## Explain, generally, what is meant by a NoSQL database

A NoSQL database is a database where it’s possible to store and retrieve data without the usage of SQL statements. This is in contrast to a relational database where every query made is done by using SQL query calls. The need for NoSQL databases came due to the fact that normal relational databases where not designed to cope with scale and agility challenges that many developers face today.

Some of the different kind of NoSQL databases that exist are:

* **Document-oriented databases:** These pair each key with a complex data structure also known as a document. Documents can contain many different key-value pairs, or key-array pairs, or even nested documents.
* **Graph stores:** These are used to store information about networks of data, such as social connections.
* **Key-value stores:** These are the simplest NoSQL databases. Every item is stored as an attribute name (a key), together with its value.
* **Wide-column stores:** These are used for large datasets, and store columns of data together instead of in rows.

Another difference between NoSQL databases and relational databases is that the latter uses schemas to be defined before data is added. A NoSQL database allow the insertion of data without a schema which makes it easy to make application changes in real-time without worrying about service interruptions. That said it’s also possible to make schemas for NoSQL databases with the use of node modules. A popular node module for this is mongoose.

## Explain how databases like MongoDB and redis would be classified in the NoSQL world

MongoDB is a document-oriented database, and redis is a key-value store database.

A document-oriented database (document store) is designed for storing, retrieving and managing document-oriented information. As the name says, a document store is about documents that can be encoded in some standard format. Example of encodings: XML, JSON, or BSON that MongoDB uses. Documents are retrieved, edited, or deleted via a unique key that represents a specific document. The key is an identifier that is typically a string.

A key-value store database is as mentioned earlier the simplest NoSQL databases. This kind of database as a key to every item in the database, together with the keys value.

## Explain, using a relevant example, how redis (or a similar data store) can increase scalability (drastic) for a server, using server side sessions

## Explain, using a relevant example, a full MEAN application including relevant test cases to test the REST-API