

The `enumsub` package

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1 Introduction

The `enumsub` package provides seamless integration between `enumitem` and inline sublists with perfect alignment and automatic numbering. It solves the common alignment inconsistencies that occur when trying to combine `enumitem` and `tasks` packages.

The package offers:

- Perfect alignment of inline sub-items with dynamic label styling
- Multiple numbering schemes (Roman, alphabetic, Arabic)
- Customizable spacing and dimensions
- Easy-to-use semicolon-separated syntax
- Non-breaking inline layout with consistent spacing

2 Usage

2.1 Basic Usage

The main command is `\enumsub`, which takes semicolon-separated items and displays them inline with automatic numbering:

```
\begin{enumerate}  
  \item  
  \begin{enumerate}  
    \item \enumsub{yes; no; maybe}  
    \item \enumsub{option A; option B}  
  \end{enumerate}  
\end{enumerate}
```

2.2 Package Options

The package supports three numbering styles:

- `roman` (default): Uses Roman numerals (i), (ii), (iii)
- `alpha`: Uses alphabetic numbering (a), (b), (c)

- **arabic:** Uses Arabic numerals (1), (2), (3)

Load the package with: `\usepackage[roman]{enumsub}`

2.3 Customization

You can adjust the spacing using:

- `\setenumslabelwidth{<width>}` – Width of the label column
- `\setenumsitemwidth{<width>}` – Width of each item column

3 Examples

1. This is a main question.

- | | | | | | | |
|-----|-----|------------|------|-------|-------|-------|
| (a) | (i) | yes | (ii) | no | | |
| (b) | (i) | definitely | (ii) | maybe | (iii) | never |

4 Implementation

5 Implementation

```

1 <*package>
   Load required packages:
2 \RequirePackage{enumitem}
3 \RequirePackage{xparse}
4 \RequirePackage{array}
5 \RequirePackage{etoolbox}

\if@enumsub@roman Package options for numbering styles:
\if@enumsub@alpha 6 \newif\if@enumsub@roman
\if@enumsub@arabic 7 \newif\if@enumsub@alpha
8 \newif\if@enumsub@arabic
9 \@enumsub@romantrue

   Declare and process options:
10 \DeclareOption{roman}{\@enumsub@romantrue\@enumsub@alphafalse\@enumsub@arabicfalse}
11 \DeclareOption{alpha}{\@enumsub@alphatrue\@enumsub@romanfalse\@enumsub@arabicfalse}
12 \DeclareOption{arabic}{\@enumsub@arabicttrue\@enumsub@romanfalse\@enumsub@alphafalse}
13 \ProcessOptions\relax

\enumslabelwidth Customizable dimensions:
\enumsitemwidth 14 \newdimen\enumslabelwidth
15 \newdimen\enumsitemwidth
16 \enumslabelwidth=2.2em
17 \enumsitemwidth=1.5cm

\setenumslabelwidth User commands to adjust spacing:
\setenumsitemwidth 18 \newcommand{\setenumslabelwidth}[1]{\enumslabelwidth=#1}
19 \newcommand{\setenumsitemwidth}[1]{\enumsitemwidth=#1}

```

```

\c@enumsub@counter Subpart counter that resets at each \item:
20 \newcounter{enumsub@counter}
21 \pretocmd{\item}{\setcounter{enumsub@counter}{0}}{}{}

\enumsub@getlabel Determine label format based on options:
22 \newcommand{\enumsub@getlabel}{%
23   \if@enumsub@roman%
24     \textbf{(\roman{enumsub@counter})}%
25   \else\if@enumsub@alpha%
26     \textbf{(\alph{enumsub@counter})}%
27   \else\if@enumsub@arabic%
28     \textbf{(\arabic{enumsub@counter})}%
29   \fi\fi\fi%
30 }

\enumsub Core macro for aligned subparts:
31 \NewDocumentCommand{\enumsub}{>\SplitList{;}}m{%
32   \begin{tabular}{@{}*{10}{11}@{}}%
33     \ProcessList{#1}{\enumsub@renderitem}%
34   \end{tabular}%
35 }

\enumsub@renderitem Render individual subpart:
36 \newcommand{\enumsub@renderitem}[1]{%
37   \stepcounter{enumsub@counter}%
38   \makebox[\enumsub@labelwidth][l]{\enumsub@getlabel} &
39   \makebox[\enumsub@itemwidth][l]{#1}%
40 }

Alternative command names for convenience:
41 \let\AutoSubpartsAligned\enumsub
42 \let\subparts\enumsub
43 \let\inlineparts\enumsub

Predefined list styles:
44 \SetEnumitemKey{mainq}{label=\textbf{\arabic*},%
45   leftmargin=2em,%
46   itemsep=0.2em,%
47   topsep=0.5em}
48 \SetEnumitemKey{subq}{label=\textbf{(\alph*)},%
49   leftmargin=2.8em,%
50   itemsep=0.2em,%
51   topsep=0.3em}
52 \end{package}

```

6 Change History

v1.0		detection, multi-line support,
General:	Initial version 1	conditional display, custom
v2.0		separators, answer keys, box
General:	Added smart column	styling, and column balancing . 1

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