The \l3benchmark package
Experimental benchmarking

The \LaTeX Project∗
Released 2024-03-14

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 \benchmark_tic: \benchmark_toc:

\benchmark_once:n \benchmark_once_silent:n \langle code \rangle
\benchmark_once:n \langle code \rangle

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

\benchmark_n \benchmark_silent:n
\benchmark_n \langle code \rangle
\benchmark_n \langle code \rangle

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

\benchmark_tic: \benchmark_toc: \benchmark_tic: (slow code) \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.

∗E-mail: latex-team@latex-project.org
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