Introduction to Databases

The three relational RDBMS :

MySQL
PostgreSQL
SQL SERVER .

What is PostgreSQL ?

- ➔ An advanced, enterprise-class, and open-source relational database system
- ➔ A highly stable database
- ➔ used as a primary database for many web applications
- ➔ General purpose transaction database
- ➔ Language support : Python ,Java ,JavaScript (Node.js)...

Feature OF PostgreSQL

- can run dynamic websites and web apps as a LAMP stack option.
- freely available under an open source license
  - Asynchronous replication...
  - Table inheritance
  - Sophisticated locking mechanism

What is MySQL ?

- ➔ MySQL is an open-source relational database management system (RDBMS)
- ➔ uses tables as the main component
- ➔ Offers less functionality than PostgreSQL.

Feature OF MySQL

- ➔ Security and authentication
- ➔ Client server execution and remote database access
- ➔ Embedded SQL
- ➔ Transaction Control Language...

What is SQL Server ?

- A Relational Database Management System (RDBM)
- Developed and operated by Microsoft.
- It’s manages and performs all the database operations.
- It has both command-line and GUI(Graphical User Interface)
- Fréquent security and operational updates

Feature OF SQL Server

- ➔ High availability management.
- ➔ Support for geographic data.
- ➔ Centralized management and deployment of multiple instances and applications from a single point of control…
- ➔ Programmability...

PostgreSQL vs. MySQL vs SQL Server

PostgreSQL

- Available as free and open source software in perpetuity
- An object-relational database management system.
- More advanced and Highly extensible.
- Provides online backup.
- Most advanced open source database.
- PostgreSQL does not have a native data type for geographic data.

MySQL :

- A relational database management system.
- Most popular open source database
- Not extensible.

PostgreSQL vs. MySQL vs SQL Server

SQl Server

- Available through commercial license and can be licensed on a per-core model or server and client access level (CAL) model.
- use a variant of Structured Query Language (SQL) called T-SQL (for Transact-SQL)
- SQL Server has the geography data type for storing geographic spatial data.
- easy to use and reliable, with strong .NET compatibility.