# ***NoSQL- The Next-Gen Databases***

***By Saii Varma, Editor at COSC***

In the Database world, there are two main kingdoms SQL and NoSQL which are otherwise known as Relational and Non-Relational Databases.These databases differ on the basis they are built, stored and the type of information they store. SQL databases collect and organise data in a tabular format. SQL has been the heart of the database technology until now. Off-late, NoSQL has been gaining popularity and limelight as Tech giants like Facebook, Apple, Instagram and several startups have started implementing this technology into their projects.

NoSQL stands for “Not only SQL”,which means the database can store the data in the format other than tables.Though NoSQL has existed since 1960s it’s true purpose is being served now, as it is very useful for Big data and Web applications.

**Why NoSQL and who is it for?**

If you are dealing with large amounts of unstructured data,you may not have the luxury to organise it using the relational database with a clearly defined schema. Unstructured data includes Sensor data, location-based information, photos, online activity data etc. Trying to store and process this type of data is very difficult if it is done by a relational database and this is where NoSQL databases excel.With their schema-less design they can store data in document-oriented format such that all the information is not necessarily categorised but can be easily found in a single document.

**Types of NoSQL Databases:**

* **Key-value Database-** The simplest among the NoSQL databases, which stores the data in schema less way which contains indexed keys. Some of the key value databases are **Cassandra, Azure, Riak**.
* **Column store-** In this type of database model the data tables are stored as Columns rather than rows providing higher performance. Hbase, HyperTable are popular column store databases.
* **Document Database**- In this model each document has its own data with a unique key which can be used to retrieve that particular data.This type of database is great for managing the document oriented data.MongoDb is one of the popular databases used by the startups which is document oriented with JSON-like documents.
* **Graph Database-** This type of database is used for representing interconnected data in a graphical format and it is capable of high complexity .Some of the graph databases are Polyglot,Neo4J.