DOCUMENT DATA MODEL

AMR ELHELW

"LineNo": 10000

{json}

"Quantity": 12,

"UnitPrice": 1397.3

MongoD
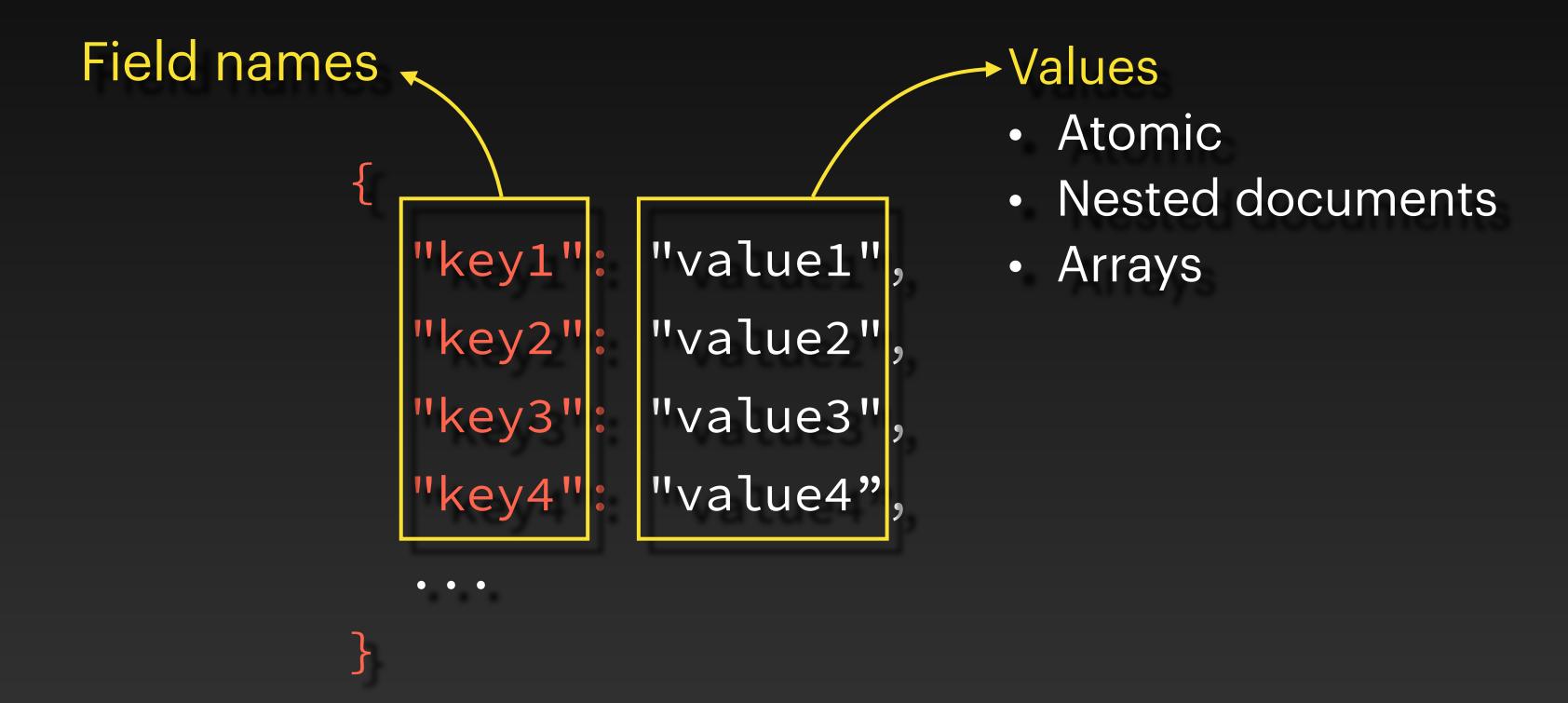
"LineNo": 2000

"Type": 2,

Field names

Values
- Atomic
- Nested documents
- Arrays

```
{
    "key1": "value1",
    "key2": "value2",
    "key3": "value3",
    "key4": "value4",
    ....
}
```

```json
{
  "_id": ObjectId("60a3f2a8c4132d76a9d6c406"),
  "city": "New York",
  "population": 8000000,
  "location": {
    "latitude": 40.7128,
    "longitude": -74.0060
  },
  "top_attractions": ["Central Park", "Statue of Liberty", "Empire State Building"],
  "neighborhoods": [
    {
      "name": "Brooklyn",
      "population": 2600000
    },
    {
      "name": "Queens",
      "population": 2300000
    },
    {
      "name": "Manhattan",
      "population": 1600000
    }
  ]
}
```

```json
{
  "_id": <ObjectId1>,
  "name": "Alice",
  "age": 28,
  "city": "London"
},
{
  "_id": <ObjectId2>,
  "name": "Bob",
  "age": 35,
  "email": "bob@example.com"
}
```

Users

Id	Name	Phone	BirthDate
1	Alice	12345	1990-05-15
2	Bob	98765	1985-10-20

Add another phone number for Bob?

Users

Id	Name	Phone1	Phone2	BirthDate
1	Alice	12345		1990-05-15
2	Bob	98765	56789	1985-10-20

Add another user who has an email address and no phone numbers?

Users

Id	Name	Phone1	Phone2	Email	BirthDate
1	Alice	12345			1990-05-15
2	Bob	98765	56789		1985-10-20
3	Tom			tom@m.com	1983-09-04

Add more phone numbers, emails, etc.?

Users

Id	Name	BirthDate
1	Alice	1990-05-15
2	Bob	1985-10-20
3	Tom	1983-09-04
...	...	...

Phones

user_id	Phone
1	12345
2	98765
2	56789
...	...
...	...

Emails

user_id	Email
3	tom@m.com
...	...
...	...

Users collection

```json
{
    "_id": <ObjectId1>
    "name": "Alice",
    "birthdate": "1990-05-15",
    "phone": "12345"
},
{
    "_id": <ObjectId2>
    "name": "Bob",
    "birthdate": "1985-10-20",
    "phone": ["98765", "56789"]
},
{
    "_id": <ObjectId3>
    "name": "Tom",
    "birthdate": "1983-09-04",
    "email": "tom@m.com"
}
```

Companies collection

```
{
  "_id": <ObjectId101>,
  "company": "TechCorp",
  "city": "London",
  "street": "123 Main Street",
  "postcode": "SW1A 1AA"
}
```

Referenced
Document

Users collection

```
{
  "_id": <ObjectId1>,
  "name": "Alice",
  "age": 25,
  "employer_id": <ObjectId101>
},
{
  "_id": <ObjectId2>,
  "name": "Bob",
  "age": 32,
  "employer_id": <ObjectId101>
}
```

Amr Elhelw's
TECH
VAULT