

```
1 %%%=====
2 % Copyright 2023-present by Alceu Frigeri
3 %
4 % This work may be distributed and/or modified under the conditions of
5 %
6 % * The [LaTeX Project Public License](http://www.Latex-project.org/lppl.txt),
7 % version 1.3c (or later), and/or
8 % * The [GNU Affero General Public License](https://www.gnu.org/licenses/agpl-3.0.html),
9 % version 3 (or later)
10 %
11 % This work has the LPPL maintenance status *maintained*.
12 %
13 % The Current Maintainer of this work is Alceu Frigeri
14 %
15 % This is version {1.7} {2025/04/21}
16 %
17 % The list of files that compose this work can be found in the README.md file at
18 % https://ctan.org/pkg/codedescribe
19 %
20 %%%=====
21 \NeedsTeXFormat{LaTeXe}[2022/06/01]
22 %
23 \ProvidesExplPackage
24   {codelisting}
25   {2025/04/21}
26   {1.7}
27   {LaTeX Code Listing}
28 %
29 %
30 %%% Just an attempt of having my packages info in a regular way
31 %%% Idea being: {<pck-name> / pkg info} for each and all.
32 %
33 %%%%
34 \keys_define:nn { codelisting / pkg info }
35 {
36   name      .code:n = {codelisting} ,
37   prefix    .code:n = {codelist} ,
38   date      .code:n = {2025/04/21} ,
39   version   .code:n = {1.7} ,
40   description .code:n = {\LaTeX~Code~Listing}
41 }
42 \cs_if_exist:N \PkgInfo
43 {
44   \NewDocumentCommand \PkgInfo {m} { \keys_set:nn {#1 / pkg info}{#2} }
45   \NewDocumentCommand \PkgDescription {m}
46     { \noindent Package~\textbf{\PkgInfo{#1}{name}}~Version:~\PkgInfo{#1}{version}~--~\PkgInfo{#1}{date}\par \emph{\PkgInfo{#1}{description}}~\p
47 }
48 %%%%
49 %%% End of cut-n-paste
50 %%%%
51 %
52 \RequirePackage{listings,scontents}
53 %
54 \msg_new:nnnn {codelist} {invalid key}
55 {
56   (ID:#1)~Key (#2) ~not~defined!
57 }
58 {
59   You~tried~to~use~a~non~defined~key:#2.
60   ~Error~Code~ID:<#1>.
61 }
62 %
63 \dim_new:N \l__codelist_demo_parindent_dim
64 \dim_new:N \l__codelist_org_parindent_dim
65 %
66 \dim_set:Nn \l__codelist_org_parindent_dim{\parindent}
67 %
68 \colorlet{c_codelist_lightred_color}{white!97!red}
69 \colorlet{c_codelist_lightgreen_color}{white!97!green}
70 \colorlet{c_codelist_lightblue_color}{white!97!blue}
71 \colorlet{c_codelist_lightmagenta_color}{white!97!magenta}
72 \colorlet{c_codelist_lighyellow_color}{white!97!yellow}
73 \colorlet{c_codelist_lightteal_color}{white!97!teal}
74 \colorlet{c_codelist_lightcyan_color}{white!97!cyan}
75 %
76 \colorlet{c_codelist_lightgray_color}{white!97!black}
77 \colorlet{c_codelist_gray_color}{gray}
78 \definecolor{c_codelist_grayblack_color}{rgb}{0.8,0.8,0.8}
79 \definecolor{c_codelist_blackgray_color}{rgb}{0.8,0.8,0.8}
80 %
81 \colorlet{c_codelist_darkred_color}{red!30!black!100}
82 \colorlet{c_codelist_darkgreen_color}{green!30!black!100}
83 \colorlet{c_codelist_darkblue_color}{blue!30!black!100}
84 \colorlet{c_codelist_darkmagenta_color}{magenta!30!black!100}
85 \colorlet{c_codelist_darkyellow_color}{yellow!30!black!100}
86 \colorlet{c_codelist_darkyellow_color}{yellow!30!black!100}
87 \colorlet{c_codelist_darkteal_color}{teal!30!black!100}
88 \colorlet{c_codelist_darkcyan_color}{cyan!30!black!100}
89 %
90 \colorlet{c_codelist_reddishblack_color}{red!50!black!100}
91 \colorlet{c_codelist_greenishblack_color}{green!50!black!100}
92 \colorlet{c_codelist_blueishblack_color}{blue!50!black!100}
93 \colorlet{c_codelist_magentaishblack_color}{magenta!50!black!100}
94 \colorlet{c_codelist_yellowishblack_color}{yellow!50!black!100}
95 \colorlet{c_codelist_tealishblack_color}{teal!50!black!100}
96 \colorlet{c_codelist_cyanishblack_color}{cyan!50!black!100}
97 %
98 \colorlet{c_codelist_redblack_color}{red!75!black!100}
99 \colorlet{c_codelist_greenblack_color}{green!75!black!100}
100 \colorlet{c_codelist_blueblack_color}{blue!75!black!100}
