



mongoDB®

Companies Uses MongoDB

Forbes



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SQL vs NoSQL

Comparison

SQL

S → Structure
Q → Query
L → Language

Relational Database

NoSQL

N → Not
O → only
S → Structure
Q → Query
L → Language

Non-Relational Database



SQL

Relational Databases

User Table

_id	first_name	last_name	email	address	phone
1	Rahul	Sharma	rahul@co	123 St.	63-55

User Table

_id	first_name	last_name	email	email_2	address	phone
1	Rahul	Sharma	rahul@co	rahul2@co	123 St.	63-55

User Table

_id	first_name	last_name	email	email_2	email_3	address	phone
1	Rahul	Sharma	rahul@co	rahul2@co	rahul3@co	123 St.	63-55

User Table

_id	first_name	last_name	email	email_2	email_3	address	phone
1	Rahul	Sharma	rahul@co	rahul2@co	rahul3@co	123 St.	63-55
2	Ram	Krishna	rk@co			456 St.	88-99

User Table

_id	first_name	last_name	email	email_2	email_3	address	address_2	phone	phone_2
1	Rahul	Sharma	rahul@co	rahul2@co	rahul3@co	123 St.	7890 St.	63-55	34-44
2	Ram	Krishna	rk@co			456 St.		88-99	

User Table

_id	first_name	last_name	email	email_2	email_3	address	address_2	phone	phone_2
1	Rahul	Sharma	rahul@co	rahul2@co	rahul3@co	123 St.	7890 St.	63-55	34-44
2	Ram	Krishna	rk@co			456 St.		88-99	
3									
4									
5									
6									
7									
8									
9									
10									
11									

Relational Database

USER_TABLE

_id	first_name	last_name
1	Rahul	Sharma
2	Ram	Krishna
3		
4		
5		
6		
7		
8		
9		
10		
11		

EMAIL_TABLE

_id	user_id	email
1	1	rahul@co
2	1	rahul2@co
3	1	rahul3@co
4	2	rk@co

ADDRESS_TABLE

_id	user_id	address
1	1	123 St.
2	1	7890 St.
3	2	789 St.
4	3	109 St.

PHONE TABLE

_id	user_id	address
1	1	63-55
2	1	34-44
3	3	15-36
4	4	33-18



NoSQL

Non – relational Databases

NoSQL Database

- Key – Value
- Wide – Column
- Graph
- Document

NoSQL Database



- MongoDB is a **document** database

Document Database



Table, row and columns

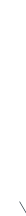
SQL



document

JSON

JavaScript Object Notation



BSON

Binary JavaScript Object Notation

```
{  
  "key": "value"  
}
```



```
{  
  "key": "value"  
}
```

```
{  
  "key": "value"  
}
```

```
{  
  "key": "value"  
}
```

```
{  
  "key": "value"  
}
```

```
{  
  "key": 123  
}
```

```
{  
    "key": ["string", 123]  
}
```

```
{  
  "key": {"key": 123}  
}
```

Record to Document

_id	first_name	last_name	email	email_2	email_3	address	address_2	phone	phone_2
1	Rahul	Sharma	rahul@co	rahul2@co	rahul3@co	123 St.	7890 St.	63-55	34-44

record

document

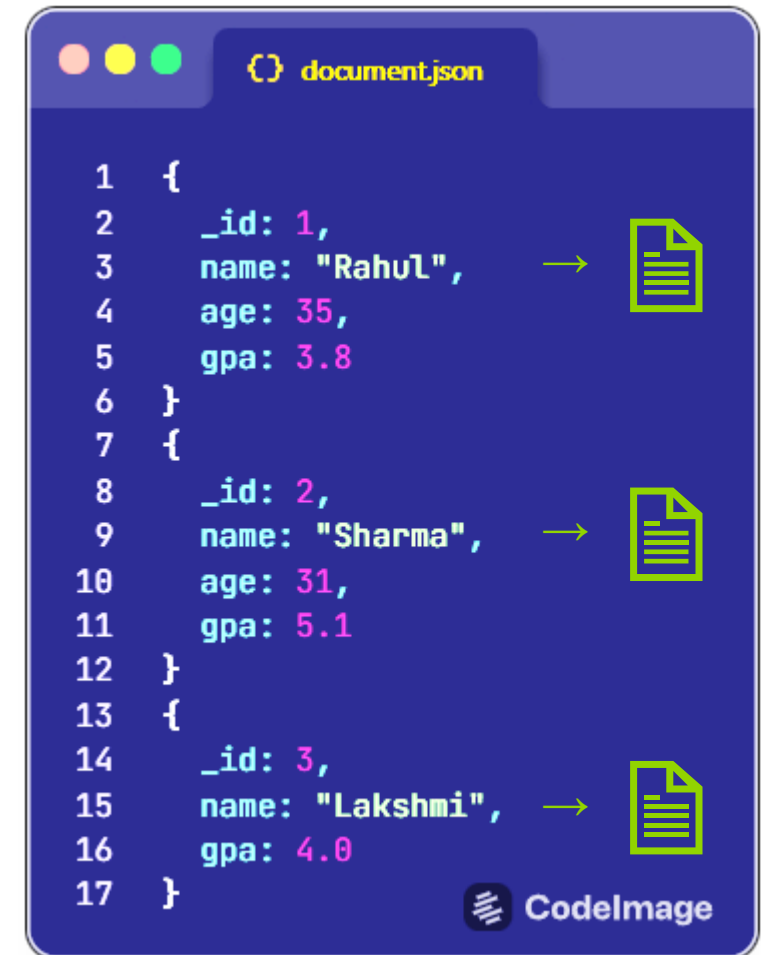
```
1  {
2    "_id": 1,
3    "first_name": "Rahul",
4    "last_name": "Sharma",
5    "email": [
6      "rahul@co",
7      "rahul2@co",
8      "rahul3@co"
9    ],
10   "address": [
11     "123 St.",
12     "7890 St."
13   ],
14   "phone": [
15     "63-55",
16     "34-44"
17   ]
18 }
```


Table and Collection

table

_id	name	age	gpa
1	Rahul	35	3.8
2	Sharma	31	5.1
3	Lakshmi	27	4.0

collections



```
document.json
1  {
2    _id: 1,
3    name: "Rahul",
4    age: 35,
5    gpa: 3.8
6  }
7  {
8    _id: 2,
9    name: "Sharma",
10   age: 31,
11   gpa: 5.1
12  }
13 {
14   _id: 3,
15   name: "Lakshmi",
16   gpa: 4.0
17 }
```

The screenshot shows a code editor window titled 'document.json' with a dark blue background. It contains a JSON array of three documents. Each document is a JavaScript object with properties '_id', 'name', 'age', and 'gpa'. The documents are separated by commas. To the right of each document, there is a yellow icon of a document with lines, indicating a file or document. The code is syntax-highlighted: strings are in pink, numbers are in green, and property names are in white. The editor has a standard macOS-style title bar with red, yellow, and green window control buttons. In the bottom right corner, there is a logo for 'CodeImage'.

SQL

Cluster

Database

Table

Row

Column

NoSQL

Cluster

Database

Collection

Document

Field

Next



Hello World to MongoDB Atlas

vedicskill.