The camnotes package (v1.0)

Dafydd Evans and David McConnell {evansd8,mcconnelld}@cf.ac.uk

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The camnotes package provides tools for typesetting lecture notes and provides an interface to the camel and latextree document processing systems.

1 Introduction

This package provides commands for typesetting lecture notes in various formats, and adopts some macros and environments from <code>exam.cls</code> for setting questions and answers, including multiple choice and multiple answer questions. The package also provides a standard interface to the <code>latextree</code> python package.

The most recent version of the package can be found at

https://github.com/cardiffmaths/texmf/tex/latex/camnotes

2 Options

The following options are available.

blanks	replace contents of \blank macros by (inline) blank boxes
	replace blankbox and solution environments by blank boxes
noproofs	exclude proofs
blankoproofs	replace proofs by blank boxes
noanswers	exclude answers
blankanswers	replace answers by blank boxes
student	equivalent to choosing blanks, noproofs and noanswers.

3 Partial handouts

\blank Contents replaced by (an inline) blank box when the blanks option is chosen.

blankbox Content is replaced by a blank box when the blanks option is chosen.

solution Solution environment: responds to the blanks option.

proof Proof environment: responds to the noproofs and blankproofs options.

answer Answer environment: responds to the noanswers and blankanswers options.

\sol Macro for short solutions: a wrapper for the solution environment.

\pro Macro for short proofs: a wrapper for the proof environment.

\ans Macro for short answers: a wrapper for the answer environment.

\setproofcolour Set the proof colour.

\setsolutioncolour Set the solution colour.

\setanswercolour Set the answer colour.

\setstretchfactor Set stretch factor for blank boxes (to accomodate handwriting).

\setimagestretchfactor Set stretch factor for blank images (to accommodate hand-drawing).

\setboxrule Set the width of the box border (default is zero).

4 Questions and Answers

The package adapts some macros and environments from exam.cls for typesetting different question types (including multiple choice and multiple answer).

questions List environment for questions.

parts List environment for parts of a question.

subparts List environment for subparts of a question.

\question Item type for questions environment.

\part Item type for parts environment.

\subpart Item type for subparts environment.

choices List environment for multiple choice options (chose exactly one).

checkboxes List environment for multiple answer options (choose zero or more).

\choice Item type for incorrect choice in choices and checkboxes environments.

\correctchoice Item type for correct choice in choices and checkboxes environments.

