

- NoSQL has advantage of short time but data duplication
- NoSQL can enter more columns data than my dataset has in stored data

	SQL	NO SQL																		
Stored Data	Employee table <table> <tr> <th>Empno (Pk)</th><th>Ename</th><th>job</th></tr> <tr> <td>7369</td><td>SMITH</td><td>CLERK</td></tr> <tr> <td>7499</td><td>ALLEN</td><td>SALESMAN</td></tr> <tr> <td>7521</td><td>WARD</td><td>SALESMAN</td></tr> <tr> <td>7566</td><td>JONES</td><td>MANAGER</td></tr> <tr> <td>7654</td><td>BLAKE</td><td>MANAGER</td></tr> </table>	Empno (Pk)	Ename	job	7369	SMITH	CLERK	7499	ALLEN	SALESMAN	7521	WARD	SALESMAN	7566	JONES	MANAGER	7654	BLAKE	MANAGER	?
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Insert New Data	Row1 800 Mohamed Engineer Row2 801 Ali HR Row3 802 Eman Sales	Row1 (Empno : 800 , Ename : "Mohamed" , job : "Engineer") Row2 (Empno : 801 , Ename : "Ali" , job : "HR" , age: 15) Row3 (Empno : 802 , Ename : "Eman" , job : "Sales" , address : "Egypt")																		

I do that by keys \Rightarrow name of the column

- In MySQL or SQL it has fixed schema

NoSQL \Rightarrow Dynamic schema

- In NoSQL I can add things that are new not a known keys for the system before \Rightarrow so all in one table & I can add them as text

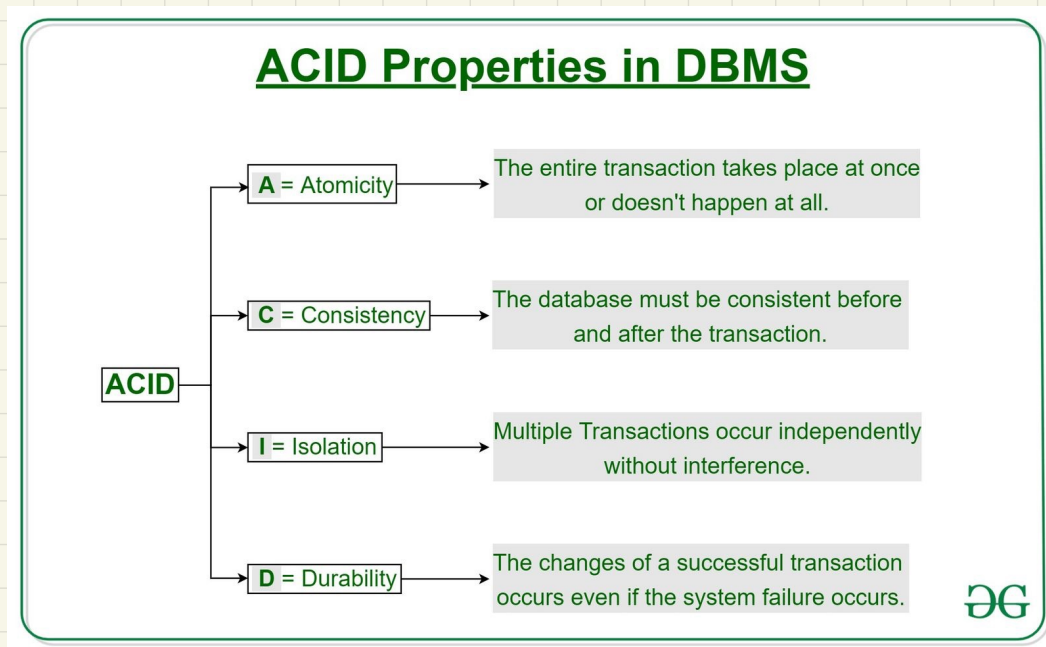
Commit or roll back \Rightarrow Atomic

ACID

Durability \Rightarrow ensure the process is done by check the log of the process

Isolation \Rightarrow each process is isolated from the other

Consistency \Rightarrow add or sub



NO SQL \Rightarrow BASE

① Basically Available

② Eventual Consistency \Rightarrow till the replication finish

③ soft + state

NoSQL Types

key-value

Document \Rightarrow record \Rightarrow logical grouping of key values

Multiple Record \Rightarrow multiple record

Graph \Rightarrow written by GraphQL

column family \Rightarrow

why NoSQL:-

variety

velocity

structured vs semi-structured vs unstructured



key & value



key & value
+
dynamic structure
which can accept
more columns in
the runtime



dynamic structure

⇒ Jason formatter & validator

Json files

①

```
{ "id" : 10,  
  name : "ahmed",  
  address : { "City" : "mansoura" },  
  a : { "city" : "mansoura", "Country" : "Eg" }  
}
```

→ Composite

②

```
[  
  {  
    "id" : 10,  
    name : "ahmed",  
    address : { "City" : "mansoura" }  
  },  
  {  
    "id" : 10,  
    name : "ahmed",  
    address : { "City" : "mansoura" }  
  }  
]
```

multiple records

```
{  
  "id": 10,  
  name: "ahmed",  
  address: ["mansoura", "alex", "cairo"]  
}
```

```
{  
  "id": 10,  
  "name": "ahmed",  
  "address": [  
    "mansoura",  
    "alex",  
    "cairo"  
  ]  
}
```