http://www.json.org/

JSON

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JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. It is based on a subset of the JavaScript Programming Language, Standard ECMA-262 3rd Edition - December 1999. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages, including C, C++, C#, Java, JavaScript, Perl, Python, and many others. These properties make JSON an ideal data-interchange language.

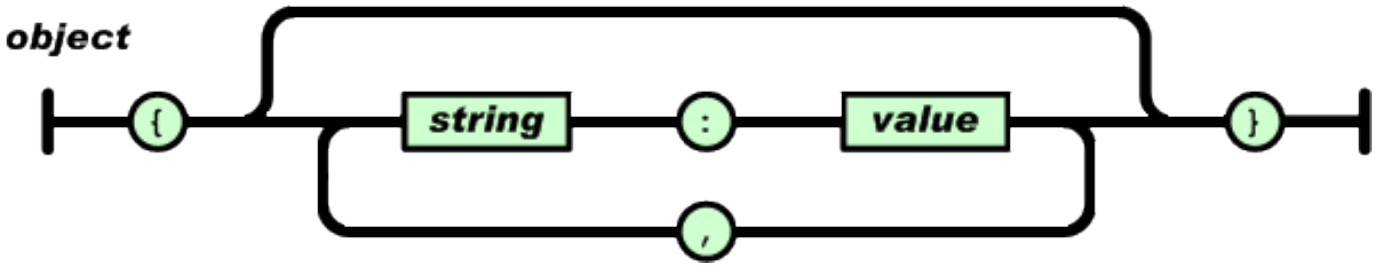
JSON is built on two structures :

- A collection of name/value pairs. In various languages, this is realized as an object, record, struct, dictionary, hash table, keyed list, or associative array.
- An ordered list of values. In most languages, this is realized as an array, vector, list, or sequence.

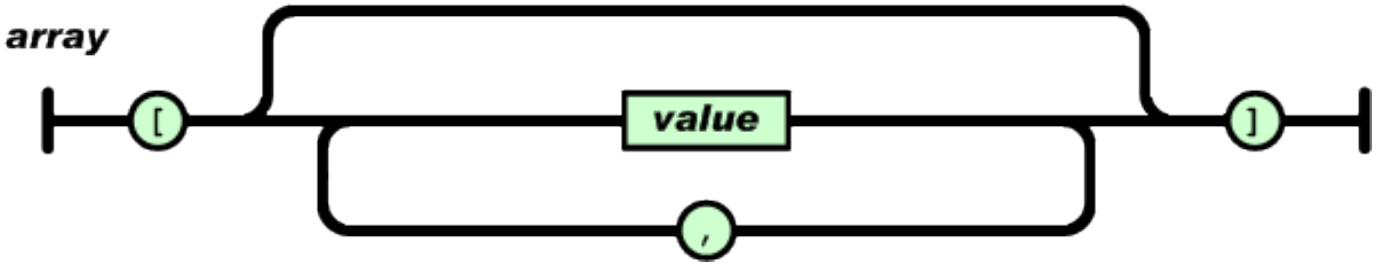
These are universal data structures. Virtually all modern programming languages support them in one form or another. It makes sense that a data format that is interchangeable with programming languages also be based on these structures.

In JSON, they take on these forms :

An *object* is an unordered set of name/value pairs. An object begins with ${}_{(leftbrace)}$ and ends with ${}_{(rightbrace)}$. Each name is followed by ${}_{(colon)}$ and the name/value pairs are separated by ${}_{(comma)}$.

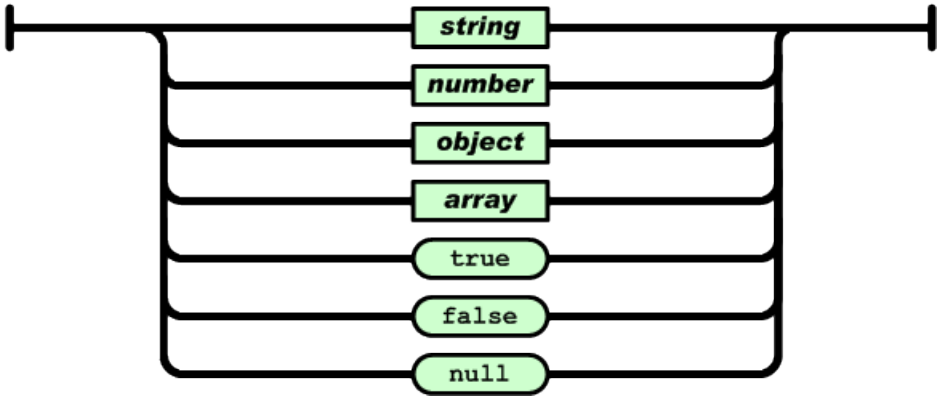


An *array* is an ordered collection of values. An array begins with ${}_{(leftbracket)}$ and ends with ${}_{(rightbracket)}$. Values are separated by ${}_{(comma)}$.

