The \texttt{l3benchmark} package
Experimental benchmarking
The \LaTeX\ Project\textsuperscript{*}
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1 Benchmark

\begin{Verbatim}
\texttt{\g_benchmark_duration_target_fp}
\end{Verbatim}

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

\begin{Verbatim}
\texttt{\g_benchmark_time_fp} \\
\texttt{\g_benchmark_ops_fp}
\end{Verbatim}

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

\begin{Verbatim}
\texttt{\benchmark_once:n} \\
\texttt{\benchmark_once_silent:n}
\end{Verbatim}

\begin{Verbatim}
\texttt{\benchmark_once_silent:n \langle\texttt{code}\rangle}
\texttt{\benchmark_once:n \langle\texttt{code}\rangle}
\end{Verbatim}

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

\begin{Verbatim}
\texttt{\benchmark:n} \\
\texttt{\benchmark_silent:n}
\end{Verbatim}

\begin{Verbatim}
\texttt{\benchmark:n \langle\texttt{code}\rangle}
\texttt{\benchmark_silent:n \langle\texttt{code}\rangle}
\end{Verbatim}

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

\begin{Verbatim}
\texttt{\benchmark_tic:} \\
\texttt{\benchmark_toc:}
\end{Verbatim}

\begin{Verbatim}
\texttt{\benchmark_tic: (slow code) \benchmark_toc:}
\end{Verbatim}

When it is not possible to run \texttt{\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, \texttt{\benchmark_tic:} will print a line to the terminal, and \texttt{\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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