101 \colorlet{c_codelist_magtablack_color}{magenta!75!black!100}
102 \colorlet{c_codelist_yellowblack_color}{yellow!75!black!100}
103 \colorlet{c_codelist_tealblack_color}{teal!75!black!100}
104 \colorlet{c_codelist_cyanblack_color}{cyan!75!black!100}
105 %
106 \colorlet{c_codelist_grayred_color}{red!30!gray!100}
107 \colorlet{c_codelist_graygreen_color}{green!30!gray!100}
108 \colorlet{c_codelist_grayblue_color}{blue!30!gray!100}
109 \colorlet{c_codelist_graymagenta_color}{magenta!30!gray!100}
110 \colorlet{c_codelist_grayyellow_color}{yellow!30!gray!100}
```

```
111 \colorlet{c_codelist_grayteal_color}{teal!30!gray!100}
112 \colorlet{c_codelist_gracycyan_color}{cyan!30!gray!100}
113
114 \colorlet{c_codelist_redishgray_color}{red!50!gray!100}
115 \colorlet{c_codelist_greenishgray_color}{green!50!gray!100}
116 \colorlet{c_codelist_blueishgray_color}{blue!50!gray!100}
117 \colorlet{c_codelist_magentaishgray_color}{magenta!50!gray!100}
118 \colorlet{c_codelist_yellowishgray_color}{yellow!50!gray!100}
119 \colorlet{c_codelist_tealishgray_color}{teal!50!gray!100}
120 \colorlet{c_codelist_cyanishgray_color}{cyan!50!gray!100}
121
122 \colorlet{c_codelist_redgray_color}{red!75!gray!100}
123 \colorlet{c_codelist_greengray_color}{green!75!gray!100}
124 \colorlet{c_codelist_bluegray_color}{blue!75!gray!100}
125 \colorlet{c_codelist_magentagray_color}{magenta!75!gray!100}
126 \colorlet{c_codelist_yellowgray_color}{yellow!75!gray!100}
127 \colorlet{c_codelist_tealgray_color}{teal!75!gray!100}
128 \colorlet{c_codelist_cyangray_color}{cyan!75!gray!100}
129
130 \tl_set:Nn \l_codelist_bckgnd_color_default_tl{c_codelist_lightgray_color}%
131 \tl_set:Nn \l_codelist_string_color_default_tl{c_codelist_darkteal_color}
132 \tl_set:Nn \l_codelist_comment_color_default_tl{c_codelist_darkgreen_color}
133
134 \tl_set:Nn \l_codelist_txcsA_color_default_tl{c_codelist_darkblue_color}
135 \tl_set:Nn \l_codelist_txcsB_color_default_tl{c_codelist_blueishblack_color}
136 \tl_set:Nn \l_codelist_txcsC_color_default_tl{c_codelist_blueblack_color}
137 \tl_set:Nn \l_codelist_txcsD_color_default_tl{c_codelist_blueishgray_color}
138
139 \tl_set:Nn \l_codelist_keywdA_color_default_tl{c_codelist_darkcyan_color}
140 \tl_set:Nn \l_codelist_keywdB_color_default_tl{c_codelist_cyanishblack_color}
141 \tl_set:Nn \l_codelist_keywdC_color_default_tl{c_codelist_cyanblack_color}
142 \tl_set:Nn \l_codelist_keywdB_color_default_tl{c_codelist_cyanishgray_color}
143
144 \tl_set:Nn \l_codelist_emphA_color_default_tl{c_codelist_darkred_color}
145 \tl_set:Nn \l_codelist_emphB_color_default_tl{c_codelist_redishblack_color}
146 \tl_set:Nn \l_codelist_emphC_color_default_tl{c_codelist_redblack_color}
147 \tl_set:Nn \l_codelist_emphD_color_default_tl{c_codelist_reddishgray_color}
148
149 \tl_set:Nn \l_codelist_rule_color_default_tl{c_codelist_gray_color}
150 \tl_set:Nn \l_codelist_number_color_default_tl{c_codelist_gray_color}
151
152 \keys_define:nn {codelist / options} {
153     settxcs .usage:n = general,
154     settxcs .code:n = { \tl_set:Nn \l_codelist_txcsA_tl {#1} },
155     settxcs .default:n =
156
157     texcs .usage:n = general,
158     texcs .code:n = { \tl_put_right:Nn \l_codelist_txcsA_tl {, #1} },
159     texcs .default:n =
160
161     texcsstyle .usage:n = general,
162     texcsstyle .code:n = { \tl_set:Nn \l_codelist_txcsAstyle_tl {#1} },
163     texcsstyle .default:n = \bfseries\color{\l_codelist_txcsA_color_default_tl},
164
165     settxcs2 .usage:n = general,
166     settxcs2 .code:n = { \tl_set:Nn \l_codelist_txcsB_tl {#1} },
167     settxcs2 .default:n =
168
169     texcs2 .usage:n = general,
170     texcs2 .code:n = { \tl_put_right:Nn \l_codelist_txcsB_tl {, #1} },
171     texcs2 .default:n =
172
173     texcs2style .usage:n = general,
