



# Introduction to PostgreSQL

Xavier Dutreilh

# Overview

- **Described** as an **ORDBMS (Object-Relational Database Management System)**
- **Invented** by **Michael Stonebraker** at the **University of California, Berkeley** in **1985**
- **Maintained** by the **PostgreSQL Global Development Group** since **1994**
- **Distributed** under the **PostgreSQL License** since **1994**
- **Used** by **Reddit, Netflix, Spotify, Instagram, DuckDuckGo,** and **InVisionApp** among others
- **Initially**, named **POSTGRES (1.x to 4.x)**, then **Postgres95 (1.x)**, then **PostgreSQL (6.x to 11.x)**
  - **Renamed** to **Postgres95** after the **migration** from **QUEL** to **SQL**
  - **Renamed** to **PostgreSQL** to **reflect** the **support** for **SQL**
- **Implements ACID (Atomicity, Consistency, Isolation, and Durability)**
- **Manages concurrency** through **MVCC (Multiversion Concurrency Control)**
- **Supports transactions, schemas, tables, data types, constraints, triggers, views, updatable views, materialized views, table inheritance, functions, stored procedures, extensions, WAL (Write Ahead Logs), and PITR (Point In Time Recovery)**
- **Runs** on **x86, x86-64, IA-64, PowerPC, PowerPC 64, Sparc, Sparc 64, ARM,** and **MIPS** among others
- **Works** on **Linux, Windows, FreeBSD, OpenBSD, NetBSD, macOS, AIX, HP-UX,** and **Solaris**

# Demonstration

- how to **manage schemas**: [sql/01 schemas.sql](#)
- how to **query records**: [sql/02 queries.sql](#)
- how to **generate dynamic values**: [sql/03 triggers as setters.sql](#)
- how to **validate user input**: [sql/04 triggers as validators.sql](#)
- how to **create (read-only) views**: [sql/05 views.sql](#)
- how to **create updatable views**: [sql/06 updatable views.sql](#)
- how to **create materialized views**: [sql/07 materialized views.sql](#)
- how to **use implicit/explicit transactions**: [sql/08 transactions.sql](#)
- how to **use full-text features**: [sql/09 search.sql](#)
- how to **store geographic coordinates**: [sql/10 postgis.sql](#)