The `l3benchmark` package
Experimental benchmarking

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1 Benchmark

\g_benchmark_duration_target_fp

This variable (default value: 1) controls roughly for how long \benchmark:n will repeat code to more accurately benchmark it. The actual duration of one call to \benchmark:n typically lasts between half and twice \g_benchmark_duration_target_fp seconds, unless of course running the code only once already lasts longer than this.

\g_benchmark_time_fp
\g_benchmark_ops_fp

These variables store the results of the most recently run benchmark. \g_benchmark_time_fp stores the time \TeX{} took in seconds, and \g_benchmark_ops_fp stores the estimated number of elementary operations. The latter is not set by \benchmark_tic:/.\benchmark_toc:.

\benchmark_once:n \benchmark_once_silent:n {⟨code⟩}
\benchmark_once:n {⟨code⟩}

Determines the time \g_benchmark_time_fp (in seconds) taken by \TeX{} to run the ⟨code⟩, and an estimated number \g_benchmark_ops_fp of elementary operations. In addition, \benchmark_once:n prints these values to the terminal. The ⟨code⟩ is run only once so the time may be quite inaccurate for fast code.

\benchmark:n \benchmark_silent:n
\benchmark:n {⟨code⟩}

Determines the time \g_benchmark_time_fp (in seconds) taken by \TeX{} to run the ⟨code⟩, and an estimated number \g_benchmark_ops_fp of elementary operations. In addition, \benchmark:n prints these values to the terminal. The ⟨code⟩ may be run many times and not within a group, thus code with side-effects may cause problems.

\benchmark_tic:
\benchmark_toc:

When it is not possible to run \benchmark:n (e.g., the code is part of the execution of a package which cannot be looped) the tic/toc commands can be used instead to time between two points in the code. When executed, \benchmark_tic: will print a line to the terminal, and \benchmark_toc: will print a matching line with a time to indicate the duration between them in seconds. These commands can be nested.
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