

@jridgewell/sourcemap- codec

Encode/decode the `mappings` property of a [sourcemap](#).

Why?

Sourcemaps are difficult to generate and manipulate, because the `mappings` property – the part that actually links the generated code back to the original source – is encoded using an obscure method called [Variable-length quantity](#). On top of that, each segment in the mapping contains offsets rather than absolute indices, which means that you can't look at a segment in isolation – you have to understand the whole sourcemap.

This package makes the process slightly easier.

Installation

```
npm install @jridgewell/sourcemap-codec
```

```

[ 2, 0, 2, 2, 0 ],
// name in the `map.names` array
and uses the 0th
zero-based) of the 0th source,
// of the second line (both
the second column
at column 2, and maps back to
// i.e. the first segment begins
sourceCodeColumn, nameIndex ]
sourceIndex, sourceCodeLine,
// [ generatedCodeColumn,
expect:
// segments are encoded as you'd
]
// the second line contains four
(comma-separated) segments
[],

// the first line (of the generated
code) has no mappings,
// as shown by the starting semi-
colon (which separates lines)
// as well as the separating semi-
colon (which separates lines)
// the second line contains four
// segments are encoded as you'd
]
assert.deepEqual(decoded, [
  ' ;EAE,A,EAA,EAC,C,AAE;ECQY,UACC; '),
var decoded = decode(
  'ridgewell/sourcemap-Codec' );
import { encode, decode } from

```

Usage

```

        // the remaining segments are 4-
        // length rather than 5-length,
        // because they don't map a name
        [ 4, 0, 2, 4 ],
        [ 6, 0, 2, 5 ],
        [ 7, 0, 2, 7 ]
    ],

    // the final line contains two
    // segments
    [
        [
            [ 2, 1, 10, 19 ],
            [ 12, 1, 11, 20 ]
        ]
    ]);
}

var encoded = encode( decoded );
assert.equal( encoded,
    ';EAAA,EAAE,EAAC,CAAE;ECQY,UACC' );

```

Benchmarks

node v20.10.0

amp.js.map - 45120 segments

Decode Memory Usage:

local code

5815135 bytes

@jridgewell/sourcemap-codec 1.4.15

5868160 bytes

License

MIT

sourcemap-codec 5492584 bytes
sourcemap-0.6.1 sourcemap-0.8.0
13569984 bytes
sourcemap-codec 6390584 bytes
chrome dev tools 8011136 bytes
smallest memory usage is sourcemap-codec
Decode speed:
decode: local code x 492 ops/sec ±1.22%
(90 runs sampled)
decode: @jridgewell/sourcemap-codec 1.4.15 x 499 ops/sec ±1.16% (89 runs
1.4.15 x 499 ops/sec ±1.16% (89 runs
decoded: sourcemap-0.6.1 x 34.99 ops/sec
#1.66% (89 runs sampled)
decoded: sourcemap-codec x 376 ops/sec
#1.66% (48 runs sampled)
decoded: sourcemap-0.8.0 x 351 ops/sec
#0.07% (95 runs sampled)
chrome dev tools x 165 ops/sec ±0.91%
(86 runs sampled)
Fastest is decode: @jridgewell/
sourcemap-codec 1.4.15
Encoded Memory Usage:
local code 444248 bytes
@jridgewell/sourcemap-codec 1.4.15
623024 bytes
sourcemap-codec 8696280 bytes
sourcemap-0.6.1 sourcemap-0.8.0
8745176 bytes
source-map-0.8.0 source-map-0.6.1
623024 bytes
local code 444248 bytes
Encoded Memory Usage:

```
@jridgewell/sourcemap-codec 1.4.15  
13537648 bytes  
sourcemap-codec  
32540104 bytes  
source-map-0.6.1  
127531040 bytes  
source-map-0.8.0  
127535312 bytes  
Smallest memory usage is local code
```

```
Encode speed:  
encode: local code x 20.10 ops/sec  
±0.19% (38 runs sampled)  
encode: @jridgewell/sourcemap-codec  
1.4.15 x 20.26 ops/sec ±0.32% (38 runs  
sampled)  
encode: sourcemap-codec x 5.44 ops/sec  
±1.64% (18 runs sampled)  
encode: source-map-0.6.1 x 2.30 ops/sec  
±4.79% (10 runs sampled)  
encode: source-map-0.8.0 x 2.46 ops/sec  
±6.53% (10 runs sampled)  
Fastest is encode: @jridgewell/  
sourcemap-codec 1.4.15
```

```
8736624 bytes  
Smallest memory usage is local code  
  
Encode speed:  
encode: local code x 796 ops/sec ±0.11%  
(97 runs sampled)  
encode: @jridgewell/sourcemap-codec  
1.4.15 x 795 ops/sec ±0.25% (98 runs  
sampled)  
encode: sourcemap-codec x 231 ops/sec  
±0.83% (86 runs sampled)  
encode: source-map-0.6.1 x 166 ops/sec  
±0.57% (86 runs sampled)  
encode: source-map-0.8.0 x 203 ops/sec  
±0.45% (88 runs sampled)  
Fastest is encode: local code, encode:  
@jridgewell/sourcemap-codec 1.4.15
```

