Question 3: MongoDB CRUD operations / database distribution
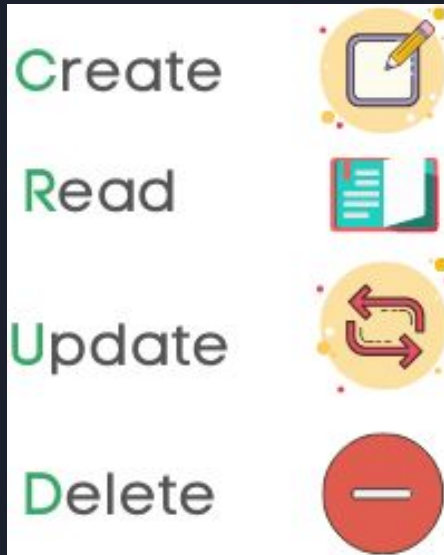
IT-NSQ1Y-S22

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Demonstrate how to use the MongoDB CRUD operations to insert, query, update and delete documents

MongoDB CRUD operations

Create Operations

- **db.collection.insertOne()**: Inserts a single document into a collection.
- **db.collection.insertMany():** Inserts multiple documents into a collection.

```
db.users.insertOne(          ←——— collection
  {
    name: "sue",             ←——— field: value  ⎫
    age: 26,                 ←——— field: value  ⎬ document
    status: "pending"        ←——— field: value  ⎭
  }
)
```

Read Operations

- **db.collection.find()**: selects documents in a collection or view and returns a cursor to the selected documents.

Update Operations

- **db.collection.updateOne()**: Updates a single document within the collection based on the filter.
- **db.collection.updateMany()**: Updates all documents that match the specified filter for a collection.
- **db.collection.replaceOne()**: Replaces a single document within the collection based on the filter.

```
db.users.updateMany(                    ⟵——— collection
  { age: { $lt: 18 } },                 ⟵——— update filter
  { $set: { status: "reject" } }        ⟵——— update action
)
```

Delete Operations

- **db.collection.deleteOne()**: Removes a single document from a collection.
- **db.collection.deleteMany()**: Removes all documents that match the filter from a collection.

```
db.users.deleteMany(          ←————————— collection
    { status: "reject" }      ←————————— delete filter
)
```

Present your hand-in to course assignment 2 with a focus on replication and sharding