The somedefs toolkit package

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long time ago in a different century...

Overview

This is an example 'programmers toolkit' package, for use by package writers. It allows package writers to provide options which switch definitions on and off. For example, a package fred might define a large number of commands, including \foo and \baz, so:

\usepackage{fred}

would use a lot of memory, even if \foo and \baz were the only commands needed. However, if the author of fred used the somedefs package, then the user would be able to say:

\usepackage[only,foo,baz]{fred}

and only the commands \foo and \baz would be defined.

To use the somedefs package in your own packages or classes, you say:

\RequirePackage{somedefs}

You can then use four new commands:

- \UseAllDefinitions which says that all the commands in the file should be defined.
- \UseSomeDefinitions which says that only the commands specified by \UseDefinition should be defined.
- \UseDefinition{ $\langle name \rangle$ } which says that the command \name should be defined.
- \ProvidesDefinition{ $\langle definition \rangle$ } which provides one definition, of the form \definingcommand{\command}...

For example, the package fred could say:

```
\RequirePackage{somedefs}
\UseAllDefinitions
\DeclareOption{only}{\UseSomeDefinitions}
\DeclareOption*{\UseDefinition{\CurrentOption}}
\ProcessOptions
\ProvidesDefinition{\newcommand{\foo}{\ldots\}}
\ProvidesDefinition{\newcommand{\baz}{\ldots\}}
```

One of the commands \UseAllDefinitions or \UseSomeDefinitions should always be used. You may have some commands which need other commands, in which case you have to declare the options by hand. For example, if the command \bar needs the command \foo, you could say:

```
\DeclareOption{bar}{\UseDefinition{bar}\UseDefinition{foo}}
```

For a longer example of the use of the somedefs package, look at the rawfonts package.

Implementation

The driver for the documentation you're now reading.

```
 \begin{tabular}{ll} $$ \arrowvertex & \arrowvert
```

\UseSomeDefinitions TI
\UseAllDefinitions \@
\UseDefinition \F
\ProvidesDefinition \U
\@providesdefinition If
\@provides@definition 10
\@unprovided@definition 11

The package works by having \UseDefinition{ $\langle name \rangle$ } define \name to be \QunprovidedQdefinition. If \UseSomeDefinitions has been called, then \ProvidesDefinition looks to see if \name is \QunprovidedQdefinition. If \UseAllDefinitions has been called, then \ProvidesDefinition does nothing. If neither has been called, then \ProvidesDefinition produces an error message.

```
10 \ensuremath{\mbox{\sc N}} 10 \ensuremath{\mbox{\sc N}}
```

```
11 \let\ProvidesDefinition\@providesdefinition
12 }
13 \def\UseAllDefinitions{%
14 \let\ProvidesDefinition\@firstofone
15 }
16 \def\UseDefinition#1{%
```

```
\verb|\expandafter\le | expandafter | endcsname | @unprovided @definition| | expandafter | endcsname | end
17
18 }
19 \def\ProvidesDefinition#1{%
                  \PackageError{somedefs}%
                         21
                         {The package which used the 'somedefs' package has an error.}%
^{22}
23 }
24 \ensuremath{\tt QprovidesQdefinition\#1{\tt QprovidesQdefinition\#1{\tt Nelax}}}
                  \@provides@definition}
25
26 \ensuremath{\mbox{\sc definition}\#1\#2\#3\ensuremath{\mbox{\sc definition}}\%}
                  \ifx#2\@unprovided@definition
27
28
                             #1#2#3%
29
30 }
31 \def\@unprovided@definition{%
                  \PackageError{somedefs}%
32
                          {Package 'somedefs' error: this command was never defined}%
33
                         {You have requested a command which does not exist.}\%
34
35 }
36 \ensuremath{\verb| Qonlypreamble| UseSomeDefinitions}
37 \@onlypreamble\UseAllDefinitions
38 \@onlypreamble\UseDefinition
39 \@onlypreamble\ProvidesDefinition
40 \@onlypreamble\@providesdefinition
41 \@onlypreamble\@provides@definition
That's it!
42 \langle / \mathsf{package} \rangle
```