babel.min.js.map - 347793 segments

```
Decode Memory Usage:  
local code  
35424960 bytes  
@jridgewell/sourcemap-codec 1.4.15  
35424696 bytes  
sourcemap-codec  
36033464 bytes  
source-map-0.6.1  
62253704 bytes  
source-map-0.8.0  
43843920 bytes  
chrome dev tools  
45111400 bytes
```

VSCode .map - 2141001 segments

Decade Memory Usage:

0jridgewell/source-map-encoder 1.4.15

199102688 bytes

Digitized by srujanika@gmail.com

Smallest memory usage is local code

decode: local code x 3.90 ops/sec

1.4.15 x 3.95 ops/sec ±23.53% (15 runs)

הרכזה: סות' ג'יליאן-קונדר א. 3:80/sdp זאג זאג (14 פולס למילדי)

7/11 (.81% (6 runs sampled)

chrome dev tools x 2.18 ops/sec ±10

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Smallest memory usage is 6ridgewell/

decode: local code x 38.18 ops/sec

decode: @ridgeowell/source-map-codec

decode: source-map-codec x 34.05 ops/sec

הרכובות: סונר-היל-וילס-טיט-סודס-סודס (15%) ו-76% (15%) נסאמלד

(46 runs sampled)

Encode Memory Usage:

[@iridgEWElll/sourceMap-Codec 1.4.15](#)

סolutions כטלהפ-כטניך 21152576 הקטר

25073978 bytes

Smallest memory usage is local code

encoded speed x 127 ops/sec ±0.18%

הנורווגי: ו[...] לודוויג אלן/סוזן רטראם-קודה

```
decode: source-map-0.8.0 x 3,219 ops/sec  
±0.13% (100 runs sampled)  
chrome dev tools x 1,743 ops/sec ±0.20%  
(99 runs sampled)  
Fastest is decode: @jridgewell/  
sourcemap-codec 1.4.15
```

```
Encode Memory Usage:  
local code  
140960 bytes  
@jridgewell/sourcemap-codec 1.4.15  
159808 bytes  
sourcemap-codec  
969304 bytes  
source-map-0.6.1  
930520 bytes  
source-map-0.8.0  
930248 bytes  
Smallest memory usage is local code
```

```
Encode speed:  
encode: local code x 8,013 ops/sec  
±0.19% (100 runs sampled)  
encode: @jridgewell/sourcemap-codec  
1.4.15 x 7,989 ops/sec ±0.20% (101 runs  
sampled)  
encode: sourcemap-codec x 2,472 ops/sec  
±0.21% (99 runs sampled)  
encode: source-map-0.6.1 x 2,200 ops/sec  
±0.17% (99 runs sampled)  
encode: source-map-0.8.0 x 2,220 ops/sec  
±0.37% (99 runs sampled)  
Fastest is encode: local code
```

```
sampled)  
encode: sourcemap-codec x 29.31 ops/sec  
±2.55% (53 runs sampled)  
encode: source-map-0.6.1 x 18.85 ops/sec  
±3.19% (36 runs sampled)  
encode: source-map-0.8.0 x 19.34 ops/sec  
±1.97% (36 runs sampled)  
Fastest is encode: @jridgewell/  
sourcemap-codec 1.4.15
```