5 Implementation

5.1 Declare options and load packages

```
Declare and process options
```

```
1 \newif\ifcamnotes@blanks\camnotes@blanksfalse
2 \newif\ifcamnotes@noproofs\camnotes@noproofsfalse
3 \newif\ifcamnotes@blankproofs\camnotes@blankproofsfalse
4 \newif\ifcamnotes@noanswers\camnotes@noanswersfalse
6 \newif\if@student\@studentfalse
7 \DeclareOption{blanks}{\camnotes@blankstrue}
8 \DeclareOption{noproofs}{\camnotes@noproofstrue}
9 \DeclareOption{blankproofs}{\camnotes@blankproofstrue}
10 \DeclareOption{noanswers}{\camnotes@noanswerstrue}
11 \DeclareOption{blankanswers}{\camnotes@blankanswerstrue}
12 \DeclareOption{student}{%
13 \camnotes@blankstrue
14 \camnotes@noproofstrue
15 \camnotes@noanswerstrue
16 }
17 \ProcessOptions
18 \relax
Type out some useful information
19 \typeout{-----}
20 \ifcamnotes@blanks\typeout{blanks on}\fi
21 \ifcamnotes@noproofs\typeout{no proofs}\fi
22 \ifcamnotes@blankproofs\typeout{blank proofs}\fi
23 \ifcamnotes@noanswers\typeout{no answers}\fi
24 \ifcamnotes@blankanswers\typeout{blank answers}\fi
25 \typeout{-----}
Load all required packages
26 \RequirePackage{amsmath,amsfonts,amssymb}
27 \RequirePackage[dvipsnames] {xcolor}
28 \RequirePackage{newfloat}
29 \RequirePackage{caption}
30 \RequirePackage{graphicx}
31 \RequirePackage{tikz}
32 \RequirePackage{xifthen}
33 \RequirePackage{comment}
34 \RequirePackage{environ}
35 \RequirePackage{setspace}
36 \RequirePackage{etoolbox}
37 \RequirePackage{tcolorbox}
38 \tcbuselibrary{breakable}
39 \tcbuselibrary{skins}
Set entity names (override these with camlang.sty)
40 \ \text{let\proofname\Qundefined}
```

```
42 \newcommand{\answername}{Answer}
                                                              43 \newcommand{\solutionname}{Solution}
                                                              5.2
                                                                               Colours
                                                              Set default colours
                                                              44 \newcommand{\camnotes@BackgroundColour}{white}
                                                              45 \newcommand{\camnotes@TextColour}{black}
                                                              46 \newcommand{\camnotes@ShowColour}{black}
                                                              47 \newcommand{\camnotes@ProofColour}{black}
                                                              48 \newcommand{\camnotes@SolutionColour}{black}
                                                              49 \newcommand{\camnotes@AnswerColour}{black}
                                                              50 \AtBeginDocument{
                                                                                \color{\camnotes@TextColour}
                                                              51
                                                                                \pagecolor{\camnotes@BackgroundColour}
                                                              52
                                                              53 }
                                                              Commands for setting custom colours
                                                              54 \ \texttt{hexcommand{\hat{\hat{\hat{\hat{f}}}}}} in \ \texttt{hexcommand{\hat{\hat{\hat{f}}}}} in \ \texttt{hexcommand{\hat{\hat{f}}}} in \ \texttt{hexcommand{\hat{\hat{f}}}} in \ \texttt{hexcommand{\hat{\hat{f}}}} in \ \texttt{hexcommand{\hat{f}}} in \ \texttt{hexcommand{\hat{
                                                              55 \newcommand{\textcolour}[1]{\renewcommand{\camnotes@TextColour}{#1}}
                                                              56 \newcommand{\showcolour}[1]{\renewcommand{\camnotes@ShowColour}{#1}}
                                                              57 \newcommand{\proofcolour}[1]{\renewcommand{\camnotes@ProofColour}{#1}}
                                                              58 \end{\colors} {\tt [1] {\tt renewcommand {\tt camnotes @Solution Colour} {\tt \#1}}}
                                                              59 \newcommand{\answercolour}[1]{\renewcommand{\camnotes@AnswerColour}{#1}}
                                                              5.3 Parameters
             \setstretchfactor Set stretch factor for blank text. This parameter is passed to the \setstretch
                                                              command of the setspace package.
                                                              60 \newcommand{\camnotes@StretchFactor}{1}
                                                              61 \newcommand{\setstretchfactor}[1]{\renewcommand{\camnotes@StretchFactor}{#1}}
\setimagestretchfactor Set stretch factor for blank images.
                                                              62 \newcommand{\camnotes@ImageStretchFactor}{1}
                                                              63 \newcommand{\setimagestretchfactor}[1]{\renewcommand{\camnotes@ImageStretchFactor}{#1}}
\setimagestretchfactor Set stretch factor for blank images.
                                                              64 \newcommand{\camnotes@BoxRule}{Opt}
                                                              65 \end{setboxrule} [1] {\tt renewcommand{camnotes@BoxRule} \{\#1\}} \\
                                                              5.4 Blanks
                                                              Internal titles
                                                              66 \newcommand{\camnotes@BoxTitle}{}
                                                              67 \newcommand{\camnotes@ProofTitle}{\proofname}
```

