

## SPRING FRAMEWORK





# SQL Beginner to Guru

MySQL Edition

History of SQL



#### Origins of SQL

- 1970 Dr Codd published a paper about the Relational Data Model.
- Initially developed in the early 70s by Donald Chamberlin and Raymond Boyce.
- In 1973 Chamberlin and Boyce started working on SEQUEL.
- Acronym meaning "Structured English Query Language.
- Changed later to "SQL" due to a trademark conflict with a UK aircraft company.
- Seeing the promise of the relational database model, in the late 1970s, a company called Relational Software, Inc started working on a SQL based RDBMS and sold it to US government agencies.



#### **SQL History**

- 1979, Relational Software, Inc. released the first commercially available Relational Database Management System.
- Relational Software, Inc. later changed it's name to Oracle.
- 1982 IBM released SQL/DS (SQL/Data System).
- 1985 IBM released DB2.
- 1986 Defense Advanced Research Projects Agency (DARPA) starts working on the Berkeley POSTGRES project.
- 1987 Microsoft released SQL Server.





#### SQL History (Cont)

- 1993 Illustra Information Technologies commercialized the Berkley POSTGRES project.
  - This code was later merged into Informix, now owned by IBM.
- 1994 Berkeley POSTGRES evolves to an open source project called Postgres95.
- 1995 The Swedish company MySQL AB released MySQL for Internal use.
  - Original MySQL developers included: Michael (Monty) Widenius, David Axmark, Allan Larsson.
    - MySQL named after Monty's daughter'My'





#### SQL History (Cont)

- 1996 Postgres95 renamed to PostgresSQL.
  - Still widely accepted to use just 'Postgres'.
- 2000 MySQL becomes an open source database under GPL.
- 2001 MySQL has over 2 million active installations.
- In 2005, Oracle acquired Innobase, the company behind the storage backend of MySQL
- In 2006, MySQL had 8 Million installations, 320 employees, across 25 countries.
- 2008 Sun Microsystems purchases MySQL





#### SQL History (Cont)

- 2010 Oracle buys Sun Microsystems (and MySQL)
- 2012 Michael (Monty) Widenius left Sun Microsystems and developed a fork of MySQL called MariaDB.
  - Largely out of concern about the future of MySQL.
  - The MariaDB API remains 100% compatible with MySQL.





#### ANSI SQL

- ANSI American National Standards Institute.
- Over time, ANSI has published a series of standards for the SQL language.
  - Standards evolve with technology.
- All major Relational Databases support ANSI standards to some degree.
  - There are differences in the interpretation of the ANSI standards between vendors.
  - The level of standard also may be different between database vendors.





#### **ANSI Release History**

- 1986 SQL-86 First SQL standard formalized by ANSI.
- 1989 SQL-89 Added Integrity constraints.
- 1992 SQL:92 Major revision with many new features, stricter compliance standards.
- 1999 SQL:1999 Added regular expressions, triggers, and many other features.
- 2003 SQL:2003 Added XML support, and columns with auto-generated values.
- 2006 SQL:2006 Additional XML features for using SQL with XML.





### **ANSI Release History (Cont)**

- 2008 SQL:2008 Added INSTEAD OF triggers and TRUNCATE statement.
- 2011 SQL:2011 Added features for temporal (time) data.
- 2016 SQL:2016 Added row pattern matching and JSON features.





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