Warning: These results are preliminary - use with caution (they may e.g. be from different browser versions).Official results are published on my blog.

The benchmark was run on a Razer Blade 15 Advanced (i7-8750H, 32 GB RAM, Manjaro 5.2.1-1-MANJARO mitigations=off, Chromium 75.0.3770.100 (64-bit))

Which frameworks? Which benchmarks?

Display mode Display results (mean results) Separate keyed and non-keyed

Keyed results

Keyed implementations create an association between the domain data and a dom element by assigning a 'key'. If data changes the dom element with that key will be updated. In consequence inserting or deleting an element in the data array causes a corresponding change to the dom.

Duration in milliseconds ± 95% confidence interval (Slowdown = Duration / Fastest)

Name Duration for...	vanillajs-keyed	vanillajs-wc-keyed	inferno-v7.2.1-keyed	lit-html-v1.1.0-keyed	svelte-v3.5.1-keyed	aurelia-v1.3.0-keyed	preact-v8.4.2-keyed	angular-v8.0.1-keyed	react-v16.8.6-keyed	vue-v2.6.2-keyed	angularjs-v1.7.8-keyed
create rows creating 1,000 rows	87.6 ± 4.8 (1.00)	92.5 ± 1.9 (1.06)	97.2 ± 2.2 (1.11)	103.3 ± 4.0 (1.18)	105.6 ± 3.2 (1.21)	123.3 ± 2.1 (1.41)	119.5 ± 4.9 (1.36)	123.0 ± 3.8 (1.40)	137.4 ± 3.7 (1.57)	136.9 ± 3.0 (1.56)	161.1 ± 4.5 (1.84)
replace all rows updating all 1,000 rows (5 warmup runs).	86.4 ± 1.5 (1.00)	96.0 ± 3.1 (1.11)	90.8 ± 0.9 (1.05)	97.3 ± 1.0 (1.13)	112.2 ± 1.4 (1.30)	114.9 ± 2.2 (1.33)	113.0 ± 2.0 (1.31)	115.6 ± 1.4 (1.34)	108.7 ± 1.6 (1.26)	108.3 ± 1.5 (1.25)	161.1 ± 4.0 (1.86)
partial update updating every 10th row for 1,000 rows (3 warmup runs). 16x CPU slowdown.	111.4 ± 3.9 (1.04)	107.6 ± 4.2 (1.00)	117.3 ± 2.4 (1.09)	143.6 ± 5.9 (1.33)	133.6 ± 3.2 (1.24)	115.3 ± 3.6 (1.07)	151.4 ± 2.0 (1.41)	114.0 ± 5.2 (1.06)	136.7 ± 3.6 (1.27)	200.1 ± 6.0 (1.86)	131.0 ± 2.6 (1.22)
select row highlighting a selected row. (5 warmup runs). 16x CPU slowdown.	16.4 ± 1.4 (1.02)	16.1 ± 1.7 (1.00)	18.1 ± 1.9 (1.12)	24.6 ± 1.7 (1.53)	26.1 ± 1.4 (1.62)	49.4 ± 0.9 (3.07)	41.7 ± 1.7 (2.58)	26.0 ± 2.5 (1.61)	30.4 ± 3.5 (1.89)	116.7 ± 17.1 (7.24)	34.3 ± 2.0 (2.13)
swap rows swap 2 rows for table with 1,000 rows. (5 warmup runs). 4x CPU slowdown.	44.7 ± 4.3 (1.04)	42.8 ± 3.9 (1.00)	47.0 ± 4.0 (1.10)	52.1 ± 4.2 (1.22)	51.1 ± 3.5 (1.19)	47.1 ± 3.7 (1.10)	50.3 ± 2.4 (1.18)	337.7 ± 2.6 (7.88)	344.5 ± 4.5 (8.05)	69.1 ± 6.2 (1.61)	359.4 ± 3.2 (8.39)
remove row removing one row. (5 warmup runs).	36.8 ± 0.3 (1.01)	37.1 ± 0.6 (1.02)	37.9 ± 0.9 (1.04)	38.3 ± 0.9 (1.05)	37.9 ± 0.3 (1.04)	37.7 ± 0.3 (1.04)	39.1 ± 0.4 (1.07)	36.4 ± 0.6 (1.00)	39.7 ± 0.5 (1.09)	44.8 ± 1.7 (1.23)	42.2 ± 2.8 (1.16)
create many rows creating 10,000 rows	861.2 ± 14.4 (1.00)	987.2 ± 24.2 (1.15)	1,002.9 ± 38.2 (1.16)	1,085.7 ± 47.9 (1.26)	1,254.9 ± 31.1 (1.46)	1,245.0 ± 45.2 (1.45)	1,326.5 ± 69.2 (1.54)	1,211.7 ± 30.2 (1.41)	1,443.8 ± 36.0 (1.68)	1,161.5 ± 38.2 (1.35)	1,522.6 ± 43.3 (1.77)
append rows to large table appending 1,000 to a table of 10,000 rows. 2x CPU slowdown	173.0 ± 1.1 (1.00)	194.8 ± 0.8 (1.13)	193.8 ± 1.5 (1.12)	204.6 ± 1.6 (1.18)	231.9 ± 5.1 (1.34)	247.7 ± 4.0 (1.43)	243.6 ± 6.7 (1.41)	247.5 ± 7.8 (1.43)	263.5 ± 4.0 (1.52)	255.8 ± 3.3 (1.48)	313.9 ± 9.5 (1.81)
clear rows clearing a table with 1,000 rows. 8x CPU slowdown	81.5 ± 3.6 (1.00)	85.1 ± 2.4 (1.04)	101.8 ± 2.5 (1.25)	110.6 ± 3.5 (1.36)	120.2 ± 3.5 (1.48)	159.3 ± 2.8 (1.95)	136.1 ± 11.3 (1.67)	232.5 ± 13.7 (2.85)	122.4 ± 4.4 (1.50)	135.3 ± 3.7 (1.66)	316.9 ± 19.5 (3.89)
slowdown geometric mean	1.01	1.05	1.11	1.24	1.31	1.45	1.46	1.74	1.76	1.77	2.17