174     texcs2style .code:n = { \tl_set:Nn \l_codelist_txcsBstyle_tl {#1} },
175     texcs2style .default:n = \bfseries\color{\l_codelist_txcsB_color_default_tl},
176
177     settxcs3 .usage:n = general,
178     settxcs3 .code:n = { \tl_set:Nn \l_codelist_txcsC_tl {#1} },
179     settxcs3 .default:n =
180
181     texcs3 .usage:n = general,
182     texcs3 .code:n = { \tl_put_right:Nn \l_codelist_txcsC_tl {, #1} },
183     texcs3 .default:n =
184
185     texcs3style .usage:n = general,
186     texcs3style .code:n = { \tl_set:Nn \l_codelist_txcsCstyle_tl {#1} },
187     texcs3style .default:n = \bfseries\color{\l_codelist_txcsC_color_default_tl},
188
189     settxcs4 .usage:n = general,
190     settxcs4 .code:n = { \tl_set:Nn \l_codelist_txcsD_tl {#1} },
191     settxcs4 .default:n =
192
193     texcs4 .usage:n = general,
194     texcs4 .code:n = { \tl_put_right:Nn \l_codelist_txcsD_tl {, #1} },
195     texcs4 .default:n =
196
197     texcs4style .usage:n = general,
198     texcs4style .code:n = { \tl_set:Nn \l_codelist_txcsDstyle_tl {#1} },
199     texcs4style .default:n = \bfseries\color{\l_codelist_txcsD_color_default_tl},
200
201     setkeywd .usage:n = general,
202     setkeywd .code:n = { \tl_set:Nn \l_codelist_keywdA_tl {#1} },
203     setkeywd .default:n =
204
205     keywd .usage:n = general,
206     keywd .code:n = { \tl_put_right:Nn \l_codelist_keywdA_tl {, #1} },
207     keywd .default:n =
208
209     keywdstyle .usage:n = general,
210     keywdstyle .code:n = { \tl_set:Nn \l_codelist_keywdstyle_tl {#1} },
211     keywdstyle .default:n = \bfseries\color{\l_codelist_keywdA_color_default_tl},
212
213     setkeywd2 .usage:n = general,
214     setkeywd2 .code:n = { \tl_set:Nn \l_codelist_keywdB_tl {#1} },
215     setkeywd2 .default:n =
216
217     keywd2 .usage:n = general,
218     keywd2 .code:n = { \tl_put_right:Nn \l_codelist_keywdB_tl {, #1} },
219     keywd2 .default:n =
220 }
```

```
221 keywd2style .usage:n = general,  
. keywd2style .code:n = { \tl_set:Nn \l_codelist_keywdBstyle_tl {#1} },  
. keywd2style .default:n = \bfseries\color{\l_codelist_keywdB_color_default_tl} ,  
. setkeywd3 .usage:n = general,  
. setkeywd3 .code:n = { \tl_set:Nn \l_codelist_keywdC_t1 {#1} },  
. setkeywd3 .default:n = ,  
. 230 keywd3 .usage:n = general,  
. keywd3 .code:n = { \tl_put_right:Nn \l_codelist_keywdC_t1 { , #1} } ,  
. keywd3 .default:n = ,  
. keywd3style .usage:n = general,  
. keywd3style .code:n = { \tl_set:Nn \l_codelist_keywdCstyle_t1 {#1} },  
. keywd3style .default:n = \bfseries\color{\l_codelist_keywdC_color_default_tl} ,  
. setkeywd4 .usage:n = general,  
. setkeywd4 .code:n = { \tl_set:Nn \l_codelist_keywdD_t1 {#1} },  
. setkeywd4 .default:n = ,  
. 240 keywd4 .usage:n = general,  
. keywd4 .code:n = { \tl_put_right:Nn \l_codelist_keywdD_t1 { , #1} } ,  
. keywd4 .default:n = ,  
. keywd4style .usage:n = general,  
. keywd4style .code:n = { \tl_set:Nn \l_codelist_keywdDstyle_t1 {#1} },  
. keywd4style .default:n = \bfseries\color{\l_codelist_keywdD_color_default_tl} ,  
. 250 setemph .usage:n = general,  
. setemph .code:n = { \tl_set:Nn \l_codelist_emphA_t1 {#1} },  
. setemph .default:n = ,  
. emph .usage:n = general,  
. emph .code:n = { \tl_put_right:Nn \l_codelist_emphA_t1 { , #1} } ,  
. emph .default:n = ,  
. 260 emphstyle .usage:n = general,  
. emphstyle .code:n = { \tl_set:Nn \l_codelist_emphAstyle_t1 {#1} },  
. emphstyle .default:n = \bfseries\color{\l_codelist_emphA_color_default_t1} ,  
. setemph2 .usage:n = general,  
. setemph2 .code:n = { \tl_set:Nn \l_codelist_emphB_t1 {#1} },  
. setemph2 .default:n = ,  
. 270 emph2 .usage:n = general,  
. emph2 .code:n = { \tl_put_right:Nn \l_codelist_emphB_t1 { , #1} } ,  
. emph2 .default:n = ,  
