

# Generic Database 101

For those people who want to get a Database primer. Also take a look at the differences between NoSQL and a Relational database.

**Relational Database:** Is a collection of data items organized in columns and rows that form a table. Relational Database allows us to identify and access data in relation to another piece of data in the database.

AWS RDS Engines :-

1. SQL server (m)
2. Oracle (used by enterprises)
3. My SQL (open source)
4. Aurora (Amazon)
5. Maria DB 1.PostgreSQL

Non-Relational DB	Relational
Collection	Table
Document	Rows
Key value pairs	Fields

## NoSQL

NoSQL DB does not use SQL but there are various other characteristics that you could attribute to a NoSQL DB like it more often than not is open sourced and are strongly oriented towards running on clusters. They normally operate without schema and allow you to freely add fields to database records without having to change the structure first.

	SQL	NoSQL
<b>Data Storage</b>	Rows and Columns	Key-Value
<b>Schemas</b>	Fixed	Dynamic
<b>Querying</b>	Using SQL	Focused on collection of documents
<b>Scalability</b>	Vertical	Horizontal

**Data Warehousing:** this is where you can use your data for business intelligence.

Tools like Oracle Hyperion, SAP Netweaver, Cogue, Jasper Soft, Microstrategy, Business objects.

**OLTP vs OLAP** OLTP: Online Transaction Processing OLAP: Online Analytics Processing

You can categorize IT systems into two, OLTP systems provide the source data to the data warehouse, whereas OLAP systems help in analyzing it.

This will help in understanding Red shift vs other databases in general.