

The rule-D Package

Rule Functions*

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At L^AT_EX 2_ε you have command `\rule` to make horizontal and vertical rules and even boxes. Currently there's no L3 command for this. This module provides two new L3 functions for rules. The “-D” in the module name indicates, that currently the implementation uses deprecated functions like `\tex_vrule:D`. Nevertheless, the new rule functions aren't declared to be deprecated.

This package has been made only, because GS1 needs such rule functions. So maybe it's simply a helper package for GS1.

```
\rule:nn \rule:nnn <{dimexpr_raise}> <{dimexpr_width}> <{dimexpr_height}>
\rule:nnn \rule:nn <{dimexpr_width}> <{dimexpr_height}>
```

Draw a rule of width $\langle dimexpr_width \rangle$, height $\langle dimexpr_height \rangle$ and raise it by $\langle dimexpr_raise \rangle$. If the $\langle dimexpr_raise \rangle$ has not been given, the rule will be drawn at the base line.

1 rule-D implementation

```
1 <{*package}>
2 <{@@=rule}>

   First of all we have to setup package information:
3 \ProvidesExplPackage
4   {rule-D} {\ExplFileDate} {\ExplFileVersion}
5   {experimental~L3~rule~functions}

   \rule:nn
   \rule:nnn
6 \cs_new:Npn \rule:nn #1#2
7   {
8     \rule:nnn { \c_zero_dim } { #1 } { #2 }
9   }
10 \cs_new:Npn \rule:nnn #1#2#3
11   {
```

Following line is same like `\leavevmode`, but it's L^AT_EX3 instead of plainT_EX.

```
12   \hbox_unpack_drop:N \c_empty_box
13   \hbox:n
14     {
15     \tex_vrule:D width \dim_eval:n { #2 }
```

*This file describes v23, last revised 2021/06/17.

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```

16             height \dim_eval:n { #1 + #3 }
17             depth -\dim_eval:n { #1 }
18         }
19     }

```

(End definition for `\rule:nn` and `\rule:nnn`. These functions are documented on page 1.)

```

20 \endpackage

```

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