. emph2style .usage:n = general,  
. emph2style .code:n = { \tl_set:Nn \l_codelist_emphBstyle_t1 {#1} },  
. emph2style .default:n = \bfseries\color{\l_codelist_emphB_color_default_t1} ,  
. setemph3 .usage:n = general,  
. setemph3 .code:n = { \tl_set:Nn \l_codelist_emphC_t1 {#1} },  
. setemph3 .default:n = ,  
. 280 emph3 .usage:n = general,  
. emph3 .code:n = { \tl_put_right:Nn \l_codelist_emphC_t1 { , #1} } ,  
. emph3 .default:n = ,  
. emph3style .usage:n = general,  
. emph3style .code:n = { \tl_set:Nn \l_codelist_emphCstyle_t1 {#1} },  
. emph3style .default:n = \bfseries\color{\l_codelist_emphC_color_default_t1} ,  
. setemph4 .usage:n = general,  
. setemph4 .code:n = { \tl_set:Nn \l_codelist_emphD_t1 {#1} },  
. setemph4 .default:n = ,  
. 290 emph4 .usage:n = general,  
. emph4 .code:n = { \tl_put_right:Nn \l_codelist_emphD_t1 { , #1} } ,  
. emph4 .default:n = ,  
. emph4style .usage:n = general,  
. emph4style .code:n = { \tl_set:Nn \l_codelist_emphDstyle_t1 {#1} },  
. emph4style .default:n = \bfseries\color{\l_codelist_emphD_color_default_t1} ,  
. 300 stringstyle .usage:n = general,  
. stringstyle .code:n = { \tl_set:Nn \l_codelist_stringstyle_t1 {#1} },  
. stringstyle .default:n = \color{\l_codelist_string_color_default_t1} ,  
. commentstyle .usage:n = general,  
. commentstyle .code:n = { \tl_set:Nn \l_codelist_commentstyle_t1 {#1} },  
. commentstyle .default:n = \color{\l_codelist_comment_color_default_t1} ,  
. bckgndcolor .usage:n = general,  
. bckgndcolor .code:n = { \tl_set:Nn \l_codelist_bckgndcolor_t1 {#1} },  
. bckgndcolor .default:n = \color{\l_codelist_bckgnd_color_default_t1} ,  
. 310 rulecolor .usage:n = general,  
. rulecolor .code:n = { \tl_set:Nn \l_codelist_rulecolor_t1 {#1} },  
. rulecolor .default:n = \color{\l_codelist_rule_color_default_t1} ,  
. numbers .usage:n = general,  
. numbers .code:n = { \tl_set:Nn \l_codelist_numbers_t1 {#1} },  
. numbers .default:n = none,  
. 320 numberstyle .usage:n = general,  
. numberstyle .code:n = { \tl_set:Nn \l_codelist_numberstyle_t1 {#1} },  
. numberstyle .default:n = \tiny\color{\l_codelist_number_color_default_t1} ,  
. parindent .usage:n = general,  
. parindent .code:n = { \dim_set:Nn \l_codelist_demo_parindent_dim{#1} },  
. parindent .default:n = \l_codelist_org_parindent_dim ,  
. codeprefix .usage:n = general,  
. codeprefix .code:n = { \tl_set:Nn \l_codelist_codeprefix_t1 {#1} },  
. codeprefix .default:n = \LaTeX\ Code:,  
. 330 resultprefix .usage:n = general,  
. resultprefix .code:n = { \tl_set:Nn \l_codelist_resultprefix_t1 {#1} },
```

```
331 resultprefix .default:n = \LaTeX\ Result:,  
. ruleht .usage:n = general,  
. ruleht .code:n = { \tl_set:Nn \l__codelist_ruleheight_tl {#1} },  
. ruleht .default:n = 1,  
. basicstyle .usage:n = general,  
. basicstyle .code:n = { \tl_set:Nn \l__codelist_basicstyle_tl {#1} },  
. basicstyle .default:n = \footnotesize\ttfamily,  
340 default .usage:n = general,  
default .meta:n = {  
.    settextcs , texcsstyle ,  
.    settextcs2 , texcs2style ,  
.    settextcs3 , texcs3style ,  
.    settextcs4 , texcs4style ,  
.    setkeywd , keywdstyle ,  
.    setkeywd2 , keywd2style ,  
.    setkeywd3 , keywd3style ,  
.    setkeywd4 , keywd4style ,  
.    setemph , emphstyle ,  
.    setemph2 , emph2style ,  
.    setemph3 , emph3style ,  
.    setemph4 , emph4style ,  
.    stringstyle ,  
.    commentstyle ,  
.    bckgndcolor , rulecolor ,  
.    numbers , numberstyle ,  
.    parindent ,  
.    codeprefix , resultprefix ,  
.    ruleht ,  
.    basicstyle ,  
},  
}  
%%%  
%%% This one can't be protected  
%%%  
\cs_new:Npn \__codelist_set_options:n #1 {\keys_set:nn {codelist / options}{#1}}  
370 \__codelist_set_options:n{default}  
.  