41 \newcommand{\proofname}{Proof}

68 \newcommand{\camnotes@SolutionTitle}{\solutionname} 69 \newcommand{\camnotes@AnswerTitle}{\answername}

```
70 \newcommand{\camnotes@makeboxtitle}{%
                          71 \textcolor{\camnotes@TextColour}{\noindent\textbf{\camnotes@CurrentBoxTitle}\smallbreak}
                          72 }
                          Macros for recording the current options (used by camnotesbox)
                          73 \newcommand{\camnotes@CurrentColour}{black}
                          74 \newcommand{\camnotes@CurrentBoxRule}{Opt}
                          75 \newcommand{\camnotes@CurrentBoxTitle}{}
  \ifcamnotes@blankmode Internal switch to indicate blank mode within various environments
                          76 \newif\ifcamnotes@blankmode
                          77 \camnotes@blankmodefalse
                         Boolean for blank images in blankbox/solution/proof/answer environments.
camnotes@blankimagemode
                          78 \newif\ifcamnotes@blankimagemode
                          79 \camnotes@blankimagemodefalse
                 \blank Inline show/hide command (uses tcolorbox)
                          80 \newcommand{\blank}[1]{#1}
                          81 \ifcamnotes@blanks
                          82
                                \renewtcbox{\blank}{
                                 on line,
                          83
                                 colback=\camnotes@BackgroundColour,
                          84
                                 coltext={\ifcamnotes@blanks\camnotes@BackgroundColour\else\camnotes@ShowColour\fi},
                          85
                                 boxrule={\ifcamnotes@blanks\camnotes@BoxRule\elseOpt\fi}
                          86
                          87
                          88 \fi
         camnotes@tcbox Basic tcolorbox.
                          89 \newenvironment{camnotes@tcbox}{%
                          90 \begin{tcolorbox}[
                          91 breakable,
                          92 notitle,
                          93 boxrule={\camnotes@BoxRule},
                          94 colback={\camnotes@BackgroundColour},
                          95 before={\smallskip},
                          96 after={},
                          97 coltext={\camnotes@CurrentColour},
                          98 skin=enhanced,
                          99 height fixed for = first and middle,
                         100 ignore nobreak,
                         101 flushleft upper
                         102]
                         103 \setminus begingroup
                         104 }{
                         105 \endgroup
                         106 \end{tcolorbox}
```

107 }

camnotes@basicbox Basic box. Blank boxes/proofs/solutions/answers are implemented by setting the \camnotes@blankmode switch within these environments before calling camnotes@basicbox.

```
108 \newenvironment{camnotes@basicbox}[1][]{
109 \ifthenelse{\isempty{#1}}%
110 {\renewcommand{\camnotes@CurrentBoxTitle}{}}%
111 {\renewcommand{\camnotes@CurrentBoxTitle}{#1}}
112 \ifcamnotes@blankmode
113 \renewcommand{\camnotes@CurrentColour}{\camnotes@BackgroundColour}
114 \setstretch{\camnotes@StretchFactor}
115 \begin{camnotes@tcbox}
116 \ifthenelse{\isempty{#1}}{}\camnotes@makeboxtitle}
117 \else
118 \par
119 \ifthenelse{\isempty{#1}}{}\camnotes@makeboxtitle}
120 \color{\camnotes@CurrentColour}
121 \fi
122 }{
123 \ifcamnotes@blankmode
124 \end{camnotes@tcbox}
125 \setstretch{1}
126 \fi
127 \camnotes@blankmodefalse
128 \color{\camnotes@TextColour}
129 }
130 \newenvironment{camnotes@framedbox}[1][]{
131 \ifthenelse{\isempty{#1}}%
132 {\renewcommand{\camnotes@CurrentBoxTitle}{}}%
133 {\renewcommand{\camnotes@CurrentBoxTitle}{#1}}
134 \ifcamnotes@blankmode
135 \renewcommand{\camnotes@CurrentColour}{\camnotes@BackgroundColour}
136 \setstretch{\camnotes@StretchFactor}
137 \else
138 \color{\camnotes@CurrentColour}
140 \begin{camnotes@tcbox}
141 \ifthenelse{\isempty{#1}}{}{\camnotes@makeboxtitle}
143 \end{camnotes@tcbox}
144 \ifcamnotes@blankmode
145 \setstretch{1}
147 \camnotes@blankmodefalse
148 \color{\camnotes@TextColour}
149 }
```

blankbox Blankbox environment. Visibility is controlled by the blanks options.

```
150 \newenvironment{blankbox}{\%
```

