# **Assignment#1**

# **Advantages and Disadvantages of MySQL and MongoDB.**

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**Advantages and Disadvantages of MySQL and MongoDB**

**Advantages:**

**MySQL:**

1. MySQL database is good for the complex query intensive environment.
2. More reliable than MongoDB upon failure.
3. MySQL is robust compared to MongoDB.
4. Suitable for transaction operations.
5. Horizontally scalable.

**MongoDB:**

1. It is very fast.
2. Sharding and replication are easy.
3. Can perform rich queries in Mongo and can create on the fly indexes.
4. Collection are similar to tables of relational database, can store unstructured data in the key-value pair.
5. Vertically scalable.
6. MongoDB database fits better for the hierarchical data storage as it follows the key-value pair way of storing data similar to JSON data.
7. It does gives you the flexibility to evolve the data schema without modifying the existing data.

**Disadvantages**:

**MySQL**:

1. MySQL database is not best fit for hierarchical data storage.
2. It does not gives the flexibility to evolve the data schema without modifying the existing data.
3. Over normalization of tables leads to complex queries and performance decreases.
4. Indexing on multiple columns in a single table makes updating and insertion CPU intensive task and not really efficient.

**MongoDB**:

1. MongoDB database is not a good fit for the complex query intensive environment.
2. Unreliable. If something crashes while updating, all the data is lost.
3. Not suitable for transaction operations.
4. Indexes takes up memory and B-tree indexes run out of memory really fast.