Startup metrics (lighthouse with mobile simulation)

Name	vanillajs-keyed	vanillajs-wc-keyed	inferno-v7.2.1-keyed	lit-html-v1.1.0-keyed	svelte-v3.5.1-keyed	aurelia-v1.3.0-keyed	preact-v8.4.2-keyed	angular-v8.0.1-keyed	react-v16.8.6-keyed	vue-v2.6.2-keyed	angularjs-v1.7.8-keyed

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consistently interactive a pessimistic TTI - when the CPU and network are both definitely very idle. (no more CPU tasks over 50ms)	1,802.5 ± 0.3 (1.00)	1,802.3 ± 0.1 (1.00)	1,877.5 ± 0.1 (1.04)	1,802.8 ± 0.2 (1.00)	1,802.5 ± 0.1 (1.00)	3,330.7 ± 0.6 (1.85)	1,877.3 ± 0.2 (1.04)	2,703.7 ± 0.4 (1.50)	2,353.2 ± 0.5 (1.31)	2,177.5 ± 0.3 (1.21)	2,703.3 ± 0.1 (1.50)
script bootup time the total ms required to parse/compile/evaluate all the page's scripts	16.0 ± 0.0 (1.00)	16.0 ± 0.0 (1.00)	16.0 ± 0.0 (1.00)	16.0 ± 0.0 (1.00)	16.0 ± 0.0 (1.00)	16.0 ± 0.0 (1.00)	16.0 ± 0.0 (1.00)	52.0 ± 70.5 (3.25)	16.0 ± 0.0 (1.00)	16.0 ± 0.0 (1.00)	52.3 ± 41.1 (3.27)
total kilobyte weight network transfer cost (post-compression) of all the resources loaded into the page.	147.2 ± 0.0 (1.01)	148.0 ± 0.0 (1.02)	163.1 ± 0.0 (1.12)	151.1 ± 0.0 (1.04)	145.7 ± 0.0 (1.00)	439.0 ± 0.0 (3.01)	152.5 ± 0.0 (1.05)	295.5 ± 0.0 (2.03)	260.7 ± 0.0 (1.79)	211.0 ± 0.0 (1.45)	324.1 ± 0.0 (2.22)
slowdown geometric mean	1.00	1.01	1.05	1.01	1.00	1.77	1.03	2.15	1.33	1.21	2.22

