NoSQL, which stand for "not only SQL," is an alternative to traditional relational databases in which data is placed in tables and data schema is carefully designed before the database is built. NoSQL databases are especially useful for working with large sets of distributed data.

2.How does data get stored in NoSQl database?
Varies based on database type. For example, key-value stores function similarly to SQL databases, but have only two columns ('key' and 'value'), with more complex information sometimes stored as BLOBs within the 'value' columns. Document databases do away with the table-and-row model altogether, storing all relevant data together in single 'document' in JSON, XML, or another format, which can nest values hierarchically.

3.What is a column family in HBase?
Columns in Apache HBase are grouped into column families. All column members of a column family have the same prefix. For example, the columns courses:history and courses:math are both members of the courses column family. The colon character (:) delimits the column family from the columns.

4.How many maximum number of columns can be added to HBase table?
There is a limit to the number of column families in HBase. There is one MemStore(Its a write cache which stores new data before writing it into Hfiles) per Column Family, when one is full, they all flush. The more you add column families there will be more MemStore created and Memstore flush will be more frequent. It will degrade the performance.

5.Why columns are not defined at the time of table creation in HBase?
Column families are specified when a table is created. They should be carefully designed before a table is created since it would be either impossible or difficul
On the other hand columns can be defined any time since they are mapped with a column family.

6.How does data get managed in HBase?
HDFS provides a scalable and replicated storage layer for HBase. It guarantees that data is never lost by writing the changes across a configurable number of physical servers. The data is stored in HFiles, which are ordered immutable key/value maps. Internally, the HFiles are sequences of blocks with a block index stored at the end. The block index is loaded when the HFile is opened and kept in memory. The default block size is 64 KB but it can be changed since it is configurable. HBase API can be used to access specific values and also scan ranges of values given a start and end key.

7.What happens internally when new data gets inserted into HBase table?
When data is updated it is first written to a commit log, called a write-ahead log (WAL) and then it is stored in the in-memory memstore.When the data in memory exceeds a given maximum value, it is flushed as an HFile to disk and after that the commit logs are discarded up to the last unflushed modification. The system can continue to serve readers and writers without blocking them while it is flushing the memstore to disk. This is done by rolling the memstore in memory where the new empty one is taking the updates and the old full one is transferred into an HFile. At the same time, no sorting orother special processing has to be performed since the data in the memstores is already sorted by keys matching what HFiles represent on disk.