DuckDB Analytical SQL shell

CONCEPTS

> With no file argument DuckDB runs in memory and everything is lost on exit; pass a file to persist.

START AND RUN

`duckdb`
Start an in-memory session

`duckdb` *`<file.db>`*
Open or create a persistent database

`duckdb -c "`*`<sql>`***`"`**
Run one statement and exit

`duckdb -csv -c "`*`<sql>`***`"`**
Print the result as CSV

`duckdb -json -c "`*`<sql>`***`"`**
Print the result as JSON

`duckdb` *`<file.db>`* **`-f`** *`<script.sql>`*
Run a script file and exit

DOT COMMANDS

`.help`
List all dot commands

`.tables`
List tables with columns and row counts

`.schema` *`<pattern>`*
Show CREATE statements

`.open` *`<file.db>`*
Switch to another database

`.quit`
Leave the shell

OUTPUT

`.mode` *`<mode>`*
Set the output format

`.output` *`<file>`*
Send all output to a file

EXPLORE DATA

`FROM` *`<table>`***`;`**
FROM-first query, SELECT * implied

EXPLORE DATA (cont.)

`DESCRIBE` *`<table>`***`;`**
Columns and types

`DESCRIBE FROM '`*`<file>`***`';`**
Infer the schema of a file

`SUMMARIZE` *`<table>`***`;`**
Min, max, nulls, quantiles per column

READ FILES

`FROM '`*`<file.csv>`***`';`**
Query a CSV directly

`FROM '`*`<file.parquet>`***`';`**
Query a Parquet file

`FROM '`*`<file.json>`***`';`**
Query a JSON file

`FROM '`*`<dir>`***`/*.parquet';`**
Glob many files as one table

`FROM read_csv('`*`<f>`***`', header=true, delim=';');`**
CSV with explicit options

TABLES AND IMPORT

`CREATE TABLE` *`<t>`* **`AS FROM '`***`<file>`***`';`**
Load a file into a table

EXPORT

`COPY` *`<table>`* **`TO '`***`<file.csv>`***`' (HEADER);`**
Export a table as CSV

`COPY (`*`<query>`***`) TO '`***`<file.csv>`***`';`**
Export a query result

`COPY` *`<table>`* **`TO '`***`<file.parquet>`***`' (FORMAT parquet);`**
Export as Parquet

SQL EXTRAS

`SELECT * EXCLUDE (`*`<col>`***`) FROM`** *`<t>`***`;`**
All columns except some

`SELECT` *`<col>`***`, count(*) FROM`** *`<t>`* **`GROUP BY ALL;`**
Group by every non-aggregate column