 $151 \ensuremath{\camnotes@CurrentColour}{\camnotes@ShowColour}$

```
152 \ifcamnotes@blanks
                        153 \camnotes@blankmodetrue
                        154 \fi
                        155 \begin{camnotes@basicbox}
                        156 }{%
                        157 \end{camnotes@basicbox}
                        158 }
solution Solution environment. Visibility is controlled by the blanks options.
                        159 \newenvironment{solution}{
                        160 \renewcommand{\camnotes@CurrentColour}{\camnotes@SolutionColour}
                        161 \ifcamnotes@blanks
                        162 \compose \colored \campose \campose \cappa \
                        164 \begin{camnotes@framedbox}[\solutionname]
                        166 \end{camnotes@framedbox}
                        167 }
       proof Proof environment. Visibility is controlled by the noproofs and blankproofs
                           options.
                        168 \let\proof\@undefined
                        169 \let\endproof\@undefined
                        170 \ifcamnotes@noproofs
                        171 \excludecomment{proof}
                        172 \ensuremath{\setminus} else
                        173 \newenvironment{proof}{
                        174 \verb|\command{\commotes@CurrentColour}{\commotes@ProofColour}| \\
                        175 \ifcamnotes@blankproofs
                        176 \camnotes@blankmodetrue
                        177 \fi
                        178 \begin{camnotes@basicbox}[\proofname]
                        180 \end{camnotes@basicbox}
                        181 }
                        182 \fi
     answer Proof environment. Visibility is controlled by the noproofs and blankproofs
                           options.
                        183 \ifcamnotes@noanswers
                        184 \excludecomment{answer}
                        185 \else
                        186 \newenvironment{answer}{
                        187 \ensuremath{\camnotes@CurrentColour}{\camnotes@AnswerColour}
                        188 \ifcamnotes@blankanswers
                        189 \camnotes@blankmodetrue
                         190 \fi
                        191 \begin{camnotes@framedbox}[\answername]
                        192 }{
```

```
193 \end{camnotes@framedbox}
194 }
195 \fi

\bbx Short commands for blankbox, solution, proof and answer environments.
\sol 196 \newcommand{\bbx}[1]{\begin{blankbox}{#1}\end{blankbox}}
\prf 197 \newcommand{\sol}[1]{\begin{solution}{#1}\end{solution}}
\ans 198 \newcommand{\prf}[1]{\begin{proof}{#1}\end{proof}}
199 \newcommand{\ans}[1]{\begin{answer}{#1}\end{answer}}
```

5.5 Images

\includegraphics

We redefine includegraphics so that it responds to the blanks, blankproofs and blankanswers options. Where necessary we set \camnotes@blankmodetrue when entering these environments then \camnotes@blankmodefalse when leaving them.

```
200 \let\oldincludegraphics=\includegraphics
201 \renewcommand\includegraphics[2][]{
202 \ifcamnotes@blankmode
203 \scalebox{\camnotes@ImageStretchFactor}{
204 \phantom{\oldincludegraphics[#1]{#2}}
205 }
206 \else
207 \oldincludegraphics[#1]{#2}
208 \fi
```

altgraphics Shows the second image in blanked environments, otherwise shows the first.

```
210 \newlength\imageheight
211 \newlength\imagewidth
212 \newcommand{\altgraphics}[3] [scale=1] {
213 \ifcamnotes@blankmode
214 \settoheight{\imageheight}{\oldincludegraphics[#1] {#2}}
215 \settowidth{\imagewidth}{\oldincludegraphics[#1] {#2}}
216 \scalebox{\camnotes@ImageStretchFactor} {
217 \oldincludegraphics[height=\imageheight,width=\imagewidth,keepaspectratio] {#3}}
218 }
219 \else
220 \oldincludegraphics[#1] {#2}
221 \fi
222 }
```

