Exercise environment and stuff

Language presets

```
\usepackage{galgon}
\usepackage[german]{galgon} % default
\usepackage[english]{galgon}
```

Shortcuts

All `\begin{...}` directives have shortcut commands. This includes potential ∗-versions.

Shortcut	Classic	∗-version	∗-shortcut
\gsheet	\begin{sheet}	—	—
\gtasks	\begin{tasks}	\begin{tasks*}	\gtasks*
\gsub	\begin{subtasks}	\begin{subtasks*}	\gsub*
\ghints	\begin{hints}	\begin{hints*}	\ghints*

All corresponding `\end{...}` directives can be replaced with `\gend`.

Language preset commands

```
\gPresetGerman
\gPresetEnglish
```

Exercise environment with arbitrary starting number

```
\gtasks[number]
  \gtask[points]{title}
    Text...
\gend
```

Exercise 5. *(Title 1)* —————————————————————————————————————

`\gtask{Title 1}`
Task, no star, title, no points.

Exercise 6. *(Title 2)* ————————————————————————————— (11 Points)

`\gtask[11]{Title 2}`
Task, no star, title, points.

Exercise 7∗ *(Title 3)* —————————————————————————————————

`\gtask*{Title 3}`
Task, star, title, no points.

Exercise 8∗ *(Title 4)* ————————————————————————————— (22 Points)

`\gtask*[22]{Title 4}`
Task, star, title, points.

Exercise 9. ———

`\gtask{}`
Task, no star, no title, no points.

Exercise 10. ————————————————————————————————————— (33 Points)

`\gtask[33]{}`
Task, no star, no title, points.

Exercise 11∗ ———

`\gtask*{}`
Task, star, no title, no points.

Exercise 12∗ ————————————————————————————————————— (44 Points)

`\gtask*[44]{}`
Task, star, no title, points.

Setting exercise header fill

`\gsetfill{`*`fill`*`}`

Exercise 1. *(Title)* ———————————————————————————————— (0 Points)

`\gsetfill{\middlerule}`

Exercise 2. *(Title)* (0 Points)

`\gsetfill{\hfill}`

Exercise 3. *(Title)* (0 Points)

`\gsetfill{}`

Exercise 4. *(Title)* ———————————————————————— (0 Points)

`\gsetfill{\hrulefill}`

Exercise 5. *(Title)* .... (0 Points)

`\gsetfill{\dotfill}`

Exercise 6. *(Title)* Hello! Hello! Hello! Hello! Hello! Hello! Hello! Hello! Hello! Hello! (0 Points)

`\gsetfill{\customfill{Hello! }}`

Exercise 7. *(Title)* ·· (0 Points)

`\gsetfill{\customfill{$\cdot$}}`

Exercise 8. *(Title)* ©···©···©···©···©···©···©···©···©···©···©···©···©··· (0 Points)

`\gsetfill{\customfill{\textcopyright$\cdot$}}`

Exercise 9. *(Title)* $\sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k} \sum_{k=0}^\infty \frac{1}{k}$ (0 Points)

`\gsetfill{\customfill{$\sum_{k=0}^\infty\frac{1}{k}$}}`

Exercise 10. *(Title)* ....$\displaystyle\sum_{k=0}^{\infty}\frac{1}{k}$............................. (0 Points)

```
\gsetfill{\customfill{\dotfill
$\displaystyle\sum_{k=0}^\infty\displaystyle\frac{1}{k}$
\dotfill}}
```

Exercise 11. *(Title)* ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ (0 Points)

`\gsetfill{\raisedrule[1.2ex]{1pt}}`

Setting exercise text indentation

$$\setlength\gtaskindent\{\textit{size}\}$$

Exercise 1. *(Indentation)* ————————————————————————————————————

`\setlength\gtaskindent{0em}`

Exercise 1. *(Indentation - Default)* ————————————————————————————

`\setlength\gtaskindent{1em}` `% default`

Exercise 1. *(Indentation)* ————————————————————————————————————

`\setlength\gtaskindent{2em}`

Exercise 1. *(Indentation)* ————————————————————————————————————

`\setlength\gtaskindent{3em}`

Setting exercise spacing

$$\setlength\gtasksep\{\textit{size}\}$$

`\setlength\gtasksep{0em}`

Exercise 1. *(Exercise spacing 1)* ————————————————————————————————
    Aufgabe 1
Exercise 2. *(Exercise spacing 2)* ————————————————————————————————
    Aufgabe 2

