MLT_EX

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Abstract

MLT_EX is a special *LaTeX* package for writing MLRISC documentation. It is similar to the *latex2html* tool except that MLT_EX has special environments for documenting Standard ML code. In addition, there is an accompanying tool called *mltex2html* for generating HTML pages.

1   MLT$_E$X

MLT$_E$X is a special *LaTeX* package for writing MLRISC documentation. It is similar to the *latex2html* [**?**] tool except that MLT$_E$X has special environments for documenting Standard ML code. In addition, there is an accompanying tool called *mltex2html* for generating HTML pages. This page, for example, is formatted by MLT$_E$X.

1.1   Macros

Environments defined in MLT$_E$X are:

SML This environment is used to display MLRISC code. For example,

```
\begin{SML}
   datatype 'a tree =
       EMPTY
   |   LEAF of 'a
   |   NODE of 'a * 'a tree * 'a tree
\end{SML}
```

generates:

```
datatype 'a tree =
    EMPTY
|   LEAF of 'a
|   NODE of 'a * 'a tree * 'a tree
```

methods This environment can be used to document a list of methods to an interface. For example,

```
\begin{methods}
   \sml{+ : int * int -> int} &  addition \\
   \sml{- : int * int -> int} &  subtraction \\
   \sml{* : int * int -> int} &  multiplication \\
   \sml{/ : int * int -> int} &  division \\
\end{methods}
```

generates:

```
+ : int * int -> int    addition
- : int * int -> int    subtraction
* : int * int -> int    multiplication
/ : int * int -> int    division
```

Macros defined in MLT$_E$X are:

sml This macro can be used inline for formating SML code fragment. For example the fragment

```
\begin{quotation}
\begin{tabular}{l}
 \sml{val toString : int -> string}  \\
 \sml{val map : ('a -> 'b) -> 'a list -> 'a list}
\end{tabular}
\end{quotation}
```

is formated as:

```
val toString : int -> string
val map : ('a -> 'b) -> 'a list -> 'a list
```

href This macro generates a html hypertext link to a page within the same logical document. For example, we can say

```
\localhref{url}{text}
```

mlrischref This macro generates a html hypertext link to MLRISC code. The general syntax is:

```
\mlrischref{path}{text}
```

The `path` parameter is a relative path in the MLRISC hierarchy.

externhref This macro generates an external hypertext link to a document outside of the same logical document. The general syntax is:

```
\externhref{url}{text}
```

newdef This macro defines a new term. The general syntax is

```
\newdef{text}
```

1.2   Other Stuff

In addition to the above, MLT$_E$X understands the following LaTeX environments and macros, and will translate them into HTML equivalents.

```
\begin{itemize} \end{itemize}
\begin{description} \end{description}
\begin{enumerate} \end{enumerate}
\verb
\begin{tabular} \end{tabular}
\begin{figure} \end{figure} \caption
\begin{wrapfigure} \end{wrapfigure}
\section \subsection \subsubsection \paragraph
\ref \label
\noindent \linebreak
\psfig
```

1.3   Bugs and Shortcomings

There are too many to list. But the things to watch for are:

- A macro and all its arguments must appear in the same line.

- The tool can get confused if too many macros appear on the same line.

- Nesting of macros may not be handled correctly.

- Math mode is not robust.

Please send bug fixes and comments to Allen Leung[1].

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[1]url: `mailto:leunga@cs.nyu.edu`

References