

**Solution:-**

* NoSQL stands for “Not Only SQL”.
* NoSQL database can be best described in terms of following Parameters:-
* Runs well on clusters.
* Open Source
* Schema Less
* Something that does not use a relational model. (this denotes that NoSQL Database will not use relational model concepts such as integrities, primary and foreign key etc.,)



**Solution:-**

NoSQL database stores the data In form of anyone of the following

* Key-value pairs
* Key-Array Pairs
* Attribute with its value



**Solution:-**

Column Family contains columns of related data. It is a tuple (pair) that consists of key-value pair where key is mapped to value that is set of columns. In analogy with the relational database, a column family is as a “table”, each key-value pair being a “row”. Each column is a tuple(triplet) consisting of a column name, a value and a timestamp.



**Solution:-**

We can add as many number of columns in HBase Table as we want. There is no upper limit on number of columns in HBase Table.



**Solution:-**

Column families only needs to be defined at the table creation time. So we can’t define columns in table creation time. Many Columns can be grouped to form a column family.



**Solution:-**

Data in HBase is organized into tables. Any character that are legal in file paths are used to name Tables. Tables are further organized into rows that store data. Each row is identified by unique row key which does not belongs to any data type but it is stored as bytearray. Column families are used to further group data in rows. Group of columns each of which stores a value can be said as column families.



When new data gets inserted into HBase Table, initially it will check whether the column of that column Family has value or not. If it has value, then it will be update the newly inserted value for that column of the column family. If it doesn’t have value, then it will get inserted directly.