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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

\[
\text{GapToJsonStream}(\text{stream}, \text{value})
\]

\text{Returns:} \quad \text{Converts the } \text{value} \text{ to JSON, and outputs it to } \text{stream}. \text{ This function disables GAP's usual line splitting while JSON is being outputted.}

1.1.2 GapToJsonString

\[
\text{GapToJsonString}(\text{value})
\]

\text{Returns:} \quad \text{string} \quad \text{Converts a GAP } \text{value} \text{ to a JSON string.}

1.1.3 JsonStringToGap

\[
\text{JsonStringToGap}(\text{string})
\]

\text{Returns:} \quad \text{value} \quad \text{Converts a JSON } \text{string} \text{ into a GAP value.}
1.1.4 JsonStreamToGap

> JsonStreamToGap(stream)

**Returns**: value

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