%  
%%%%%  
%%% From doctools.dtx file  
%%% Lstlistings 'definitions'  
%%%  
380 %  
%%% Listings  
%  
\lstdefinestyle{lstStyleDefault}{  
    %% appearance  
    ,basicstyle=\small\ttfamily % Standardschrift  
    %% Space and placement  
    ,floatplacement=tbp % is used as float place specifier  
    ,aboveskip=\medskipamount % define the space above and  
    ,belowskip=\medskipamount % below displayed listings.  
    ,lineskip=0pt % specifies additional space between lines in Listings.  
    ,boxpos=c % c,b,t  
    ,showlines=false % prints empty lines at the end of Listings  
    %% characters  
    ,extendedchars=true % allows or prohibits extended characters  
    % in Listings, that means (national)  
    % characters of codes 128-255.  
    ,upquote=true % determines printing of quotes  
    ,tabsize=2 % chars of tab  
    ,showtabs=false % do not show tabs  
    ,showspaces=false % do not show spaces  
    ,showstringspaces=false % do not show blank spaces in string  
    %% Line numbers  
    ,numbers=none % Left, right, none  
    %% Captions  
    ,numberbychapter=true %  
    ,captionpos=b % t,b  
    ,abovecaptionskip=\smallskipamount % the vertical space respectively above  
    ,belowcaptionskip=\smallskipamount % or below each caption  
    %% Margins and line shape  
    ,linewidth=\ linewidth % defines the base line width for Listings.  
    ,xleftmargin=0pt % extra margins  
    ,xrightmargin=0pt %  
    ,resetmargins=false % indentation from List environments like enumerate  
    % or itemize is reset, i.e. not used.  
    ,breaklines=true % line breaking of long lines.  
    ,breakatwhitespace=false % allows line breaks only at white space.  
    ,breakindent=0pt % is the indentation of the second, third, ...  
    %% line of broken lines.  
    ,breakautoindent=true % apply indentation  
    ,columns=flexible %  
    ,keepspaces=true %  
}  
.  
.\lstdefinestyle{lstDocStyleBase}{  
    %% base style  
    ,style=lstStyleDefault  
    ,commentstyle=\slshape  
    %% Line numbers  
    ,numbers=left % Left, right, none  
    ,stepnumber=1 % separation between numbers  
    ,numberfirstline=false % number first line always  
    %%  
    ,numberstyle={\l__codelist_numberstyle_tl} % style of numbers  
    ,numbersep=5pt % distance to text  
    ,numberblanklines=true %  
    %% Language
```

```
441 ,language = [LaTeX]TeX
442 %%% commands
443 % LaTeX programming
444 ,moretexcs={setlength,usepackage,newcommand,renewcommand,providecommand,RequirePackage,SelectInputMappings,ifpdfTeX,ifpdfoutput,AtBeginEnvironment,
445 ,moretexcs={maketitle,text,includegraphics,chapter,section,subsection,
446 ,subsubsection,paragraph,textmu,enquote,blockquote,ding,mathds,ifcsdef,Bra,Ket,Braket,subcaption,letrine,mdfsetup,captionof,listoffigures,listo,
447 ,moretexcs={newcolumntype,rowfont,taburowcolors,rowcolor,rowcolors,bottomrule,
448 ,toprule,midrule,}
449 ,moretexcs={hypersetup}
450 ,moretexcs={gls,printglossary,glsadd,newglossaryentry,newacronym}
451 ,moretexcs={mainmatter,frontmatter,geometry,KOMAoptions,setkomafont,addtokomafont}
452 ,moretexcs={si,SI,sisetup,unit,unitfrac,micro}
453 ,moretexcs={newblock,ExecuteBibliographyOptions,addbibresource}
454 ,moretexcs={operatorname,frac,sfrac,dfrac,DeclareMathOperator,mathcal,underset}
455 ,moretexcs={democodefile,package,cs,command,env,DemoError,PrintDemo}
456 ,moretexcs={theadstart,tbody,tsubheadstart,tsubhead,tend}
457 ,moretexcs={DefineCodeSection,SetCodeSection,BeginCodeSection,EndCodeSection}
458 ,moretexcs={IfDefined,IfUndefined,IfElseDefined,IfElseUndefined,IfMultDefined,IfNotDraft,IfNotDraftElse,IfDraft,IfPackageLoaded,IfElsePackageLoad
