

scrambledenvs – Create and print scrambled environments

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Abstract

The `scrambledenvs` package allows you to create scrambled environments and print them out later, such as scrambled hints or solutions.

1 Overview

This package was designed to mark hints at a location¹ and print them out later in a random order.²

There is an outer environment which typesets the label. Inside it you should place the inner environment **and only the inner environment**. Inside this inner environment, you write the contents of your hint. This will typeset the hint number. Finally, you may print the hints at some later location in a randomized order.

2 Usage

If you want your solutions to be scrambled, call

```
\usepackage{scrambledenvs}
```

If you want to disable all scrambling for any reason, call

```
\usepackage[noscramble]{scrambledenvs}
```

`\newsrambledenv` In order to create a new scrambled environment, one should call `\newsrambledenv{envname}`. This requires that the macros `\envname` and `\envnames` be undefined, as well as the counters `envnamecount` and `envnametempcount` be undefined, as `\newsrambledenv` will define these.

¹It can generalize beyond hints, but I thought it best to start off with a specific example..

²Though you do have the ability to make the order not random: pass in `noscramble` to the package.

This defines the environments ‘`envname`’s and ‘`envname`’, and the macro `\printenvname`, where ‘`envname`’ denotes the value passed in to `\newsrambledenv`. Because this will get confusing fast, we will just assume that ‘`envname`’ is `hint`, since this generalizes quite easily.

Thus in this example, the environments `hints` and `hint` are defined, and the macro `\printhint` is defined.

If any of these macros or counters are defined, the package will throw a custom error.

`hints` This is the outer environment. Depending on how many `hint` environments are put inside it, it will either typeset **Hints:** or **Hint:** with the numerical labels of the passed in hints following it. You should put in nothing but the inner environment `hint`. (See the examples for a correct usage.)

`hint` This is the inner environment. The inner environment `hint` **must** be inside the outer environment `hints`.

`\printhint` To print out the hints (either in a random or fixed order, depending on whether the option `nosrambled` is passed in), just write `\printhint`.
`;/main;`

2.1 Formatting

There are five pieces of configurable formatting. They are roughly ordered by the order they would appear in a document.

`\hintlabel` First is the label “Hint(s)” which gets printed by the outer environment `hints`. Capitalization and singular/plural form is automatically taken care of. To change it, write `\hintlabel{new label}` to get “New label(s)” as the new label.

By default the label is the environment name capitalized. This may be useful if your environment names are shortened: for instance, you could change the label of `solu` to “Solution(s)” instead.

`\hintlabelfont` Second is the font of the label. To change it, write `\hintlabelfont{new label font}` to apply the new font. By default the font applied is `\bfseries`.

Because this macro only takes in one argument, it is advisable to use `\bfseries` instead of `\textbf`, for instance.

`\hintreffont` Sets the font of the numerical references the follows the label.

Because the references are generated with `\ref`, you must change hyperref colors in order to change the color. `\color` will not work.

`\hintprintenv` When the randomized hints are printed at the end, the actual printed contents are wrapped around an environment. By default the beginning of the environment is `\begin{enumerate}` and the end is `\end{enumerate}`.

To change these, write `\hintprintenv{new env beginning}{new env ending}`.

`\hintprintitem` Each item of the randomized hints is printed with `\hintprintitem` at the beginning. By default it is `\item`.

The way this is defined also allows for changing the font of the output. So if you want to bold the hint text, you could write `\hintprintitem{\bfseries\item}`.

You may also change the defaults of all these pieces **except the label** with the following macros. (The names of these macros make it impossible to pass in `\newscrambledenv{default}`, but there is no reason to do such a thing anyway.)

If, at any point, you change the defaults, **all** fonts/formats that have not been custom-set will be changed, including those of previously defined scrambled environments.

Usage is identical to configuring formatting for specific scrambled environments.

<code>\defaultlabelfont</code>	Changes the default label font.
<code>\defaultreffont</code>	Changes the default reference font.
<code>\defaultprintenv</code>	Changes the default print environment.
<code>\defaultprintitem</code>	Changes the formatting of the default print item.

3 Examples

In all of the examples, we use `hint` as our generic scrambled environment.

3.1 A barebones example

```
\documentclass{article}
\usepackage{scrambledenvs}
\newscrambledenv{hint}

\begin{document}
This is a really hard problem, so we provide hints.\begin{hints}
\begin{addhint}
This is a helpful hint.
\end{addhint}
\begin{addhint}
And another one!
\end{addhint}
\end{hints}

\section{Hints printed}

\printhint

\end{document}
```

3.2 Changing hint formatting

We omit the fluff from last time, such as parts of the preamble and the document.

3.3 Changing default formatting

Change History

v1.0.0
General: Initial version 1