\blanktikz Macro to replace tikz pictures by blank space. To limit the scope it should be included inside blankbox, solution, proof, or answer environments.

```
223 \newcommand{\blanktikz}{%
224 \ifcamnotes@blankmode
225 \tikzset{every picture/.style={
226 scale=\camnotes@ImageStretchFactor,
227 execute at end picture={
```

```
228 \draw[fill=\camnotes@BackgroundColour] (current bounding box.south west) rectangle (current bou
                                         229 }}}
                                         230 \fi
                                         231 }
\blankgraphics If the 'blanks' option is used, the image is replaced with blank space of the same
                                         232 \newcommand{\blankgraphics}[2][scale=1]{
                                                            \ifcamnotes@blankmode
                                         233
                                                               \scalebox{\camnotes@ImageStretchFactor}{\phantom{\oldincludegraphics[#1]{#2}}}
                                         234
                                         235
                                         236
                                                               \oldincludegraphics[#1]{#2}
                                                             \fi
                                         237
                                         238 }
                                         To manually specify different dimensions for the 'blank' and 'full' versions of an
  \hidegraphics
  \showgraphics
                                          image
                                         239 \newcommand{\hidegraphics}[2][scale=1]{
                                                            \ifcamnotes@blankmode
                                         240
                                                               \oldincludegraphics[#1]{#2}
                                         241
                                                             \else
                                         242
                                                               \null
                                         243
                                                             \fi
                                         244
                                         245 }
                                         246 \newcommand{\showgraphics}[2][scale=1]{
                                         247
                                                            \ifcamnotes@blankmode
                                         248
                                                               \null
                                                             \else
                                         249
                                         250
                                                              \oldincludegraphics[#1]{#2}
                                         251
                                         252 }
                                                             Local options
                blankson Environments to override the global blanks option.
             \verb|blanksoff||_{253} \verb|\newif| if camnotes @globalblanks| camnotes @globalblanksfalse||
                                         254 \ifcamnotes@blanks\camnotes@globalblankstrue\fi
                                         255 \newenvironment{blankson}{
                                         256 \camnotes@blankstrue
                                         257 \begingroup
                                         258 }{
                                         259 \endgroup
                                         260 \verb| ifcamnotes@globalblanks \verb| camnotes@blankstrue \verb| else \verb| camnotes@blanksfalse \verb| fine the context of 
                                         262 \newenvironment{blanksoff}{
                                         263 \camnotes@blanksfalse
                                         264 \begingroup
                                         265 }{
                                         266 \endgroup
```

```
267 \ifcamnotes@globalblanks\camnotes@blankstrue\else\camnotes@blanksfalse\fi
      proofson Environments to override the global noproofs and blankproofs proof options.
   {\tt proofsoff}~_{269} \verb|\newif| if camnotes @global no proofs \verb|\camnotes @global no proofs alse | {\tt proofsoff} |_{269} |
                                    270 \verb|\newif\ifcamnotes@globalblankproofs\camnotes@globalblankproofsfalse|
                                    271 \ifcamnotes@noproofs\camnotes@globalnoproofstrue\fi
                                    272 \ifcamnotes@blankproofs\camnotes@globalblankproofstrue\fi
                                    273 \newenvironment{proofson}{
                                    274 \camnotes@noproofsfalse
                                    275 \camnotes@blankproofsfalse
                                    276 \begingroup
                                    277 }{
                                    278 \endgroup
                                    279 \ifcamnotes@globalnoproofs\camnotes@noproofstrue\else\camnotes@noproofsfalse\fi
                                    280 \ifcamnotes@globalblankproofs\camnotes@blankproofstrue\else\camnotes@blankproofsfalse\fi
                                    282 \newenvironment{proofsoff}{
                                    283 \camnotes@noproofstrue
                                    284 \begingroup
                                    285 }{
                                    286 \endgroup
                                    287 \verb| ifcamnotes@globalnoproofs| camnotes@noproofstrue | else \verb| camnotes@noproofsfalse| file | f
   answerson Environments to override the global noanswers or blankanswers options.
290 \newif\ifcamnotes@globalblankanswers\camnotes@globalblankanswersfalse
                                    291 \ifcamnotes@noanswers\camnotes@globalnoanswerstrue\fi
                                    292 \ifcamnotes@blankanswers\camnotes@globalblankanswerstrue\fi
                                    293 \newenvironment{answerson}{
                                    294 \camnotes@noanswersfalse
                                    295 \camnotes@blankanswersfalse
                                    296 \begingroup
                                    297 }{
                                    299 \ifcamnotes@globalnoanswers\camnotes@noanswerstrue\else\camnotes@noanswersfalse\fi
                                    300 \verb| ifcamnotes@globalblankanswers| camnotes@blankanswerstrue| else \verb| camnotes@blankanswersfalse| fine the context of the
                                    301 }
                                    302 \newenvironment{answersoff}{
                                    303 \camnotes@noanswerstrue
                                    304 \begingroup
                                    305 }{
                                    306 \endgroup
                                    307 \ifcamnotes@globalnoanswers\camnotes@noanswerstrue\else\camnotes@noanswersfalse\fi
                                    308 }
```