459 ,moretexcs={setuptablefontsize,tablefontsize,setupstablestyle,tablestyle, setuptablecolor,tablecolor,disablealternatecolors, tablealtcolored,tb
460 ,moretexcs={todo,missingfigure}
461 ,moretexcs={lstloadlanguages,lstdefinestyle,lstset}
462 ,moretexcs={indexsetup}
463 ,moretexcs={newglossarystyle,glossarystyle,deftranslation,newglossary}
464 ,moretexcs={usetikzlibrary}
465 ,moretexcs={definecolor,colorlet}
466 ,moretexcs={captionsetup,DeclareCaptionStyle}
467 ,moretexcs={floatsetup}
468 ,moretexcs={EnableCrossrefs,DisableCrossrefs,PageIndex,CodelineIndex,CodelineNumbered}
469 ,moretexcs={cref,Cref,vref,eqnref,figref,tabref,secref,chapref}
470 }

471 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
472 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
473 %%%
474 %% From doctools.dtx file
475 %% Lstlistings 'definitions'
476 %%%
477 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
478 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
479 
480 ,\lstloadlanguages{[LaTeX]TeX}
481 ,\lstdefinestyle{codestyle}{%
482   style      = lstDocStyleBase,
483   language   = [LaTeX]TeX,
484   numbers    = none, \%l_codelist_numbers_t1,
485   rulecolor  = {\l_codelist_rulecolor_t1},
486   backgroundcolor = {\l_codelist_bckgndcolor_t1},
487   stringstyle = {\l_codelist_stringstyle_t1},
488   commentstyle = {\l_codelist_commentstyle_t1},
489   framerule  = 0pt,                      %0.4pt,
490   nolol      = true,
491   frame       = none,
492   aboveskip  = 0pt,%-2ex,
493   belowskip  = 0pt,%-2ex,
494   basicstyle  = {\l_codelist_basicstyle_t1}, %\footnotesize\ttfamily ,
495   rulesep    = 0pt,
496   breaklines  = true,
497   breakindent = 3em,
498   moretexcs  = {\l_codelist_txecsA_t1},
499   moretexcs  = [2] {\l_codelist_txecsB_t1},
500   moretexcs  = [3] {\l_codelist_txecsC_t1},
501   moretexcs  = [4] {\l_codelist_txecsD_t1},
502   txecsstyle = * {\l_codelist_txecsAstyle_t1},
503   txecsstyle = *[2] {\l_codelist_txecsBstyle_t1},
504   txecsstyle = *[3] {\l_codelist_txecsCstyle_t1},
505   txecsstyle = *[4] {\l_codelist_txecsDstyle_t1},
506   morekeywords = {\l_codelist_keywdA_t1},
507   morekeywords = [2] {\l_codelist_keywdB_t1},
508   morekeywords = [3] {\l_codelist_keywdC_t1},
509   morekeywords = [4] {\l_codelist_keywdD_t1},
510   keywordstyle = {\l_codelist_keywdstyle_t1},
511   keywordstyle = [2] {\l_codelist_keywdBstyle_t1},
512   keywordstyle = [3] {\l_codelist_keywdCstyle_t1},
513   keywordstyle = [4] {\l_codelist_keywdDstyle_t1},
514   emph       = {\l_codelist_emphA_t1},
515   emph       = [2] {\l_codelist_emphB_t1},
516   emph       = [3] {\l_codelist_emphC_t1},
517   emph       = [4] {\l_codelist_emphD_t1},
518   emphstyle  = {\l_codelist_emphAstyle_t1},
519   emphstyle  = [2] {\l_codelist_emphBstyle_t1},
520   emphstyle  = [3] {\l_codelist_emphCstyle_t1},
521   emphstyle  = [4] {\l_codelist_emphDstyle_t1},
522 }

523 ,\lstset{style=codestyle}

524 ,\cs_generate_variant:Nn \keys_set:nn {nx}
525 %%%
526 %% extending scontents package options !!!!%
527 %% changing it's default key handling from \msg_error to 'store-env'.
528 %%%
529 ,\keys_define:nn { scontents / scontents }
530 {
531   st.meta:nn      = { scontents } { store-env = #1 },
532   st.value_required:n = true,
533   store-at.meta:nn = { scontents } { store-env = #1 },
534   store-at.value_required:n = true,
535   unknown . undefined: ,
536   unknown . code:n = { \keys_set:nn {scontents}{ store-env = \l_keys_key_str} }
537 }

538 ,\newenviron{codestore}{}

539 %%%%%%
540 %%%
541 %% yep, the <verbatimsc> environment gets redefined
542 %% each and every time (to change the 'Listings' defaults/highlights !
