

1. Flat file system → XML, JSON, text, TSV, CSV, etc.
2. RDBMS (Codd) → MySQL, Oracle, PostgreSQL
3. OLAP (warehouse) → Hive, SuperStar
4. NoSQL database → HBASE

SQL

- 1.
2. ACID
3. Vertical
4. ~~X~~ predefined schema

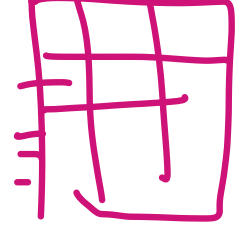
NoSQL

1. non-relational
2. CAP
3. Horizontal
4. ~~X~~ dynamic schema

NoSQL

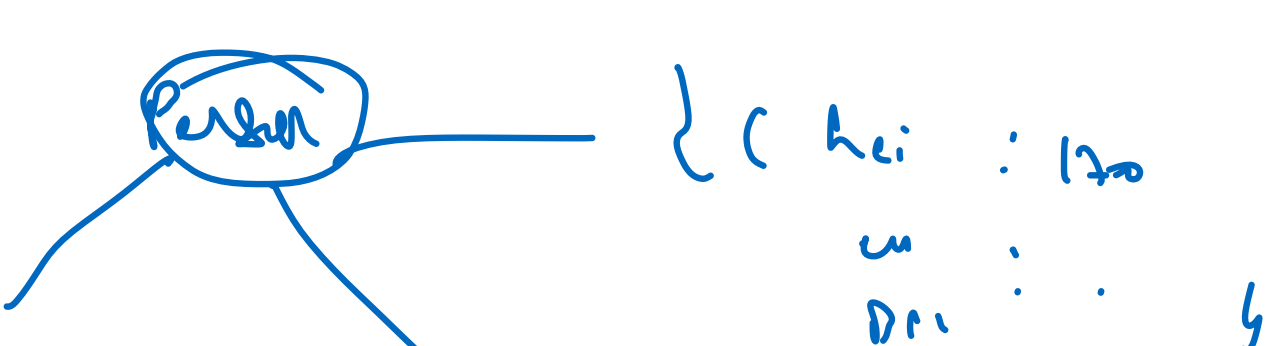
1. Key-Value pairs - Dynamo, Redis
2. Column-oriented - HBase, Cassandra
3. document based - MongoDB, CouchDB
4. graph based - Neo4j

Row?



Key	Value
name	Iman
city	...
Age	...

Row Key	Column 1	Column 2
D1
D2
D3



HBASE Architecture

1. client
2. HMaster
3. Region server
4. HDFS
5. ZooKeeper

