* NoSQL is an approach to [database](https://searchsqlserver.techtarget.com/definition/database) design that can accomodate a wide variety of data models, including key-value, document, columnar and graph formats. NoSQL, which stand for "not only [SQL](https://searchsqlserver.techtarget.com/definition/SQL)," is an alternative to traditional relational databases in which data is placed in tables and data [schema](https://searchsqlserver.techtarget.com/definition/schema) is carefully designed before the database is built. NoSQL databases are especially useful for working with large sets of distributed data.
* Graph stores are used to store information about networks of data, such as social connections. Graph stores include Neo4J and Giraph. Key-value stores are the simplest NoSQL databases. Every single item in the database is stored as an attribute name (or 'key'), together with its value.
* In the HBase data model columns are grouped into column families, which must be defined up front during table creation.Column families are stored together on disk, which is why HBase is referred to as a column-oriented data store.
* There is no hard limit to number of columns in HBase , we can have more than 1 million columns but usually three column families are recommended
* A namespace is a logical grouping of tables analogous to a database in relational database management systems. They are useful when you are dealing with many tables. Namespaces are also used to apply security rules to all tables in a namespace. If you do not specify a namespace when you create a table, it will be automatically added to the “default” tablespace.
* A namespace membership is determined during a table creation when the table is fully named as

<table namespace>:<table qualifier>

* NoSQL databases are designed for scalability where unstructured data is spread across multiple nodes. When data volumes increase you just need to add another node to accommodate the growth. The lack of structure in NoSQL databases relaxes stringent requirements of consistency enforced in relational databases to improve speed and agility.