

[Foundation](#) / JSONSerialization

## Class

# JSONSerialization

An object that converts between JSON and the equivalent Foundation objects.

iOS 5.0+ | iPadOS 5.0+ | Mac Catalyst 13.1+ | macOS 10.7+ | tvOS 9.0+ | visionOS 1.0+ | watchOS 2.0+

```
class JSONSerialization
```

## Overview

You use the [JSONSerialization](#) class to convert JSON to Foundation objects and convert Foundation objects to JSON.

To convert a Foundation object to JSON, the object must have the following properties:

- The top level object is an [NSArray](#) or [NSDictionary](#), unless you set the [fragments Allowed](#) option.
- All objects are instances of [NSString](#), [NSNumber](#), [NSArray](#), [NSDictionary](#), or [NSNull](#).
- All dictionary keys are instances of [NSString](#).
- Numbers are neither NaN nor infinity.

Other rules may apply. Calling [isValidJSONObject\(\\_:\)](#) or attempting a conversion are the definitive ways to tell if the [JSONSerialization](#) class can convert given object to JSON data.

### Note

On iOS 7 and later and macOS 10.9 and later, [JSONSerialization](#) is thread safe.

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# Topics

## Creating a JSON Object

```
class func jsonObject(with: Data, options: JSONSerialization.ReadingOptions) throws -> Any
```

Returns a Foundation object from given JSON data.

```
class func jsonObject(with: InputStream, options: JSONSerialization.ReadingOptions) throws -> Any
```

Returns a Foundation object from JSON data in a given stream.

```
struct ReadingOptions
```

Options used when creating Foundation objects from JSON data.

## Creating JSON Data

```
class func data(withJSONObject: Any, options: JSONSerialization.WritingOptions) throws -> Data
```

Returns JSON data from a Foundation object.

```
class func writeJSONObject(Any, to: OutputStream, options: JSONSerialization.WritingOptions, error: NSErrorPointer) -> Int
```

Writes a given JSON object to a stream.

```
struct WritingOptions
```

Options for writing JSON data.

```
class func isValidJSONObject(Any) -> Bool
```

Returns a Boolean value that indicates whether the serializer can convert a given object to JSON data.

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# Relationships

## Inherits From

NSObject

## Conforms To

CVarArg

CustomDebugStringConvertible

CustomStringConvertible

Equatable

Hashable

NSObjectProtocol

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## See Also

### JSON

`class` JSONEncoder

An object that encodes instances of a data type as JSON objects.

`class` JSONDecoder

An object that decodes instances of a data type from JSON objects.