The `vdmlisting` Package

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Abstract

The `vdmlisting`package is a Vienna Development Method (VDM) source code printer for LaTeX. The package uses the listings package and provides a number of new listing environments for the three VDM dialects: VDM-SL,VDM-PP and VDM-RT. If one wants to typeset VDM with a mathematical syntax instead of the ASCII syntax used here then use the `vdm` package instead.

Contents

1 Getting started

Before using the `vdmlisting`package, you should be familiar with the LaTeXtypesetting system and the listings package which this packages depends upon.

1.1 A minimal example

Here is a minimal file for `vdmlisting`showing a VDM function:

```
\documentstyle{article}
\usepackage{vdmlisting}

\begin{document}
  \begin{vdmsl}
      add : int * int ->
     add(a,b) == a+b;
  \end{vdmsl}
\end{document}
```

1.2 Typesetting VDM with listings

This package defined three listing environments that can be used to typeset VDM. The environments are defined as:

```
\begin{listing-name}[options]
  VDM specification
\end{listing-name}
```

The `options` are parsed directly to the `lstlisting` environment and could be used to e.g. set the label or caption like `label=lst:mymodel,caption=My special specification`. The `listing-name` may be any of the following:

vdmsl The `vdmsl` environment configures the listing environment to use the VDM-SL language definition:

```
\begin{vdmsl}[label=lst:mymodule,caption=My module]
  module MyModule
  end MyModule
\end{vdmsl}
```

it typesets as follows:

```
module MyModule
end MyModule
```

Listing 1: My module

vdmpp The `vdmpp` environment configures the listing environment to use the VDM-PP language definition:

```
\begin{vdmpp}[label=lst:myclass,caption=My Class]
  class MyClass
  end MyClass
\end{vdmpp}
```

it typesets as follows:

```
class MyClass
end MyClass
```

Listing 2: My Class

vdmrt The `vdmrt` environment configures the listing environment to use the VDM-RT language definition:

```
\begin{vdmrt}[label=lst:myclass,caption=My System]
  system MySystem
  end MySystem
\end{vdmrt}
```

it typesets as follows:

```
system MySystem
end MySystem
```

Listing 3: My System

Furthermore, the environments are configured with `escapeinside={(*@}{@*)}` enabling the command `\vdmnotcovered{ VDM specification}` to be used to mark execution coverage for the VDM specification displayed.

1.3 Previous versions

This package includes all environments from the previous version `1.0` of this package. All environments and language definitions can be post fixed with `_10` to get the previous version.

2 Package loading

As usual in LATEX, the package is loaded by `\usepackage[optionsi]{vdmlisting}`, where [optionsi] is optional and gives a comma separated list of options:

color This loads the `color` package and defines the `vdmnotcovered` command to use a red color.

notimes This package loads the `times` package, by default, so if you do not want that to happen use this option to skip the load of `times`.

3   Installing the `vdmlisting` files

Place the file `vdmlisting.sty` in your standard directory for LaTeX style files (your system administrator will know where this is).

4   The License

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