543 %%%
544 %%%
545 %%%%
```

```
551 \cs_undefine:c{verbatimsc}
  \cs_undefine:c{verbatimsc@@}
  \cs_undefine:c{verbatimsc@}
  \cs_undefine:c{endverbatimsc}
  \lstnewenvironment{verbatimsc}{\lstset{style=codestyle}}{}

  %%%%%%
  %% This one can't be protected
  %%%%
560 \cs_new:Npn \__codelist_set_verbsc:n #1
  {
    \cs_undefine:c{verbatimsc}
    \cs_undefine:c{verbatimsc@@}
    \cs_undefine:c{verbatimsc@}
    \cs_undefine:c{endverbatimsc}

    \__codelist_set_options:n{#1}

570 \lstnewenvironment{verbatimsc}
  {
    \exp_args:Ne \lstset
    {
      style=codestyle,
      moretexcs   = {\l_codelist_texcsA_tl},
      moretexcs  =[2] {\l_codelist_texcsB_tl},
      moretexcs  =[3] {\l_codelist_texcsC_tl},
      moretexcs  =[4] {\l_codelist_texcsD_tl},
      morekeywords = [2] {\l_codelist_keywdA_tl},
580      morekeywords = [3] {\l_codelist_keywdB_tl},
      morekeywords = [3] {\l_codelist_keywdC_tl},
      morekeywords = [4] {\l_codelist_keywdD_tl},
      emph        = {\l_codelist_emphA_tl},
      emph        =[2] {\l_codelist_emphB_tl},
      emph        =[3] {\l_codelist_emphC_tl},
      emph        =[4] {\l_codelist_emphD_tl},
      numbers     = {\l_codelist_numbers_tl}
    }
  }
  {}

  %% !!! DEPRECATED !!!
  \NewDocumentEnvironment {verbsc} {m}
  {
    \cs_undefine:c{verbatimsc}
    \cs_undefine:c{verbatimsc@@}
    \cs_undefine:c{verbatimsc@}
    \cs_undefine:c{endverbatimsc}

590 \__codelist_set_options:n{#1}

  \lstnewenvironment{verbatimsc}
  {
    \exp_args:Ne \lstset
    {
      style=codestyle,
      moretexcs   = {\l_codelist_texcsA_tl},
      moretexcs  =[2] {\l_codelist_texcsB_tl},
      moretexcs  =[3] {\l_codelist_texcsC_tl},
      moretexcs  =[4] {\l_codelist_texcsD_tl},
      morekeywords = [2] {\l_codelist_keywdA_tl},
      morekeywords = [3] {\l_codelist_keywdB_tl},
      morekeywords = [3] {\l_codelist_keywdC_tl},
      morekeywords = [4] {\l_codelist_keywdD_tl},
      emph        = {\l_codelist_emphA_tl},
      emph        =[2] {\l_codelist_emphB_tl},
      emph        =[3] {\l_codelist_emphC_tl},
      emph        =[4] {\l_codelist_emphD_tl},
      numbers     = {\l_codelist_numbers_tl}
    }
  }
  {}

  } %environment's end

  \NewDocumentCommand \setcodekeys {m}
  {
    \keys_set:nn {codelist / options}{#1}
  }

630 \NewDocumentCommand \setnewcodekey {mm}
  {
    \keys_define:nn {codelist / options}
    {
      #1 .meta:nn = {codelist / options} { #2 },
      #1 .value_forbidden:n = true ,
    }
  }

  \cs_new_protected:Npn \__codelist_ts_settings:nn #1#2
640 {
  \bool_if:nTF {#1}
  { % paragraph wide OR one below the other
    \dim_set:Nn \l_codedesc_width_dim {\l_codedesc_textcolwidth_dim}
    \dim_set:Nn \l_codedesc_offset_dim {0pt}
    \tl_set:Nn \l_codedesc_rule_in_tl {\l_codedesc_rule:n {\l_codelist_ruleheight_tl}}
    \tl_set:Nn \l_codedesc_rule_out_tl {}
  }
  { % half as wide OR side-by-side
    \dim_set:Nn \l_codedesc_width_dim {0.5\l_codedesc_textcolwidth_dim}
    \dim_set:Nn \l_codedesc_offset_dim {0.5\l_codedesc_width_dim}
    \tl_set:Nn \l_codedesc_rule_in_tl {}
    \tl_set:Nn \l_codedesc_rule_out_tl {\l_codedesc_rule:n {\l_codelist_ruleheight_tl}}
  }

  \__codelist_set_verbsc:n {#2}
  \tl_if_blank:VTF \l_codelist_codeprefix_tl
  {
    \vcoffin_set:Nnn \__codelist_code_label_coffin {\l_codedesc_width_dim}
    {}
  }
}

660
```

```
661 .     {
662 .         \vcoffin_set:Nnn \__codelist_code_label_coffin {\l__codedesc_width_dim}
663 .         {
664 .             \raggedright
665 .             \l__codelist_codeprefix_t1
666 .         }
667 .     }
668 . 
