL

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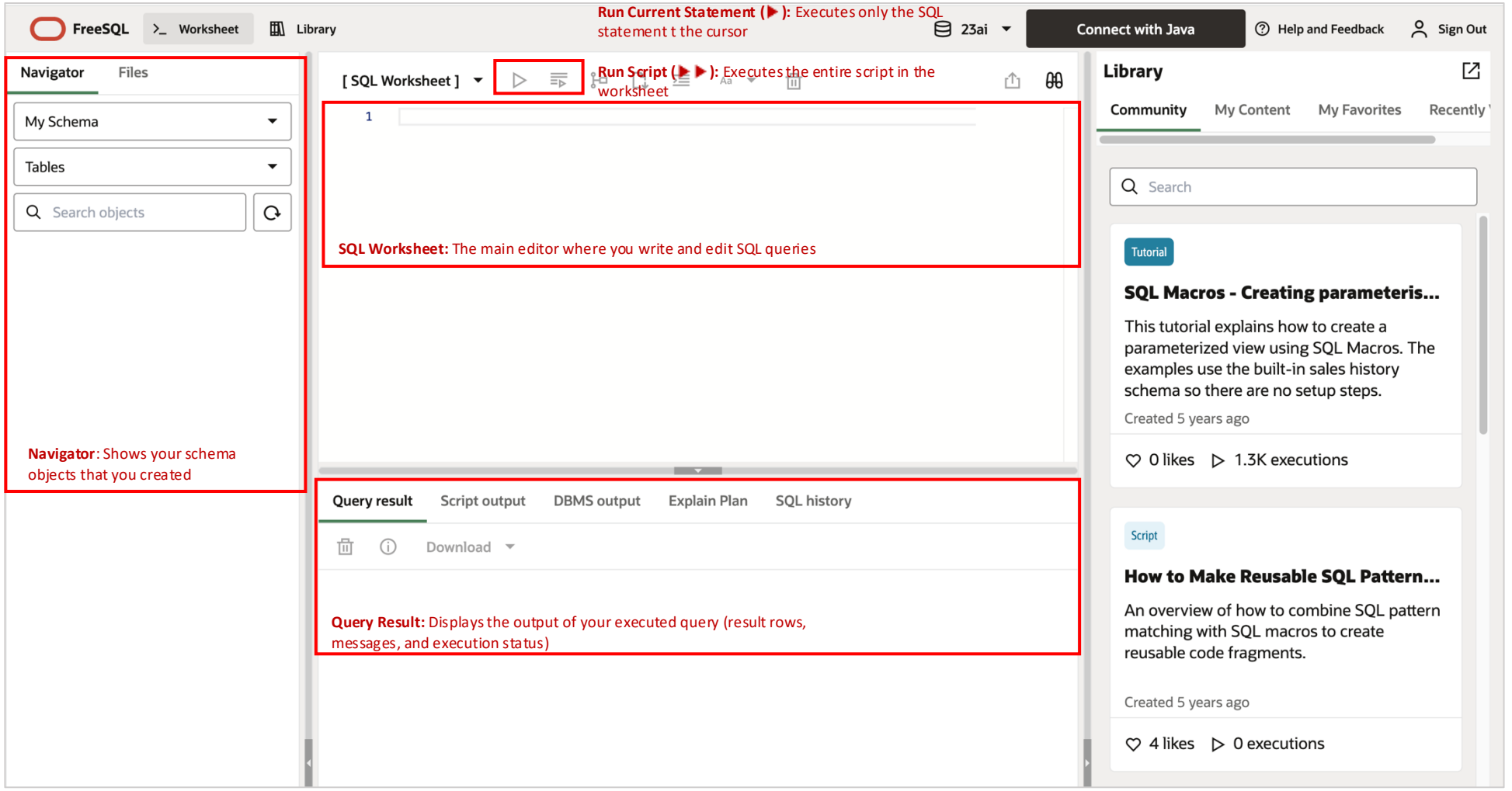
# What is Oracle LiveSQL?

- https://freesql.com/
- Free, browser-based SQL environment (no local DB install)
- Run SQL & PL/SQL in a hosted Oracle Database
- Great for labs, demos, and sharing runnable scripts
- Not ideal for: production workloads, long-running jobs
- **An Oracle account is required to create or modify tables.**

