Hide Proofs LaTeX Package
Define a `proof*` environment to hides proofs based on document mode

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Abstract

The `hideproofs` package provides a convenient way to conditionally hide or display proof contents in LaTeX documents based on the document mode (`draft`, `final`, or neither). It defines a starred proof environment `proof*` that behaves like the standard `proof` environment from `amsthm`, but optionally hides its body and replaces it with a customizable message. The motivation for this package is to reduce the clutter in large files by omitting long proofs, allowing authors to focus their attention on results or proofs that are currently works in-progress. Issues and feature requests can be submitted on GitHub at github.com/pwintz/hideproofs.

1 Requirements

This package requires LaTeX3 support (`expl3`, `l3keys2e`).

2 Usage

To use the `hideproofs` package, load it in your document preamble:

```
\usepackage{hideproofs}
```

Then, replace any `proof` environments you want to hide with a `proof*` environment:

```
\begin{proof*}
  This is the proof that will be hidden based on the mode.
\end{proof*}
```

By default, proofs are hidden in `draft` and default (non-`draft`, non-`final`) document modes, and shown only in `final` mode. To compile your document `draft` mode, pass `draft` as a class option:

```
\documentclass[draft]{article}
```

Similarly for `final`:

```
\documentclass[draft]{article}
```

The default mode has neither `draft` nor `final` in the class options:

```
\documentclass{article}
```

3 Package Options

Several package options allow you to customize the hiding behavior and the appearance of the message that replaces hidden proofs.

Hiding options

The following options control when proofs are hidden or shown, based on the document class options:

hideInDraft Hide proofs in `draft` mode. Default: `true`.

hideInDefault Hide proofs in the default mode (neither `draft` nor `final`). Default: `true`.

hideInFinal Hide proofs in `final` mode. Default: `false`.

show Show all proofs, regardless of mode-specific settings.

hide Hide all proofs in `proof*` environments, regardless of mode-specific settings.

Message options

The following options modify how the

message=*string* Sets the message shown when proofs are hidden.
Default: `Proof hidden.`

color=*name* Sets the color of the message if the `color` package is loaded. This option has no effect if the 'color' package is not loaded.
Default: `blue`.

3.1 Optional Environment Argument

The `proof*` environment supports an optional title, just like `proof` to change the rendered text from "Proof.":

```
\begin{proof*}[Sketch of proof]
This sketch will be hidden in draft mode.
\end{proof*}
```

Example

Consider the following example:

```
\documentclass{article}
\usepackage{hideproofs}
\usepackage{color}

\begin{document}

  \begin{proof}
    This is a non-starred proof environment.
  \end{proof}

```

```
11    \begin{proof*}
12      This is a starred proof environment.
13    \end{proof*}
14
15    \begin{proof*}[Proof sketch]
16      This is a starred proof environment with an optional argument.
17    \end{proof*}
18
19  \end{document}
```

The output is

Proof. This is a non-starred proof environment.	☐
Proof. Proof hidden.	☐
Proof sketch. Proof hidden.	☐

(If the `color` package is not loaded, then the message text is black.)

Changing the document class options to

```
1  \documentclass[final]{article}
```

produces

Proof. This is a non-starred proof environment.	☐
Proof. This is a starred proof environment.	☐
Proof sketch. This is a starred proof environment with an optional argument.	☐

The appearance of the "proof hidden" text can be changed by setting the `message` and `color` options:

```
1  \usepackage[
2    message={Proof omitted.},
3    color=red
4  ]{hideproofs}
```

Note that the `message` string must be wrapped in brackets if it contains spaces. The result is

Proof. This is a non-starred proof environment.	☐
Proof. Proof omitted.	☐
Proof sketch. Proof omitted.	☐

4   License

This package is released under the LaTeX Project Public License, which is distributed from CTAN archives in the directory macros/latex/base/lppl.txt.

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