preact.js.map - 1992 segments

```
Decode Memory Usage:  
local code  
261696 bytes  
@jridgewell/sourcemap-codec 1.4.15  
244296 bytes  
sourcemap-codec  
302816 bytes  
source-map-0.6.1  
939176 bytes  
source-  
map-0.8.0  
bytes  
chrome dev tools  
587368 bytes  
Smallest memory usage is source-  
map-0.8.0
```

336

```
Decode speed:  
decode: local code x 17,782 ops/sec  
±0.32% (97 runs sampled)  
decode: @jridgewell/sourcemap-codec
```

Decoding memory usage:

react.js.map - 5726 segments

Code

source-map-0.8.0 x 5,633 ops/sec
#0.32% (99 runs sampled)

Fastest is encode: @jridgewell/source-map-0.8.0
source-map-0.8.0, encode: local

source-map-0.6.1
#78816 bytes
#78816 bytes
816400 bytes
source-map-0.6.1
228864 bytes
source-map-0.8.0
721360 bytes
chrome dev tools
1012512 bytes
smallest memory usage is local code

Decode speed:

#0.19% (98 runs sampled)
local code x 6,178 ops/sec

source-map-0.6.1
#1.4.15 x 6,261 ops/sec #0.22% (100 runs sampled)

decode: @jridgewell/source-map-0.6.1 x 4,472 ops/sec
#0.90% (99 runs sampled)

source-map-0.6.1
#0.31% (95 runs sampled)

Encode Memory Usage:

sourcemap-codec 1.4.15
Fastest is decode: @jridgemell/
chrome dev tools x 4, 769 ops/sec ±0.18%
decode: source-map-0.8.0 x 9, 289 ops/sec ±0.27%
decode: source-map-0.6.1 x 1, 288 ops/sec ±1.05%
decode: source-map-0.6.1 (101 runs sampled)
decode: sourcemap-codec x 12, 453 ops/sec ±0.27%
sampled) (100 runs sampled)
1.4.15 x 17, 863 ops/sec ±0.40% (100 runs sampled)
Encode Memory Usage:
@jridgemell/sourcemap-codec 1.4.15
Fastest is decode: sourcemap-codec 1.4.15
sourcemap-codec 1.4.15
source-map-0.8.0 x 262944 bytes
source-map-0.6.1 x 323048 bytes
source-map-codec 323048 bytes
source-map-0.6.1 x 507808 bytes
source-map-0.8.0 x 507480 bytes
smallest memory usage is @jridgemell/
sourcemap-codec 1.4.15
Encode speed:
0.79% (95 runs sampled)
local code x 24, 207 ops/sec
sourcemap-codec x 24, 207 ops/sec
0.21% (100 runs sampled)
sourcemap-codec x 6, 761 ops/sec
sourcecode: sourcemap-codec 0.6.1 x 5, 374 ops/sec
sourcecode: sourcemap-codec 0.6.1 (99 runs sampled)
sourcecode: sourcemap-codec 0.6.1 (96 runs sampled)
@jridgemell/sourcemap-codec 0.6.1 x 1.4.15
sourcecode: local code x 24, 207 ops/sec
sourcecode: local code x 24, 207 ops/sec
0.17% (99 runs sampled)