# What is Oracle LiveSQL?



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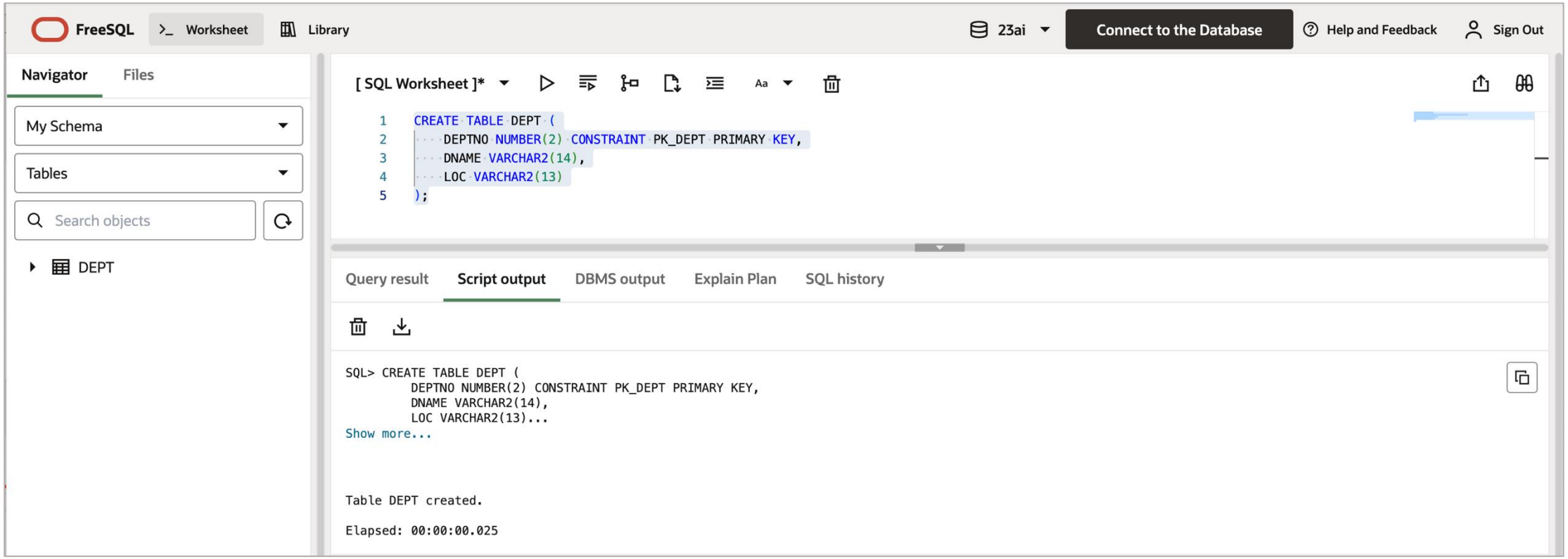
# What is Oracle LiveSQL?

## Example Screen



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# What is PostgreSQL?

- PostgreSQL is a free, open-source **relational database management system (RDBMS).**
- It supports **SQL** and follows **ACID** principles for reliable data storage and transactions.
- It is widely used in industry and academia for applications ranging from small projects to large-scale systems.
- If offers rich features such as **indexes, constraints, views and extensions**.

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# What is Docker?

- **Docker** is a platform for packaging and running software in **containers**.
- Containers bundle an application with its dependencies, so it runs **consistently across difference environments**.
- Docker makes setup fast and repeatable, without installing complex software directly on your machine.
- It is commonly used for development, testing, and deployment workflows.

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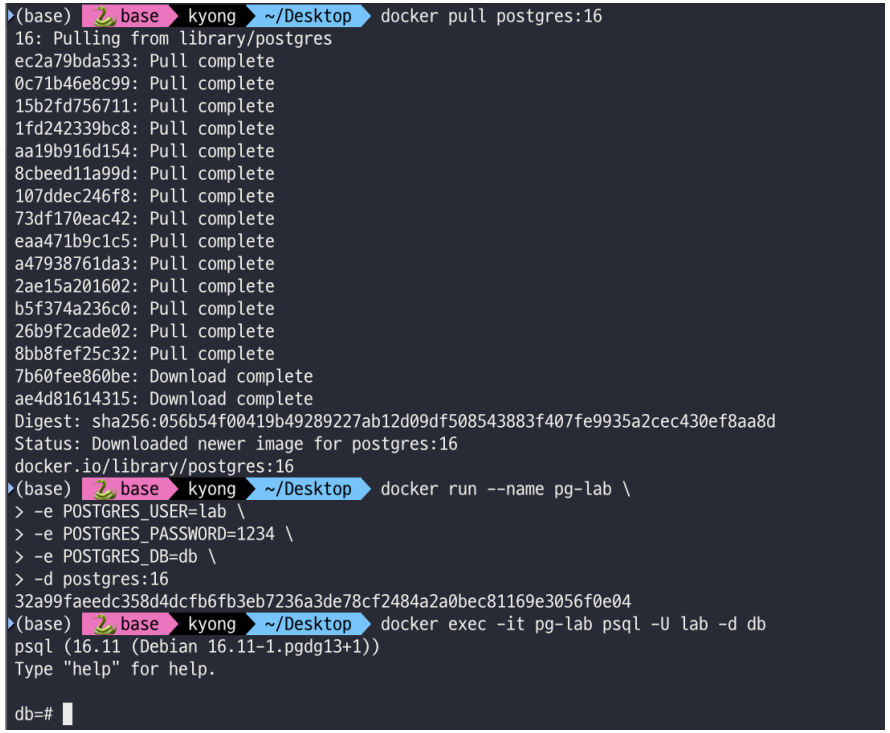
# Install Docker and PostgreSQL

- Download and install Docker Desktop: https://www.docker.com/products/docker-desktop/
- Copy & paste below commands to download and start PostgreSQL in a Docker container.

```
$ docker pull postgres:16
$ docker run –name pg-lab ₩
   -e POSTGRES_USER=lab ₩
   -e POSTGRES_PASSWORD=1234 ₩
   -e POSTGRES_DB=db ₩
   -d postgres:16
$ docker exec -it pg-lab psql -U lab -d db
```




*Screenshot*

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# Run PostgreSQL

- how to exit: type “exit” (postgres=# exit)

- Test sql
  - postgres=# SELECT version();

- Commands
  - \h: help
  - \dt: list of tables
  - \du: user roles
  - \q: quit
  - run command with + (ex: \dt+) for more details