jq JSON processor

CONCEPTS

> Everything is a filter: it takes one input and emits zero or more outputs. The pipe | feeds each output of the left side into the right side. Quote the program in single quotes.

Input JSON file or stdin
↓ parse
Filter .a | .b[] | f
↓ 0..n values
Output pretty by default

Each stage runs once per value it receives

COMMAND-LINE FLAGS

jq -r '*filter*'
Print strings without quotes

jq -c '*filter*'
Compact, one value per line

jq -n '*filter*'
Use null as input, read nothing

jq -s '*filter*' *file*
Slurp all inputs into one array

jq -R '*filter*' *file*
Read each line as a string

jq -e '*filter*'
Exit 1 if last output is false/null, 4 if none

jq --arg *name value* **'$*name*'**
Pass a string variable

jq --argjson *name* **'*json*' '$*name*'**
Pass a JSON variable

SELECTING

.
The whole input

.*key*
Object field

.*key*.*sub*
Nested field

.[*n*]
Array element, negative counts from end

.[*a*:*b*]
Array or string slice

.[]
Every element or value

SELECTING (cont.)

.*key*?
Field, suppress errors

.["*key*"]
Field with odd characters

..
Recurse into every value

.a, .b
Several outputs from one input

FILTERING AND LOGIC

select(*cond*)
Keep inputs where cond is true

map(*f*)
Apply f to each array element

map_values(*f*)
Apply f to each object value

== != < > <= >=
Compare values

and / or / not
Combine conditions

a* // *default
Use default if a is null or false

if *cond* **then** *a* **else** *b* **end**
Conditional

test("*regex*")
Regex match, returns boolean

has("*key*")
Object contains key

values / strings / numbers / objects / arrays
Keep only values of that type, e.g. .. | strings

any(*f*) / all(*f*)
Does some or every element match

f* as $*x* | *expr
Bind each output of f to a variable

CONSTRUCTING

{*a*, *b*: .*c*}
Build an object, shorthand for {a: .a}

[*f*]
Collect all outputs into an array

{(.*key*): .*v*}
Computed key

CONSTRUCTING (cont.)

"*text* \(.*key*)"
String interpolation

.*key* = *v*
Set a field

.*key* |= *f*
Update a field with a filter

del(.*key*)
Remove a field or element

to_entries / from_entries / with_entries(*f*)
Object to key-value pairs and back

ARRAYS AND AGGREGATION

length
Size of array, object, string

keys
Sorted object keys or array indexes

sort / sort_by(.*key*)
Sort array

group_by(.*key*)
Group into sub-arrays

unique / unique_by(.*key*)
Remove duplicates

min_by(.*key*) / max_by(.*key*)
Smallest or largest element

add
Sum numbers or concatenate

first / last / nth(*n*)
Pick by position

flatten
Flatten nested arrays

STRINGS AND FORMATS

tostring / tonumber
Convert type

type
Name of the value type

split("*sep*") / join("*sep*")
Split and join strings

@csv / @tsv
Array to CSV or TSV row (use with -r)