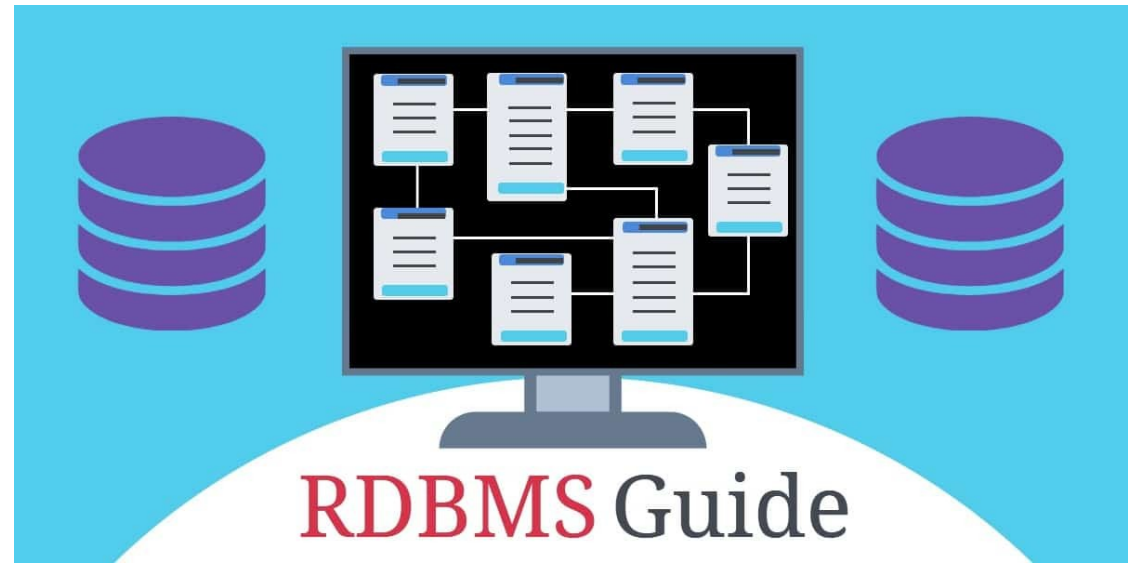# Database Management

RDBMS

- RDBMS
  - most widely-used form of data storage in businesses
  - reduce the amount of space needed for storing corporate transactions and documents
  - MS SQL
  - MySQL
  - Oracle
  - Postgresql

RDBMS Guide

SQL Server

- Microsoft SQL Server
    - relational database management system developed by Microsoft.
- Proprietary software
- As a Database server:
    - software product
    - primary function is to store and retrieve data
    - Serve request from the same computer or those running on another computer across a network (including the Internet).

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Database Administrator (DBA)

- Database Administrator
  - Technical person with DB technology skills and knowledge
  - controls the design and the use of database.

Tasks of a Database Administrator

Task 1: Evaluate the Database Server Hardware

Task 2: Install the Oracle Database Software

Task 3: Plan the Database

Task 4: Create and Open the Database

Task 5: Back Up the Database

Task 6: Enroll System Users

Task 7: Implement the Database Design

Task 8: Back Up the Fully Functional Database

Task 9: Tune Database Performance

Task 10: Download and Install Patches

Task 11: Roll Out to Additional Hosts

http://oracledbaonlinetraining.com

MS SQL, MySQL, and Oracle

No	Dev./License	MySQL	Oracle	SQL Server
1	Developer / Maintainer	Oracle Corp. (since 2010) Sun Microsystems (2008-2010) MySQL AB (before 2008)	Oracle Corp. (Since 1977)	Microsoft Corp.
2	License	General Public License, and Proprietary	Proprietary	Proprietary

MS SQL, MySQL, and Oracle

No	RDBMS	Windows	Linux	Unix	Mac	BSD
1	MySQL	Yes	Yes	Yes	Yes	Yes
2	Oracle	Yes	Yes	Yes	Yes	-
3	SQL Server	Yes (All Version)	Yes (Version 2017 or latest)	-	-	-

MS SQL, MySQL, and Oracle

No	Limitation	MySQL	Oracle	SQL Server
1	Max Database (Number or Size)	256TB by default, up to 65536TB by permissible	No absolute limit except for the first file whose minimum size is 2 MB	524272 terabytes (consists of 32767 Databases and 16 terabytes per database)
2	Max Table (Number or Size)	MyISAM: 256TB by default, up to 65536TB by permissible InnoDB: 64TB by default, up to 256TB by page size	32 tables per clustered Unlimited per database	Limited by number of objects (tables, views, stored procedures, user-defined functions, triggers, rules, defaults, and constraints) in a database.
3	Max Row (Number or Size)	65535 bytes per table	Unlimited per table	8060 bytes a row
4	Max Column (Number or Size)	4096 columns per table	1000 columns per table	30000 columns per wide table

References

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- https://docs.oracle.com/cd/B19306_01/em.102/b31949/database_management.htm#i1006971

- https://www.comparitech.com/net-admin/rdbms-guide/

- https://www.sqlservertutorial.net/

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