5.7 Macros and environments adapted from exam.cls

```
Commands to define symbols for choices and checkboxes
309 \newcommand{\choicechar}[1]{\def\choice@char{#1}}
310 \newcommand{\chosenchar}[1]{\def\chosen@char{#1}}
311 \newcommand{\checkboxchar}[1]{\def\checkbox@char{#1}}
312 \newcommand{\checkedchar} [1] {\def\checked@char{#1}}
Set default symbols
{$13 \neq 0.5ex}{fbox{\phi_0.5ex}{fbox{\phi_0.5ex}}}}
314 \choicechar{$\bigcirc$}
315 \chosenchar{$\text{\rlap{\,$\checkmark$}}\bigcirc$}
316 \checkboxchar{$\bigsquare$}
317 \checkedchar{$\text{\rlap{\,\!$\checkmark$}}\bigsquare$}
Hooks (for customization)
318 \newcommand\questionshook{}
319 \newcommand\partshook{}
320 \newcommand\subpartshook{}
321 \newcommand\subsubpartshook{}
322 \newcommand\choiceshook{}
323 \newcommand\checkboxeshook{}
Counters
324 \newcounter{question}
325 \newcounter{partno}
326 \newcounter{subpart}
327 \newcounter{subsubpart}
328 \newcounter{choice}
Item labels for questions, parts, subparts and subsubparts
329 \newcommand\questionlabel{\arabic{question}.}
330 \newcommand\partlabel{(\alph{partno})}
331 \newcommand\subpartlabel{(\roman{subpart})}
332 \newcommand\subsubpartlabel{\alph{subsubpart}.}
Questions
333 \newenvironment{questions}{
     \def\@queslevel{question}
     \def\question{
335
       \@checkqueslevel{question}
336
       \item
337
     }
338
     \def\subpart{
339
       \@checkqueslevel{subpart}
340
341
     }
342
     \def\subsubpart{
343
       \@checkqueslevel{subsubpart}
344
       \item
345
346
     }
347
     \list{\questionlabel}{
```

```
\usecounter{question}
348
        \settowidth{\leftmargin}{10.\hskip\labelsep}
349
        \labelwidth\leftmargin\advance\labelwidth-\labelsep
350
        \partopsep=0pt
351
        \questionshook
352
353
       }
354 }{
355 \endlist
356 }
Parts
357 \newenvironment{parts}{
358 \def\@queslevel{part}
359 \def\part{
        \@checkqueslevel{part}
360
361
        \item
362 }
363 \list{\partlabel}{
364
        \usecounter{partno}\def\makelabel##1{\hss\llap{##1}}
365
        \settowidth{\leftmargin}{(m)\hskip\labelsep}
366
        \labelwidth\leftmargin\advance\labelwidth-\labelsep
367
        \topsep=0pt
368
        \partopsep=0pt
        \partshook
369
370 }
371 }{
372 \setminus endlist
373 }
Subparts
374 \verb|\newenvironment{subparts}{} \{
375 \def\@queslevel{subpart}
376 \list{\subpartlabel}{
        \usecounter{subpart}\def\makelabel##1{\hss\llap{##1}}
377
378
        \settowidth{\leftmargin}{vii.\hskip\labelsep}
        \labelwidth\leftmargin\advance\labelwidth-\labelsep
379
        \topsep=0pt
380
        \partopsep=0pt
381
382
        \subpartshook
383
384 }{
385 \endlist
386 }
Subsubparts
387 \newenvironment{subsubparts}{
388 \def\@queslevel{subsubpart}
389 \list{\subsubpartlabel}{
       \usecounter{subsubpart}\def\makelabel##1{\hss\llap{##1}}
390
391
        \settowidth{\leftmargin}{($\psi$)\hskip\labelsep}
        \labelwidth\leftmargin\advance\labelwidth-\labelsep
392
```

```
393
         \topsep=0pt
394
         \partopsep=0pt
         \subsubpartshook
395
396
397 }{
398 \setminus endlist
399 }
Choices
400 \verb|\renewcommand\\ the choice{\Alph{choice}.}|
401 \newcommand\choicelabel{\thechoice}
402 \neq 02 
403 \setminus @correctchoicefalse