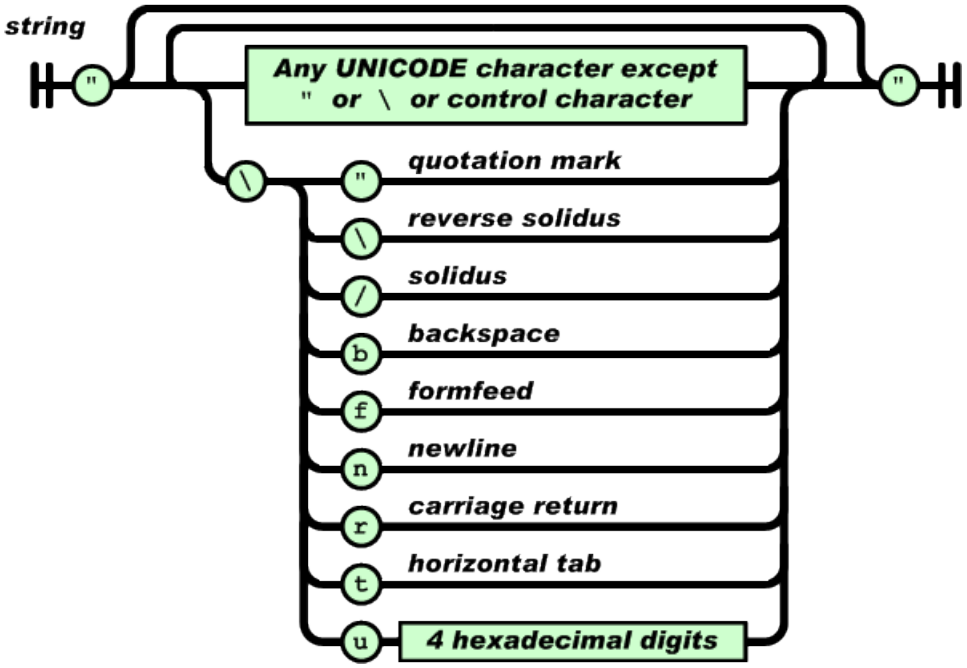


A *value* can be a string in double quotes, or a number, or true or false or null, or an object or an array. These structures can be nested.

value

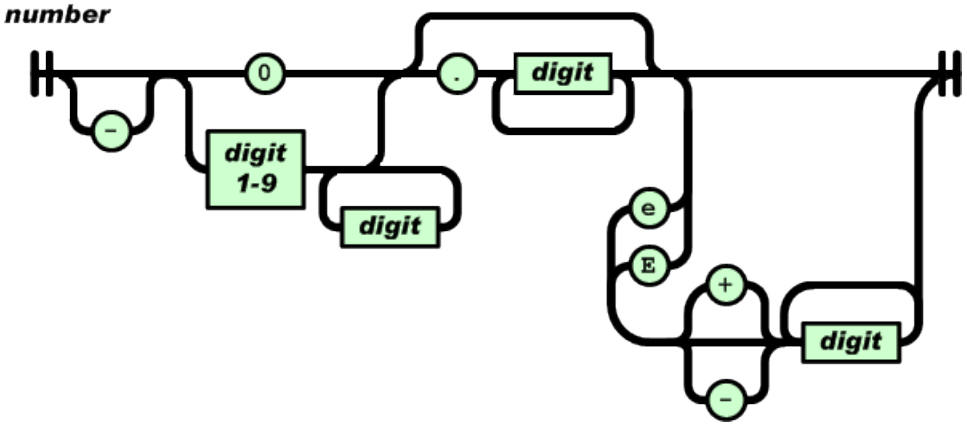


A *string* is a sequence of zero or more Unicode characters, wrapped in double quotes, using backslash escapes. A character is represented as a single character string. A string is very much like a C or Java string.



A *number* is very much like a C or Java number, except that the octal and hexadecimal formats are not used.

number



Whitespace can be inserted between any pair of tokens. Excepting a few encoding details, that completely describes the language.

object
{} ; { members }
members
pair
pair , members
pair
string : value
array
[] ; [elements]
elements
value
value , elements
value
string ; number ;
object ; array ;
true ; false ;
null
string
"" ; " chars "
chars
char
char chars
char
any-Unicode-character-
except-"-or-\-or-
control-character
\" ; \\ ; \/ ; \b ; \f ; \n ; \r ;
\t ; \u four-hex-digits
number
int
int frac
int exp
int frac exp
int
digit
digit1-9 digits
– digit
– digit1-9 digits
frac
. digits
exp
e digits
digits
digit
digit digits
e
e ; e+ ; e-
E ; E+ ; E-