Overview

- not only SQL
- [[SQL]] alternative
- uses [[Document Stores]] to store data as documents within collections as [[Key-Value Pairs]]

Benefits

- non-relational
  - key value pairs
  - graphs
  - time series
- schema-free
  - flexible
  - implicit
- impedance mismatch
- scalable
  - horizontal partitioning (sharding)
  - scaling

MongoDB Example

- **Creating a Collection**

```
import pymongo as m
conn = m.MongoClient("mongodb://localhost:123/")
db = conn["dbs19"]      # database dbs19
cust = db["customers"]  # collection customers
```

- **Inserting into a Collection**

```
mdict = {
  "name": "Jane Smith",
  "address": "Inffeldgasse 13, Graz"
}
id = cust.insert_one(mdict).inserted_id
# ids = cust.insert_many(mlist).inserted_ids
```

- **Querying a Collection**

```
print(cust.find_one({"_id": id}))

ret = cust.find({"name": "Jane Smith"})
for x in ret:
  print(x)
```

[[Data Models]]