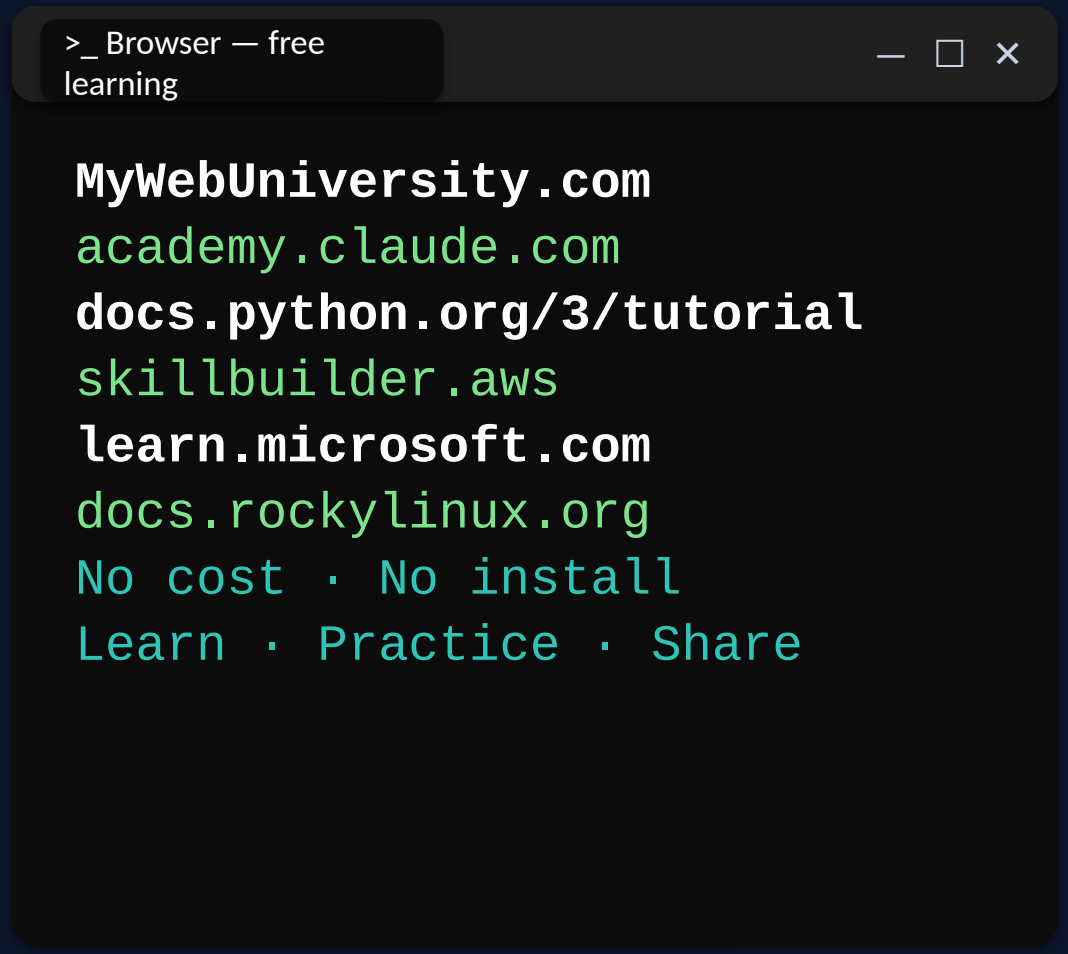


LESSON 8 OF 12

Free Learning Websites

Linux · Python · AI · Cloud · Security · Claude

Databases: SQLBolt, PostgreSQL Docs & MongoDB University

Full Course · Free learning sites · checked Nov 2026

What You Will Learn in Lesson 8

- Relational (SQL) vs document (NoSQL) databases
- SQLBolt: interactive SQL lessons in the browser
- PostgreSQL docs: tutorial, reference, admin
- MongoDB University: free courses, labs, learning paths
- More free practice: Kaggle SQL, freeCodeCamp, MyWebUniversity Ch. 35
- Practice with SQLite and PostgreSQL on Linux
- A free database path

