**Comparison HSQL vs MySQL vs PostgreSQL**: <https://db-engines.com/en/system/HyperSQL%3BMySQL%3BPostgreSQL>

|  |  |  |  |
| --- | --- | --- | --- |
| Name | **HyperSQL** | **MySQL** | **PostgreSQL** |
| Description | Multithreaded, transactional [RDBMS](https://db-engines.com/en/article/RDBMS) written in Java | Widely used open source [RDBMS](https://db-engines.com/en/article/RDBMS) | Based on the object relational DBMS Postgres |
| Primary database model | [Relational DBMS](https://db-engines.com/en/article/RDBMS) | [Relational DBMS](https://db-engines.com/en/article/RDBMS) | [Relational DBMS](https://db-engines.com/en/article/RDBMS) |
| Additional database models | [Key-value store](https://db-engines.com/en/article/Key-value+Stores) | [Document store](https://db-engines.com/en/article/Document+Stores) [Key-value store](https://db-engines.com/en/article/Key-value+Stores) | [Document store](https://db-engines.com/en/article/Document+Stores) [Key-value store](https://db-engines.com/en/article/Key-value+Stores) |
| |  |  | | --- | --- | | [DB-Engines Ranking](https://db-engines.com/en/ranking) | [ranking trend](https://db-engines.com/en/ranking_trend/system/HyperSQL%3BMySQL%3BPostgreSQL) | | [Trend Chart](https://db-engines.com/en/ranking_trend/system/HyperSQL%3BMySQL%3BPostgreSQL) | | |  |  |  | | --- | --- | --- | | Score | 5.28 | | | Rank | #48 | [Overall](https://db-engines.com/en/ranking) | |  | #27 | [Relational DBMS](https://db-engines.com/en/ranking/relational+dbms) | | |  |  |  | | --- | --- | --- | | Score | 1322.03 | | | Rank | #2 | [Overall](https://db-engines.com/en/ranking) | |  | #2 | [Relational DBMS](https://db-engines.com/en/ranking/relational+dbms) | | |  |  |  | | --- | --- | --- | | Score | 379.92 | | | Rank | #4 | [Overall](https://db-engines.com/en/ranking) | |  | #4 | [Relational DBMS](https://db-engines.com/en/ranking/relational+dbms) | |
| Website | [hsqldb.org](http://hsqldb.org/) | [www.mysql.com](https://www.mysql.com/) | [www.postgresql.org](https://www.postgresql.org/) |
| Technical documentation | [hsqldb.org/­web/­hsqlDocsFrame.html](http://hsqldb.org/web/hsqlDocsFrame.html) | [dev.mysql.com/­doc](https://dev.mysql.com/doc/) | [www.postgresql.org/­docs/­manuals](https://www.postgresql.org/docs/manuals/) |
| Developer |  | Oracle | PostgreSQL Global Development Group |
| Initial release | 2001 | 1995 | 1989 |
| Current release | 2.4.0, April 2017 | 5.7.20, October 2017 | 10.0, October 2017 |
| License | Open Source | Open Source | Open Source |
| Cloud-based | no | no | no |
| Implementation language | Java | C and C++ | C |
| Server operating systems | All OS with a Java VM | FreeBSD Linux OS X Solaris Windows | FreeBSD HP-UX Linux NetBSD OpenBSD OS X Solaris Unix Windows |
| Data scheme | yes | yes | yes |
| Typing | yes | yes | yes |
| XML support | no | yes | yes |
| Secondary indexes | yes | yes | yes |
| SQL | yes | yes | yes |
| APIs and other access methods | HTTP API  JDBC ODBC | ADO.NET JDBC ODBC | native C library streaming API for large objects ADO.NET JDBC ODBC |
| Supported programming languages | All languages supporting JDBC/ODBC Java | Ada C C# C++ D Delphi Eiffel Erlang Haskell Java JavaScript (Node.js) Objective-C OCaml Perl PHP Python Ruby Scheme Tcl | .Net C C++ Delphi Java  Perl PHP Python Tcl |
| Server-side scripts | Java, SQL | yes | user defined functions |
| Triggers | yes | yes | yes |
| Partitioning methods | none | horizontal partitioning, sharding with MySQL Cluster or MySQL Fabric | no, but can be realized using table inheritance |
| Replication methods | none | Master-master replication Master-slave replication | Master-slave replication |
| MapReduce | no | no | no |
| Consistency concepts | Immediate Consistency | Immediate Consistency | Immediate Consistency |
| Foreign keys | yes | yes | yes |
| Transaction concepts | ACID | ACID | ACID |
| Concurrency | yes | yes | yes |
| Durability | yes | yes | yes |
| In-memory capabilities | yes | yes | no |
| User concepts | fine grained access rights according to SQL-standard | Users with fine-grained authorization concept | fine grained access rights according to SQL-standard |