# Relational vs. NoSQL Databases

* Relationships in MongoDB are used to specify how one or more documents are related to each other. In MongoDB, the relationships can be modeled either by Embedded way or by using the Reference approach.
* The three main types of relationships in relational databases
  + One to One
    - “One person has one address.” (Study Tonight)
  + One to Many
    - “One person has many addresses” (Study Tonight)
  + Many to Many
    - “Many roles can be accomplished by students or students can be associated to multiple roles” (Study Tonight)
* Relational Advantages
  + Consistent data and form
  + Reliable/mature technology
  + Can combine multiple tables of data
* Relational Disadvantages
  + Scalability issues, especially with large amounts of data
  + Lack of standardization
* NoSQL Advantages
  + Scalability
  + Speed
  + Just as flexible data
  + Compatible with lots of big tech technologies
* NoSQL Disadvantages
  + Newer tech / less tools
  + Lacks standardization
  + Struggles with complex transactions
* SQL Features
  + ACID Compliance: MySQL is fully ACID compliant, which stands for Atomicity, Consistency, Isolation, and Durability.
  + Structured Query Language - standardized language that makes managing and manipulating data straightforward. SQL is used for querying data, creating tables, inserting records, updating records, and deleting records, among other things
* MongoDB Features
  + NoSQL database can handle a variety of data types, including structured, semi-structured, and unstructured data. This also allows for changes in your data structure without needing to modify a predefined schema
  + Horizontal Scalability: Allows data data to be distributed across many servers