

The notebeamer Package*

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Released 2025-02-12 v4.0D

1 Introduction

The `notebeamer` package provides an easy way to input slides on note pages quickly for making annotations, developed by `expl3` based on `tikz` and `l3graphics`. It is compatible with `TEX Live 2019` or later distributions and supports compilation methods such as `pdfLATEX`, `XLLATEX`, and `LuaLATEX`, etc.

2 Usage

To load this package, write the line

```
\usepackage{notebeamer}
```

```
\includebeamer [⟨keyvals⟩] {⟨filename⟩} [⟨keyvals⟩]
```

The `\includebeamer` command can create pages with note lines, and import the specific pages of the `.pdf` file on the left side of the note pages. The mandatory argument can set the `.pdf` file that will be inserted. The optional argument accepts the following keys

color = `⟨string⟩` can set the color of the note lines (Default: `black`), key's name could be omitted.

ratio = `⟨fp⟩` can set the ratio of imported slides' and empty area's width (Default: `0.5`).

sep = `⟨dim⟩` can set the vertical space between slides (Default: `2ex`).

nup = `⟨int⟩` can set the number of slides on every page (Default: `3`).

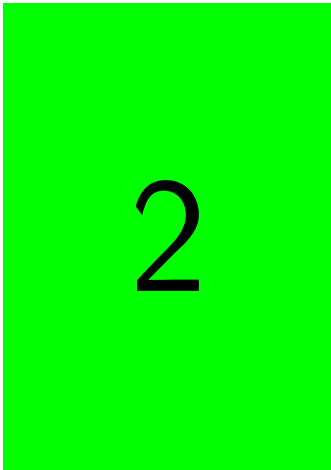
pages = `⟨comma separated list⟩` can select pages to insert. The comma separated list contains combination of (ranges of) page numbers. (Default: `1`).

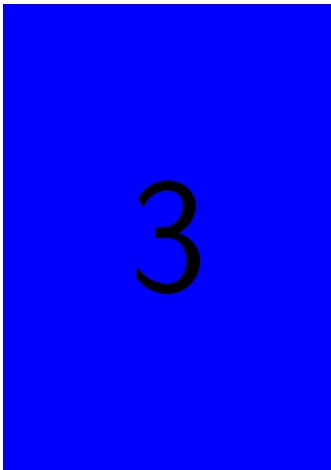
lefthead = `⟨string⟩`, **righthead** = `⟨string⟩` can set the left / right header of the pages.

Meanwhile, You can use `\newgeometry`. For instance

```
\newgeometry{margin = .75in}
\includebeamer
[ nup = 4, pages = {2-4, 6}, lines = 32, ratio = .28,
  Navy, lefthead = Chapter 1, righthead = Page~\thepage
] { example-image-a4-numbered.pdf }
```

*<https://github.com/myhsia/notebeamer>, <https://ctan.org/pkg/notebeamer>









3 The Source Code

```
1 <*package>
2 <@@=notebm>
   The package starts here.
3 \ProvidesExplPackage{notebeamer}{2025-02-12}{v4.0D}
4   {Package provides macros for inputting slides on note papers quickly.}
5 \RequirePackage{l3graphics, tikz, tikzpagenodes}
```

3.1 User's Interface

`\includebeamer` Define the `\includebeamer` command.

```
6 \NewDocumentCommand \includebeamer { 0{} m 0{} }
7   {
8     \group_begin:
9     \keys_set:nm { notebeamer / includebeamer } { #1, #3 }
10    \__notebm_include_aux:n {#2}
11    \group_end:
12  }
```

3.2 Keys

Define the keys for the `\includebeamer` command.

```
13 \keys_define:nm { notebeamer / includebeamer }
14   {
15     color      .tl_set:N = \l__notebm_include_color_tl,
16     color      .initial:n = black,
17     pages      .tl_set:N = \l__notebm_include_pages_tl,
18     pages      .initial:n = 1,
19     nup        .int_set:N = \l__notebm_include_nup_int,
20     nup        .initial:n = 3,
21     lines      .int_set:N = \l__notebm_include_lines_int,
22     ratio      .fp_set:N = \l__notebm_include_ratio_fp,
23     ratio      .initial:n = .5,
24     sep        .dim_set:N = \l__notebm_include_sep_dim,
25     sep        .initial:n = 2ex,
26     lefthead   .tl_set:N = \l__notebm_include_lefthead_tl,
27     righthead  .tl_set:N = \l__notebm_include_righthead_tl,
28     unknown    .code:n   = \tl_if_novalue:nF {#1}
29     { \tl_set_eq:NN \l__notebm_include_color_tl \l_keys_key_tl }
30   }
```

3.3 Internal Auxiliary

`\l__notebm_nup_dim` Store the heights and widths of the logical pages in a specific nup.

```
\l__notebm_include_ratio_dim
31 \dim_new:N \l__notebm_nup_dim
32 \dim_new:N \l__notebm_include_ratio_dim
```