Two Kinds of Databases

	Relational (SQL)	Document (NoSQL)
Data	Tables with rows and columns	JSON-like documents
Examples	PostgreSQL, MySQL/MariaDB, SQLite, Oracle, SQL Server	MongoDB, Couchbase
Query	SQL: SELECT, JOIN, GROUP BY	find(), aggregation pipeline
Strengths	Strong consistency, relationships, reporting	Flexible schema, fast development
Learn first	SQL — used everywhere, including data and AI	After SQL basics

SQLBolt: sqlbolt.com

Feature	Details
What	Free interactive SQL lessons — type queries, see results instantly
Lessons	SELECT, WHERE, ORDER BY, JOINs, aggregates, GROUP BY, INSERT, UPDATE, DELETE, CREATE TABLE
Exercises	Each lesson has tasks checked in the browser
Account	None needed
Time	A few hours for the whole set
Next	Repeat the same queries in PostgreSQL on your own Linux system

PostgreSQL Docs: postgresql.org/docs

Part	Use it for
Tutorial (Part I)	Getting started, SQL language basics, advanced features
The SQL Language	Data types, queries, indexes, transactions, functions
Server Administration	Install, config, roles, backup and restore, replication
Reference	Every SQL command and client tool (psql, pg_dump)
Version menu	Pick your version — docs for each release
Free	Open source database and docs; community mailing lists

Practice: PostgreSQL on Linux

```
$ sudo dnf install -y postgresql-server postgresql   # Rocky/RHEL/Fedora
$ sudo postgresql-setup --initdb && sudo systemctl enable --now postgresql
$ sudo apt install -y postgresql                     # Ubuntu/Debian
$ sudo -u postgres psql
postgres=# CREATE DATABASE school;
postgres=# \c school
school=# CREATE TABLE students (id serial PRIMARY KEY, name text, city text);
school=# INSERT INTO students (name, city) VALUES ('Maryam','Kabul'), ('Ali','Herat');
school=# SELECT city, count(*) FROM students GROUP BY city;
school=# \q
$ sqlite3 test.db "SELECT sqlite_version();"         # SQLite: no server
```

MongoDB University: learn.mongodb.com

Feature	Details
Cost	Free, self-paced, on-demand
Formats	Learning paths, courses, units under an hour, labs, short 'learning bytes'
Paths	Developer (Python, Node.js, Java, C#), DBA, Atlas, data modeling
Hands-on	Labs on MongoDB Atlas (free tier cluster)
AI topics	Vector search and retrieval-augmented generation (RAG)
Certification	Completing a certification path unlocks an exam discount

More Free Database Practice

Site	What you get
Kaggle Learn: Intro to SQL	SQL on real BigQuery datasets in free notebooks
freeCodeCamp: Relational Databases	Bash, SQL, PostgreSQL, Git — free certification
MyWebUniversity Ch. 35	SQL Databases resources
MyWebUniversity Ch. 32–34	JSON, XML, YAML — data formats used with databases
MySQL / MariaDB docs	dev.mysql.com/doc and mariadb.com/kb — free references
AWS / Microsoft Learn	Free database fundamentals paths (lessons 10–11)

A Free Database Path

Weeks	Do this
1	SQLBolt — all lessons
2	PostgreSQL tutorial (Part I) + install on Linux; recreate SQLBolt queries
3	Kaggle Intro to SQL + Advanced SQL
4–5	freeCodeCamp Relational Databases projects
6	PostgreSQL admin: roles, pg_dump backup and restore
7–8	MongoDB University: Introduction to MongoDB + Python developer path
Project	A small app (Python + PostgreSQL) on GitHub

Summary and Homework

- Learn SQL first; then document databases
- SQLBolt: free interactive SQL, no account
- PostgreSQL docs: tutorial, SQL language, administration, reference
- MongoDB University: free courses, labs, learning paths
- Kaggle SQL, freeCodeCamp Relational Databases, MyWebUniversity Ch. 35
- Homework: finish SQLBolt lessons 1–6 and create the 'school' database

Thank You! 🙏

Free videos & PDFs: www.MyWebUniversity.com

Slides for this lesson: MyWebUniversity.com/presentations

YouTube: @MyWebUniversity · @MyWebUniversity-Dari

Wahidullah Lutfy — Founder and Director of IT of MyWebUniversity, and CS teacher

Book: The Direct Path to Linux Ubuntu (Amazon · Barnes & Noble)

Learn it, then pass it on.