Python JSON

❮ Previous Next ❯

JSON is a syntax for storing and exchanging data.

JSON is text, written with JavaScript object notation.

JSON in Python

Python has a built-in package called `json`, which can be used to work with JSON data.

Example

Get your own Python Server

Import the json module:

```
import json
```

Parse JSON - Convert from JSON to Python

If you have a JSON string, you can parse it by using the `json.loads()` method.

The result will be a Python dictionary.

Example

Convert from JSON to Python:

```
import json

# some JSON:
x =  '{ "name":"John", "age":30, "city":"New York"}'

# parse x:
y = json.loads(x)

# the result is a Python dictionary:
print(y["age"])
```

Try it Yourself »

Convert from Python to JSON

If you have a Python object, you can convert it into a JSON string by using the `json.dumps()` method.

```
import json

# a Python object (dict):
x = {
  "name": "John",
  "age": 30,
  "city": "New York"
}

# convert into JSON:
y = json.dumps(x)

# the result is a JSON string:
print(y)
```

Try it Yourself »

You can convert Python objects of the following types, into JSON strings:

- dict
- list
- tuple
- string
- int
- float
- True
- False
- None

Example

Convert Python objects into JSON strings, and print the values:

```
import json

print(json.dumps({"name": "John", "age": 30}))
print(json.dumps(["apple", "bananas"]))
print(json.dumps(("apple", "bananas")))
print(json.dumps("hello"))
print(json.dumps(42))
print(json.dumps(31.76))
print(json.dumps(True))
print(json.dumps(False))
print(json.dumps(None))
```

Try it Yourself »

When you convert from Python to JSON, Python objects are converted into the JSON (JavaScript) equivalent:

Python	JSON
dict	Object
list	Array
tuple	Array
str	String

True	true
False	false
None	null

Example

Convert a Python object containing all the legal data types:

```
import json

x = {
  "name": "John",
  "age": 30,
  "married": True,
  "divorced": False,
  "children": ("Ann","Billy"),
  "pets": None,
  "cars": [
    {"model": "BMW 230", "mpg": 27.5},
    {"model": "Ford Edge", "mpg": 24.1}
  ]
}

print(json.dumps(x))
```

Try it Yourself »

Format the Result

The example above prints a JSON string, but it is not very easy to read, with no indentations and line breaks.

The `json.dumps()` method has parameters to make it easier to read the result:

Example

Use the `indent` parameter to define the numbers of indents:

```
json.dumps(x, indent=4)
```

Try it Yourself »

You can also define the separators, default value is (", ", ": "), which means using a comma and a space to separate each object, and a colon and a space to separate keys from values:

Example

Use the `separators` parameter to change the default separator:

```
json.dumps(x, indent=4, separators=(". ", " = "))
```

Try it Yourself »

Example

Use the `sort_keys` parameter to specify if the result should be sorted or not:

```
json.dumps(x, indent=4, sort_keys=True)
```

Try it Yourself »

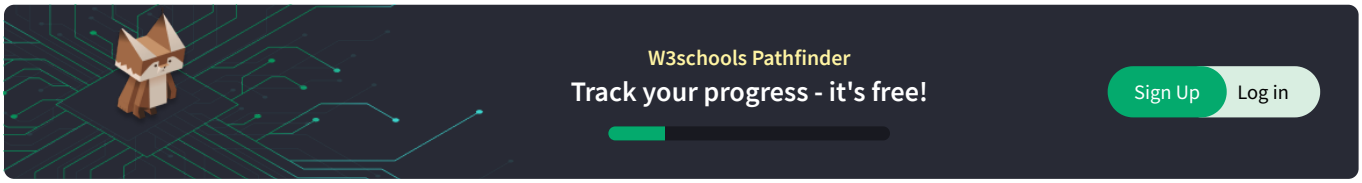
Exercise

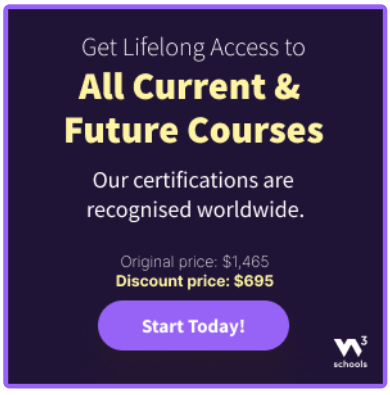
When you parse code with the `json.loads()` method, the result is returned as a specific Python data type, which one?

- list
- set
- tuple
- dictionary

Submit Answer »

‹ Previous Next ›





COLOR PICKER

SPACES UPGRADE AD-FREE NEWSLETTER GET CERTIFIED CONTACT US

Top Tutorials

HTML Tutorial
CSS Tutorial
JavaScript Tutorial
How To Tutorial
SQL Tutorial
Python Tutorial
W3.CSS Tutorial
Bootstrap Tutorial
PHP Tutorial
Java Tutorial
C++ Tutorial
jQuery Tutorial

Top References

HTML Reference
CSS Reference
JavaScript Reference
SQL Reference
Python Reference
W3.CSS Reference
Bootstrap Reference
PHP Reference
HTML Colors
Java Reference
Angular Reference
jQuery Reference

Top Examples

HTML Examples
CSS Examples
JavaScript Examples
How To Examples
SQL Examples
Python Examples
W3.CSS Examples
Bootstrap Examples
PHP Examples
Java Examples
XML Examples
jQuery Examples

Get Certified

HTML Certificate
CSS Certificate
JavaScript Certificate
Front End Certificate
SQL Certificate
Python Certificate
PHP Certificate
jQuery Certificate
Java Certificate
C++ Certificate
C# Certificate
XML Certificate

FORUM ABOUT CLASSROOM

W3Schools is optimized for learning and training. Examples might be simplified to improve reading and learning. Tutorials, references, and examples are constantly reviewed to avoid errors, but we cannot warrant full correctness of all content. While using W3Schools, you agree to have read and accepted our terms of use, cookie and privacy policy.

Copyright 1999-2024 by Refsnes Data. All Rights Reserved. W3Schools is Powered by W3.CSS.