Memory allocation in MBs ± 95% confidence interval

Name	vanillajs-keyed	vanillajs-wc-keyed	inferno-v7.2.1-keyed	lit-html-v1.1.0-keyed	svelte-v3.5.1-keyed	aurelia-v1.3.0-keyed	preact-v8.4.2-keyed	angular-v8.0.1-keyed	react-v16.8.6-keyed	vue-v2.6.2-keyed	angularjs-v1.7.8-keyed
ready memory Memory usage after page load.	1.8 ± 0.0 (1.00)	1.8 ± 0.0 (1.01)	1.9 ± 0.0 (1.04)	1.9 ± 0.0 (1.05)	1.8 ± 0.0 (1.02)	3.8 ± 0.0 (2.09)	1.9 ± 0.0 (1.03)	4.8 ± 0.0 (2.66)	2.2 ± 0.0 (1.23)	2.2 ± 0.1 (1.20)	2.9 ± 0.0 (1.59)
run memory Memory usage after adding 1000 rows.	2.4 ± 0.0 (1.00)	2.7 ± 0.0 (1.11)	4.2 ± 0.0 (1.73)	4.1 ± 0.0 (1.69)	3.8 ± 0.0 (1.57)	8.4 ± 0.0 (3.45)	4.8 ± 0.0 (1.98)	9.2 ± 0.0 (3.77)	6.9 ± 0.0 (2.81)	7.0 ± 0.0 (2.88)	10.7 ± 0.0 (4.37)
update eatch 10th row for 1k rows (5 cycles) Memory usage after clicking update every 10th row 5 times	2.9 ± 0.1 (1.00)	3.0 ± 0.0 (1.05)	4.6 ± 0.0 (1.60)	4.5 ± 0.0 (1.57)	4.2 ± 0.0 (1.45)	8.7 ± 0.0 (3.01)	5.1 ± 0.0 (1.79)	9.5 ± 0.0 (3.30)	8.0 ± 0.0 (2.77)	7.4 ± 0.0 (2.57)	11.0 ± 0.0 (3.81)
replace 1k rows (5 cycles) Memory usage after clicking create 1000 rows 5 times	3.2 ± 0.1 (1.00)	3.3 ± 0.0 (1.04)	4.8 ± 0.0 (1.53)	4.8 ± 0.0 (1.51)	4.4 ± 0.0 (1.39)	9.1 ± 0.0 (2.89)	7.6 ± 0.0 (2.39)	9.8 ± 0.1 (3.11)	8.8 ± 0.0 (2.79)	7.6 ± 0.0 (2.41)	11.5 ± 0.0 (3.63)
creating/clearing 1k rows (5 cycles) Memory usage after creating and clearing 1000 rows 5 times	3.2 ± 0.1 (1.04)	3.1 ± 0.0 (1.00)	3.2 ± 0.0 (1.04)	3.4 ± 0.0 (1.13)	3.1 ± 0.0 (1.00)	6.2 ± 0.1 (2.03)	5.6 ± 0.0 (1.85)	6.5 ± 0.0 (2.12)	4.6 ± 0.0 (1.52)	3.7 ± 0.0 (1.22)	4.5 ± 0.0 (1.48)
slowdown geometric mean	1.01	1.04	1.35	1.36	1.26	2.64	1.74	2.94	2.10	1.92	2.70