

# json

## Reading and Writing JSON

1.2.0

10 October 2017

**Christopher Jefferson**

**Christopher Jefferson**

Email: [caj21@st-andrews.ac.uk](mailto:caj21@st-andrews.ac.uk)

Homepage: <http://caj.host.cs.st-andrews.ac.uk/>

Address: St Andrews

Scotland

UK

# Contents

|          |                         |          |
|----------|-------------------------|----------|
| <b>1</b> | <b>GAP-JSON mapping</b> | <b>3</b> |
| 1.1      | Methods . . . . .       | 3        |
|          | <b>Index</b>            | <b>5</b> |

# Chapter 1

## GAP-JSON mapping

This package defines a mapping between the JSON markup language and GAP. The built-in datatypes of GAP provide an easy mapping to and from JSON. This package uses the following mapping between GAP and JSON.

- JSON lists are mapped to GAP lists
- JSON dictionaries are mapped to GAP records
- JSON strings are mapped to GAP strings
- Integers are mapped to GAP integers, non-integer numbers are mapped to Floats
- true, false and null are mapped to true, false and fail respectively

Note that this library is *\*NOT\** intended to provide a general purpose library for transmitting any GAP object. If you wish to do this, look at the `openmath` package, or `IO_Pickle` in the `IO` package.

### 1.1 Methods

#### 1.1.1 GapToJsonStream

▷ `GapToJsonStream(stream, value)` (function)

Converts the *value* to JSON, and outputs it to *stream*. This function disables GAP's usual line splitting while JSON is being outputted.

#### 1.1.2 GapToJsonString

▷ `GapToJsonString(value)` (function)

**Returns:** string

Converts a GAP *value* to a JSON string.

#### 1.1.3 JsonStringToGap

▷ `JsonStringToGap(string)` (function)

**Returns:** value

Converts a JSON *string* into a GAP value.

### 1.1.4 JsonStreamToGap

▷ `JsonStreamToGap(stream)`

(function)

**Returns:** value

Reads a single JSON object from a *stream* and converts it to a GAP value.

# Index

GapToJsonStream, 3

GapToJsonString, 3

JsonStreamToGap, 4

JsonStringToGap, 3