(End of definition for `\l__notebm_nup_dim` and `\l__notebm_include_ratio_dim`.)

```

\l__notebm_pages_total_int Store the number of total physical pages and residue logical pages.
\l__notebm_pages_residue_int
33 \int_new:N \l__notebm_pages_total_int
34 \int_new:N \l__notebm_pages_residue_int

(End of definition for \l__notebm_pages_total_int and \l__notebm_pages_residue_int.)

\l__notebm_tmpa_clist Store the results of \__notebm_range_to_list:nN.
35 \clist_new:N \l__notebm_tmpa_clist

(End of definition for \l__notebm_tmpa_clist.)

\__notebm_include_aux:n Define the auxiliary command of \includebeamer.
36 \cs_new_protected_nopar:Npn \__notebm_include_aux:n #1
37 {
38   \graphics_get_pagecount:nN {#1} \l__notebm_include_filepages_int
39   \dim_set:Nn \l__notebm_nup_dim { \textheight/\l__notebm_include_nup_int }
40   \dim_set:Nn \l__notebm_include_ratio_dim
41     { \fp_use:N \l__notebm_include_ratio_fp \textwidth }
42   \tl_if_eq:NnTF \l__notebm_include_pages_tl { - }
43     {
44       \__notebm_range_to_list:nN
45         { 1 - \l__notebm_include_filepages_int } \l__notebm_tmpa_clist
46     }
47     {
48       \exp_args:NV \__notebm_range_to_list:nN
49         { \l__notebm_include_pages_tl } \l__notebm_tmpa_clist
50     }
51   \int_set:Nn \l__notebm_pages_total_int
52     {
53       \fp_eval:n
54         {
55           ceil(\clist_count:N \l__notebm_tmpa_clist/\l__notebm_include_nup_int,0)
56         } - 1
57     }
58   \int_set:Nn \l__notebm_pages_residue_int
59     {
60       \int_eval:n
61         {
62           \clist_count:N \l__notebm_tmpa_clist -
63           \l__notebm_include_nup_int * \l__notebm_pages_total_int
64         }
65     }
66   \int_step_inline:nn { \int_use:N \l__notebm_pages_total_int }
67     {
68       \clearpage
69       \__notebm_empty_note_aux:
70       \int_step_inline:nn { \l__notebm_include_nup_int }
71     {

```

```

72         \tikz [ remember~picture, overlay ]
73         \node [ xshift = \l__notebm_include_ratio_dim/2,
74                 yshift = \fp_eval:n { -###1 + .5 } \l__notebm_nup_dim
75         ] at (current~page~text~area.north~west)
76         {
77         \includegraphics
78         [ height = \dim_eval:n
79           { \l__notebm_nup_dim - \l__notebm_include_sep_dim },
80           page = \clist_item:Nn \l__notebm_tmpa_clist
81             { ###1 + \l__notebm_include_nup_int * ( ##1 - 1 ) }
82         ] {#1}
83         };
84     }
85     \clearpage
86 }
87 \__notebm_empty_note_aux:
88 \int_step_inline:nn { \int_use:N \l__notebm_pages_residue_int }
89 {
90     \tikz [ remember~picture, overlay ]
91     \node [ xshift = \l__notebm_include_ratio_dim/2,
92             yshift = \fp_eval:n { ( -##1 + .5 ) } \l__notebm_nup_dim
93     ] at (current~page~text~area.north~west)
94     {
95     \includegraphics
96     [ height = \dim_eval:n
97       { \l__notebm_nup_dim - \l__notebm_include_sep_dim },
98       page = \clist_item:Nn \l__notebm_tmpa_clist
99         { \l__notebm_include_nup_int * \l__notebm_pages_total_int + ##1 }
100     ] {#1}
101     };
102 }
103 \clearpage
104 }

```

(End of definition for __notebm_include_aux:n.)

__notebm_empty_note_aux: Define the auxiliary command for creating empty note line page.

```

105 \cs_new_protected_nopar:Nn \__notebm_empty_note_aux:
106 {
107     \tikzpicture [ remember~picture, overlay ]
108     \draw [ very~thick, \l__notebm_include_color_tl!80 ]
109         (current~page~text~area.north~west) --
110         (current~page~text~area.north~east)
111     node [ at~start, above~right, font = \Large \bfseries ]
112         { \l__notebm_include_lefthead_tl }
113     node [ above~left, font = \Large \bfseries ]
114         { \l__notebm_include_righthead_tl };
115     \draw [ very~thick, \l__notebm_include_color_tl!80 ]

```

```

116     (current~page~text~area.south~west) --
117     (current~page~text~area.south~east);
118     \int_step_inline:nn { \l__notebm_include_lines_int - 1 }
119     {
120         \draw [ thick, \l__notebm_include_color_tl!60 ]
121             ([xshift = \l__notebm_include_ratio_dim,
122              yshift = -\textheight/\l__notebm_include_lines_int * ##1
123              ]current~page~text~area.north~west) ---+
124             (\dim_eval:n { \textwidth - \l__notebm_include_ratio_dim },0);
125     }
126     \endtikzpicture
127     \pagestyle{empty}
128 }

```

(End of definition for __notebm_empty_note_aux:.)

\l__notebm_tmpa_seq Store the results of 2D array segmentation.
 \l__notebm_tmpb_seq

```

129 \seq_new:N \l__notebm_tmpa_seq
130 \seq_new:N \l__notebm_tmpb_seq

```

(End of definition for \l__notebm_tmpa_seq and \l__notebm_tmpb_seq.)

__notebm_range_to_list:nN Convert the combination of number and number range to a list.

```

131 \cs_new_protected_nopar:Npn \__notebm_range_to_list:nN #1#2
132 {
133     \clist_clear:N #2
134     \seq_set_split:Nnn \l__notebm_tmpa_seq { , } {#1}
135     \seq_map_inline:Nn \l__notebm_tmpa_seq
136     {
137         \tl_if_in:nnTF {##1} { - }
138         {
139             \seq_set_split:Nnn \l__notebm_tmpb_seq { - } {##1}
140             \int_step_inline:nnn
141             { \seq_item:Nn \l__notebm_tmpb_seq { 1 } }
142             { \seq_item:Nn \l__notebm_tmpb_seq { 2 } }
143             { \clist_put_right:Nn #2 {###1} }
144             } { \clist_put_right:Nn #2 {##1} }
145     }
146 }

```

(End of definition for __notebm_range_to_list:nN.)

147 <@@=>

The package ends here.

148 </package>