

An introduction to

**JSON**

# What is JSON

## JavaScript Object Notation

A **lightweight** format for :

- **Storing** data (as a **Database/DataStore**)

MongoDB uses **BSON** (JSON-like documents) when storing documents in collections

- **Transporting/Interchanging** data (as a **Communication standard**)

Used when data is sent from a server to a web page (Rest API)

# JSON vs XML

```
{  
  "name" : "Loghman Avand",  
  "age" : 31 ,  
  "gender" : "male",  
  "isSingle" : false,  
  "success" : null,  
  "friends" : ["Keivan", "Vahid", "Mostafa"]  
}
```

156 Character



=

```
<?xml version="1.0" encoding="UTF-8"?>  
<user>  
  <name>Loghman Avand</name>  
  <age>31</age>  
  <gender>male</gender>  
  <isSingle>false</isSingle>  
  <success null="true" />  
  <friends>  
    <element>Keivan</element>  
    <element>Vahid</element>  
    <element>Mostafa</element>  
  </friends>  
</user>
```


291 Character




# JSON vs XML

- **.json** file extension vs **.xml**
- The **more lightweight JSON** has become a popular alternative to XML
- **JSON is Data interchange** format but **XML is a Markup Language**
- JSON has been extended from JavaScript whereas XML from SGML
- JSON came into existence in 2002 whereas XML in 1996
- **JSON is easier** than XML for learning and understanding
- JSON supports array whereas XML does not
- JSON is less secured than XML
- JSON files are more human readable than its counterpart XML
- JSON only supports text and number data types whereas XML has varieties like text, numbers, images, charts, graphs etc

```
{  
  "name" : "Loghman Avand",  
  "age" : 31 ,  
  "gender" : "male",  
  "isSingle" : false,  
  "success" : null,  
  "friends" : ["Keivan", "Vahid", "Mostafa"]  
}
```

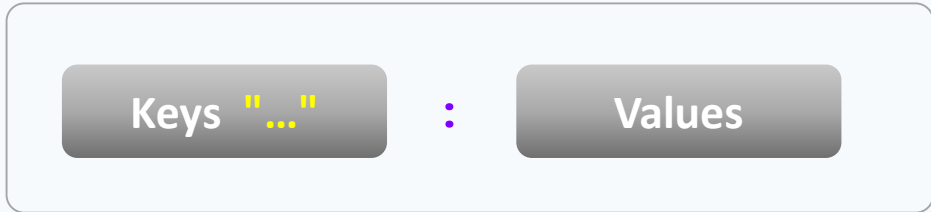
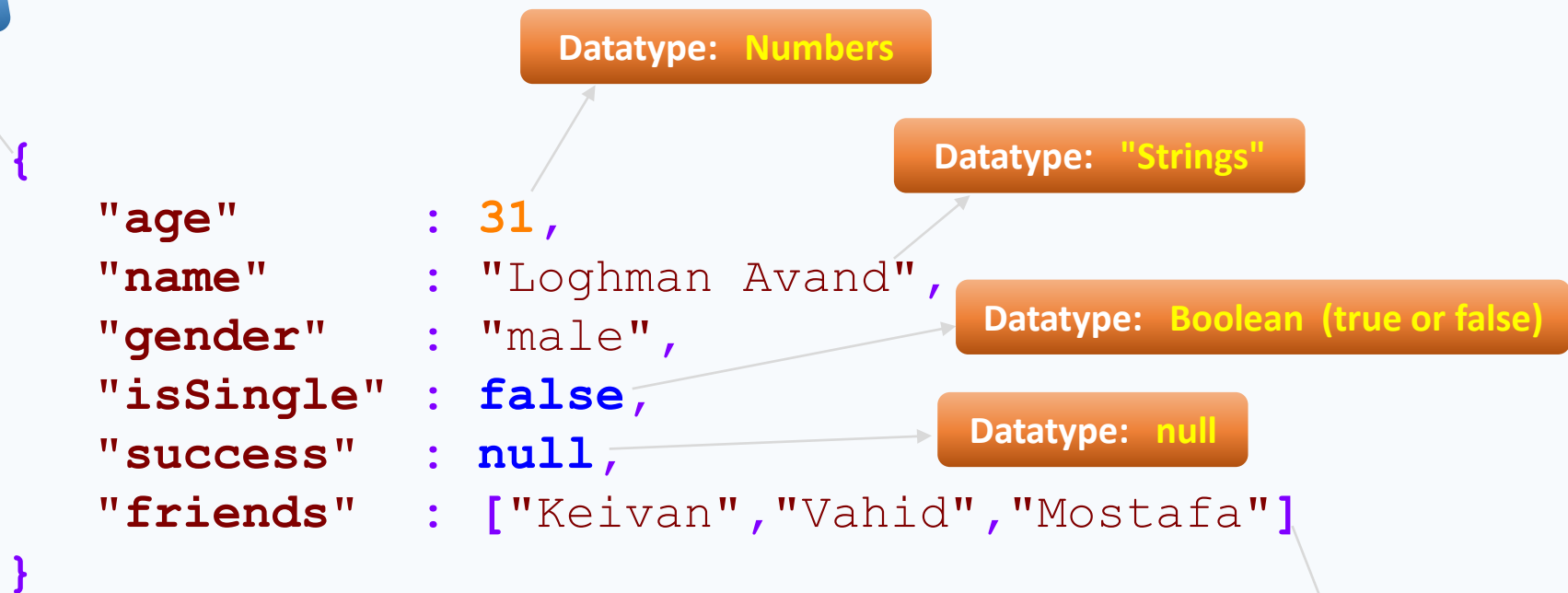


```
<?xml version="1.0" encoding="UTF-8"?>  
<user>  
  <name>Loghman Avand</name>  
  <age>31</age>  
  <gender>male</gender>  
  <isSingle>>false</isSingle>  
  <success null="true" />  
  <friends>  
    <element>Keivan</element>  
    <element>Vahid</element>  
    <element>Mostafa</element>  
  </friends>  
</user>
```



# JSON Structure

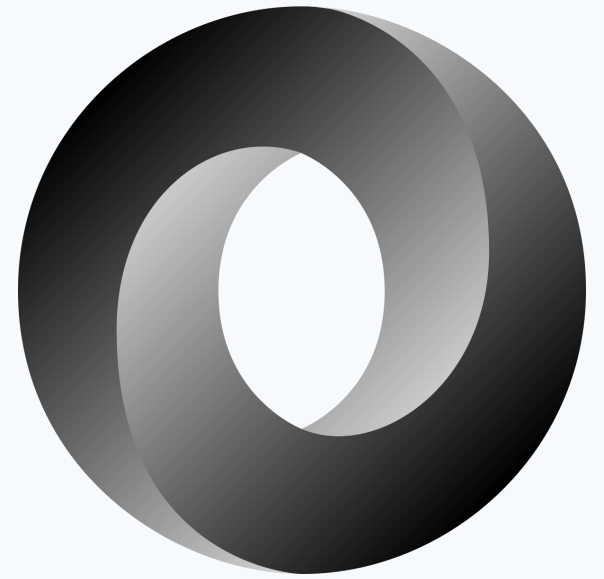
Objects { ... }



# JSON Use Cases

- As a simple **DataStore/Database**
  - Store data in Json files
- **Transferring** data between systems
  - Web Services and RESTful API
    - Mobile app ↔ Web Service
    - Example: ip-api, **snapp**, digi**kala**
- As a **Configuration** data holder
  - VSCode Setting
  - Sftp configuration
  - Import & Export





**JSON**