

### General Information

- Data is in **key/value** pairs
- Data groups by **colon ":"** and separates by **comma ","**
- Objects are surrounded with **curly braces "{"** and **"}"**
- Each **key** in objects should be **unique**
- Arrays are surrounded with **square brackets "["** and **"]"**
- Light, human-readable **data-interchange** format
- Can be used with **modern** programming languages
- Language **independent**
- The trailing commas and leading zeros are **prohibited**
- Numbers can't have **octal** or **hexadecimal** format
- **Easy** to use and doesn't use full markup like XML
- Popular due to it's **asynchronous** speed
- Extension for Json files is **".json"**
- Mime type for Json texts is **"application/json"**
- Official media type for Json is **"application/json"**
- Json internet media type is **"application/json"**
- The uniform type identifier for Json is **"public.json"**

### Data Types

Json	Python	Possible Values
boolean	bool	true   false
number	float	123   123.456   1234e-3
string	str	"abcdef"   ""
array	list	["a", "b", "c", "d"]
object	dict	{"id": 7}
null	None	null

### Escape Sequences

Name	Sequence
Double Quote	\"
Backslash	\\
Slash	\/
Backspace (BS)	\b
Form Feed (FF)	\f
Horizontal Tab (HT)	\t
Newline (NL)	\n
Carriage Return (CR)	\r
Hexadecimal	\uXXXX

### Arrays

Syntax	Description
arr = []	Empty Array
arr = ["James"]	Single Element Array
arr = [ "James", "Bond", 42, "M", {"Germany": "Berlin"}, true ]	Multi Element Array Firstname Lastname Age Sex Location Available



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Not published yet.  
Last updated 6th April, 2020.  
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### 📄 Objects

Syntax	Description
<code>obj = {}</code>	Empty Object
<code>obj = {"key": value}</code>	Single Element Object
<pre>obj = {   "Firstname": "Jane",   "Lastname": "Doe",   "Age": 39,   "Sex": "F",   "Location": {"DE": "Berlin"},   "Availability": false }</pre>	Multi Element Object Firstname Lastname Age Sex Location Availability

### ☰ Nested Object and Arrays

```
nested = {
  "indexes": {
    "Firstname": 0,
    "Lastname": 1,
    "Age": 2,
    "Sex": 3,
    "Country": 4,
    "Available": 5
  },
  "user": [
    "James",
    "Bond",
    42,
    "M",
    {"Germany": "Berlin"},
    true
  ]
}
```

### Nested Objects and Arrays

```
nested = {
  "defaults": {
    "First": 0,
    "Last": 1,
    "Age": 2,
```

### Nested Objects and Arrays (cont)

```
  "Sex": 3,
  "Country": 4,
  "Available": 5
},
"husband": [
  "James",
  "Bond",
  "42",
  "T",
  "Germany",
  true
],
"wife": [
  "Jane",
  "Honda",
  "42",
  "T",
  "Germany",
  false
]
}
```



### Arrays

array = []	Empty Array
array = ["James"]	Single Element Array
array = [ "James", "Bond", "42", "T", "Germany", true ]	Multi Element Array

### Objects

myobject = {}	Empty Object
myobject = {"key": value}	Single Element Object
myobject = { "First": "James", "Last": "Bond", "Age": "42", "Sex": "T", "Country": "Germany", "Available": true }	Multi Element Object



### Syntax

Syntax	Description
arr = []	Empty Array
arr = ["Username"]	Single Element Array
arr = [ "James", "Bond", 42, "M", { "Germany": "Berlin" }, true ]	Multi Elements Array

### Literals

null
true
false

### Data Types

boolean	true, false
number	123, 123.456, 1.234e-3
string	"abcdef", ""
array	["a", "b", "c", "d"]
object	{"id": 7}
null	null

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### General Information

- Doesn't have comments. Everything in it is considered data
- Data is in name/value pairs. Grouped by a colon ":" and separated by comma ","
- Objects are surrounded with curly braces. Each key within should be unique and enclosed within the double quotes. An object begins with a left brace "{" and ends with a right brace "}"
- Arrays are surrounded with square brackets. An array begins with a left bracket "[" and ends with a right bracket "]"
- The trailing commas and leading zeros are prohibited
- Numbers can't have octal or hexadecimal format
- Lightweight and human-readable data-interchange format
- Can be used with modern programming languages
- Language independent
- Very easy to parse and generate and doesn't use a full markup structure like a XML
- Popular alternative to XML format for its fast asynchronous client-server communication
- Extension for json files is ".json"
- Mime type for json texts is "application/json"
- The official media type for json is "application/json".
- json internet media type is "application/json".
- The uniform type identifier is "public.json"

### Escape Sequences

Double Quote	\"
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