404 \newcommand\CorrectChoiceEmphasis[1]{
405 \def\CorrectChoice@Emphasis{#1}
407 \CorrectChoiceEmphasis{\bfseries}
408 \verb|\let| correct Choice Emphasis| Correct Choice Emphasis|
409 \newenvironment{choices}{
410 \left\lceil \frac{410}{\cosh 2} \right\rceil
411 \usecounter{choice}
412 \verb|\labelsep|| \\ 412 \verb|\labelsep|| \\
             \def\choice{
             \if@correctchoice
414
415
                  \endgroup
               \fi
416
               \item
417
418 }
419 \def\CorrectChoice{}
420 \setminus if@correctchoice
421
             \endgroup
422
             \fi
423
             \ifcamnotes@noanswers
424 \setminus item
425 \ensuremath{\setminus} \texttt{else}
426 \ifcamnotes@blankanswers
427 \setminus item
428 \else
429 \setminus begingroup
                        \@correctchoicetrue
430
431 \correctChoice@Emphasis
                   \item[\chosen@char]
432
433
         \fi
434 \fi
435 }
436 \ \text{let}\ \text{correctChoice}
             \topsep=2pt
437
             \partopsep=0pt
438
             \choiceshook
439
440 }
```

```
441 }{
442 \if@correctchoice
443 \setminus endgroup
444 \fi
445 \setminus endlist
446 }
 Checkboxes
447 \newenvironment{checkboxes}{
448 \left( \frac{448}{checkbox@char} \right)
449 \usecounter{choice}
450
              \settowidth{\leftmargin}{W.\hskip\labelsep}
451
              \def\choice{
               \if@correctchoice
452
                   \endgroup
453
                \fi
454
455 \setminus item
456 }
457 \ensuremath{\mbox{\sc def}\mbox{\sc CorrectChoice}} \{
               \if@correctchoice
458
                   \endgroup
459
                \fi
460
461
                \ifcamnotes@noanswers
                \item
463 \ensuremath{\setminus} else
464 \ifcamnotes@blankanswers
465 \setminus item
466 \ensuremath{\setminus} \text{else}
467 \begingroup
468
                   \@correctchoicetrue
469
                   \CorrectChoice@Emphasis
                   \item[\checked@char]
470
471 \fi
472 \fi
473 }
             \let\correctChoice\CorrectChoice
474
475
             \topsep=2pt
476
             \partopsep=0pt
             \checkboxeshook
477
478
479 }{
         \if@correctchoice
480
481
              \endgroup
         \fi
482
         \endlist
483
484 }
485\ \mbox{\em \%} Validatte nesting level
          \begin{macrocode}
486 %
487 \def\@checkqueslevel#1{
     \begingroup
```

```
\left(\frac{41}{2}\right)
489
       \ifx\@temp\@queslevel
490
         \null
491
       \else
492
         \ClassError{camnotes}{
493
           I found a #1 where I expected to find a \@queslevel
494
495
           \MessageBreak
496
           Both #1 and \@queslevel \space can be used only inside the correct
497
           \MessageBreak \space \space
498
           environment and outside of any smaller environment
499
500
            \MessageBreak
         }
501
502
       \fi
503
     \endgroup
504 }
 Move up one level
\par\bigskip
506
507
     \vbox{
       \leftskip=\@totalleftmargin
508
       \advance\leftskip-\leftmargin
509
       \advance\@totalleftmargin-\leftmargin
510
       \advance\linewidth\leftmargin
511
       #1
512
     }
513
514
     \nobreak
515 }
```

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