669 . \tl_if_blank:VTF \l__codelist_resultprefix_t1
670 .     {
671 .         \vcoffin_set:Nnn \__codelist_demo_label_coffin {\l__codedesc_width_dim}
672 .         {}
673 .     }
674 .     {
675 .         \vcoffin_set:Nnn \__codelist_demo_label_coffin {\l__codedesc_width_dim}
676 .         {
677 .             \raggedright
678 .             \l__codelist_resultprefix_t1
679 .         }
680 .     }
681 . 
682 . \cs_new_protected:Npn \__codelist_codecoffin:nnnn #1#2#3#4
683 . {
684 .     \vcoffin_set:Nnn \__codelist_code_coffin {\l__codedesc_width_dim}
685 .     {
686 .         \raggedright #4
687 .         \tl_if_blank:nTF {#2}
688 .             { #3 {#1} }
689 .             { #3 [#2]{#1} }
690 .     }
691 . }
692 . 
693 . \cs_new_protected:Npn \__codelist_democooffin:nn #1#2
694 . {
695 .     \vcoffin_set:Nnn \__codelist_demo_coffin {\l__codedesc_width_dim}
696 .     {
697 .         \l__codedesc_rule_in_t1
698 .         \group_begin:\vspace*{0.5\baselineskip}\vspace*{-1ex}
699 .         \setlength\parindent{\l__codelist_demo_parindent_dim}
700 .         \tl_if_blank:nTF {#2}
701 .             { \getstored {#1} }
702 .             { \getstored [#2]{#1} }
703 .         \group_end:
704 .         \l__codedesc_rule_in_t1
705 .     }
706 . }
707 . 
708 . \cs_new_protected:Npn \__codelist_ts_code:nnnnn #1#2#3#4#5
709 . {
710 .     \__codedesc_set_textcolwidth:
711 .     \group_begin:
712 .         \par\noindent
713 .         \__codelist_ts_settings:nn {#1}{#2}
714 .         \__codelist_codecoffin:nnnn {#3}{#4}{#5}{}
715 . 
716 .         \coffin_join:NnnNnnn
717 .             \__codelist_code_label_coffin {1}{b}
718 .             \__codelist_code_coffin {1}{t}
719 .             {0pt}{-1ex}
720 .             \vspace*{-1ex}
721 .             \coffin_typeset:Nnnnn \__codelist_code_label_coffin {1}{t}{\l__codedesc_offset_dim}{0pt}
722 .             \vspace*{2ex}
723 .             \par
724 .         \group_end:
725 .     }
726 . 
727 . \NewDocumentCommand{\tscode}{sO{}mO{}}
728 . {
729 .     \__codelist_ts_code:nnnnn {#1}{#2}{#3}{#4}{\typestored}
730 . }
731 . 
732 . \cs_new_eq:NN \typesetcode \tscode
733 . 
734 . \NewDocumentCommand{\tsmergedcode}{sO{}m}
735 . {
736 .     \__codelist_ts_code:nnnnn {#1}{#2}{#3}{\mergesc[typestored,print-cmd]}
737 . }
738 . 
739 . \cs_new_eq:NN \typesetmergedcode \tsmergedcode
740 . 
741 . \coffin_new:N \__codelist_code_coffin
742 . \coffin_new:N \__codelist_code_label_coffin
743 . \coffin_new:N \__codelist_demo_coffin
744 . \coffin_new:N \__codelist_demo_label_coffin
745 . 
746 . \dim_new:N \l__codedesc_width_dim
747 . \dim_new:N \l__codedesc_offset_dim
748 . 
749 . \NewDocumentCommand{\tsdemo}{sO{}mO{}}
750 . {
751 .     \__codedesc_set_textcolwidth:
752 .     \group_begin:
753 .         \par\setlength\parindent{0pt}
754 .         \__codelist_ts_settings:nn {#1}{#2}
755 . 
756 .         \__codelist_codecoffin:nnnn {#3}{#4}{\typestored}{\vspace*{0.1ex}}
757 .         \__codelist_democooffin:nn {#3}{#4}
758 . 
759 .         \bool_if:nTF {#1}
760 .             { % one below the other
761 .                 \coffin_join:NnnNnnn
762 .                     \__codelist_code_label_coffin {1}{b}
763 .                     \__codelist_code_coffin {1}{t}
764 .                     {0pt}{-1ex}
765 .                     \vspace*{-1ex}
766 .                     \coffin_typeset:Nnnnn \__codelist_code_label_coffin {1}{t}{0pt}{0pt}\vspace*{1ex}
767 .             }
768 .             \par
769 .             \coffin_join:NnnNnnn
770 . }
```

