The **rule-D** Package
Rule Functions*

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At LaTeX 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`

`\rule:nnn` {⟨*dimexpr*$_{raise}$⟩} {⟨*dimexpr*$_{width}$⟩} {⟨*dimexpr*$_{height}$⟩}
`\rule:nn` {⟨*dimexpr*$_{width}$⟩} {⟨*dimexpr*$_{height}$⟩}

Draw a rule of width ⟨*dimexpr*$_{width}$⟩, height ⟨*dimexpr*$_{height}$⟩ and raise it by ⟨*dimexpr*$_{raise}$⟩. It the ⟨*dimex*$_{raise}$⟩ has not been given, the rule will be drawn at the base line.

1 **rule-D** implementation

First of all we have to setup package information:

```
1 \ProvidesExplPackage
2   {rule-D} {\ExplFileDate} {\ExplFileVersion}
3   {experimental~L3~rule~functions}
```

`\rule:nn`
`\rule:nnn`

```
4 \cs_new:Npn \rule:nn #1#2
5   {
6     \rule:nnn { \c_zero_dim } { #1 } { #2 }
7   }
8 \cs_new:Npn \rule:nnn #1#2#3
9   {
```

Following line is same like `\leavevmode`, but it's LaTeX3 instead of plainTeX.

```
10     \hbox_unpack_clear:N \c_empty_box
11     \hbox:n
12       {
13         \tex_vrule:D width \dim_eval:n { #2 }
14                     height \dim_eval:n { #1 + #3 }
15                     depth -\dim_eval:n { #1 }
16       }
17   }
```

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

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