The `moveproofs` Package

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1 Package Overview

Welcome to the `moveproofs` package, which will let you write your proofs inline with your document, then automatically move them to the appendix. To use the package:

1. Write down and label theorems:

   \begin{theorem}**\label**{my_theorem}
       The world is flat.
   \end{theorem}

2. Prove your theorems using the `\makeproof` command:

   \makeproof{my_theorem}{
       My worldview does not permit a round Earth.
       Therefore, the world is flat.
   }

3. Include the `moveproofs` package (\usepackage{moveproofs}) and alter its options to choose how proofs are displayed:

   - `location = [inline | appendix]`. Controls whether proofs are displayed inline (where you wrote the `\makeproof` command) or in the appendix of the document. This option is required.
   - `appendixsectionname = NAME`. Customizes the name of the appendix section in which proofs are displayed ('Proofs' by default).
   - `prependtoappendix = [true | false]`. Controls whether proofs are inserted before existing appendix sections or after them (false by default: proofs are inserted at the end of the appendix).
   - `manual = [true | false]`. If this option is set to `true` and `location = appendix`, proofs will not automatically be inserted in the appendix. Rather, you can control where proofs are inserted with two commands:
     - `\appendixproofsection{Section Name}`: creates a section in the appendix that appears only if `location = appendix`.
     - `\appendixproof{theorem_label}`: Inserts the proof you wrote inside `\makeproof{theorem_label}` (again, only if `location = appendix`).

4. Use the `\appendixproofnotice[MESSAGE]` command to notify readers that proofs will appear in the appendix. Default text (or the replacement text given in the optional `MESSAGE` argument) will appear only if `location = appendix`.

2 Demonstration

The remainder of this document demonstrates the functionality of the `moveproofs` package. Feel free to modify the source to see how the options affect the document's appearance.

First, we use the `\appendixproofnotice` command to notify readers that proofs will appear in the appendix. If `location = appendix`, the notification will appear in bold in the following sentence of this paragraph (boldface is for emphasis, not provided by the command). **Proofs are all in the appendix.**

Now, let's prove some theorems! The `location` package option controls whether the proofs appear inline or in the appendix.

Theorem 1 *For any $\delta \in (0,1)$, with probability $1 - \delta$, proofs are useful.*

We can also use the moveproofs package to prove statements that aren't theorems. Note the reference to the corollary when this proof is moved to the appendix (thanks to the `cleveref` package).

Corollary 2 *For any $\delta \in (0,1)$, with probability $1 - \delta$, corollaries are useful.*

A   Existing Appendix

The `moveproofs` package won't alter existing appendix material. Toggle the `prependtoappendix` option to choose whether proofs are placed before or after the existing appendix. Alternatively, set `manual = true` to turn off automatic proof insertion into the appendix and use the `\appendixproofsection{Section Name}` and `\appendixproof{theorem_label}` commands to manually specify where the proofs should go.

B   Our Proofs

B.1   Proof of Theorem 1

Proof Proofs are great! Therefore, we have our result.   ■

B.2   Proof of Corollary 2

Proof Corollaries support proofs. Therefore, we have our result.   ■