`\setlength\gtasksep{1em}`

Exercise 1. *(Exercise spacing 1)* ————————————————————————————————
    Aufgabe 1

Exercise 2. *(Exercise spacing 2)* ————————————————————————————————
    Aufgabe 2

`\setlength\gtasksep{2em}`

Exercise 1. *(Exercise spacing 1)* ————————————————————————————————
    Aufgabe 1

Exercise 2. *(Exercise spacing 2)* ————————————————————————————————
    Aufgabe 2

Persistent exercise counter

```
\setcounter{gctri}{0}
\gtasks*
  ...
\gend
\gtasks*
  ...
\gend
```

Exercise 1. ───

Exercise 2. ───

Exercise 3. ───

New set of exercises.

Exercise 4. ───

Exercise 5. ───

Exercise 6. ───

New set of exercises.

Exercise 7. ───

Exercise 8. ───

Exercise 9. ───

Point sum

```
\raisedrule[0.2em]{0.5pt}\\
\dummy\hfill\textbf{Sum:} \thegpoints\gpointslabel\\
\dummy\hfill\textbf{Global sum:} \thegpointsall\gpointslabel
```

Exercise 1. ── (2 Points)

Exercise 2. ── (4 Points)

Exercise 3. ── (6 Points)

Exercise 4. ── (8 Points)

Exercise 5. ── (10 Points)

Exercise 6. ── (12 Points)

───

Sum: 42 Points

Global sum: 152 Points

Exercise 1. ──────────────────────────────── (2+4+6+8+10+12 Points)

```
\addtocounter{gpoints}{42}
```
Sum: 42 Points

Subtasks

```
\gtask{}
\gsub
  \item ...
  \gsub
    \item ...
  \gend
\gend
```

Exercise 1. ───

Maximum subtask nesting depth: 2

a) Subtask 1

   i) Sub-subtask 1-1

   ii) Sub-subtask 1-2

b∗) Subtask 2 `\item*`

   i) Sub-subtask 2-1

  ii∗) Sub-subtask 2-2 `\item*`

   ii) Uncounted item `\citem`

     Unlabeled item `\nitem`

     Uncounted & unlabeled item `\ncitem`

   iv) Sub-subtask 2-6

Start at specified subtask: `\gsub[number]` , e.g, `\gsub[11]`

k) A subtask.

l) Another subtask.

Continuous subtask numbering: `\gsub*`

m) The level-1 counter proceeds wherever it left off.

   i) Normally counted.

   ii) Normally counted.

n) Another subtask.

a) Normally counted.

   iii) The level-2 counter proceeds wherever it left off.

   iv) Another sub-subtask.

b) Normally counted.

Cross referencing

Exercise 1. ——

Ref Sub-subtask: 1b,iii

a) Subtask 1 - Ref Sub-subtask: 1b,ii

    i) Sub-subtask 1-1 - Ref Sub-subtask: 1b,i

    ii) Sub-subtask 1-2 - Ref Subtask: 1b

    iii) Sub-subtask 1-3 - Ref Sub-subtask: 1a,iii

b) Subtask 2 - Ref Sub-subtask: 1a,ii

    i) Sub-subtask 2-1 - Ref Sub-subtask: 1a,i

    ii) Sub-subtask 2-2 - Ref Subtask: 1a

    iii) Sub-subtask 2-3 - Ref Task: 1

Hints

```
\ghint{...}
```

Hint: *Some enlightening text.*

```
\ghints{}
  \item ...
\gend
```

`\setlength\ghintsep{2pt}`	Distance between items.
`\setlength\ghintspace{5pt}`	Distance label $\leftrightarrow$ text.
`\setlength\ghintmargin{0pt}`	Distance header line $\leftrightarrow$ items.
`\setlength\ghintindent{10pt}`	Distance line start $\leftrightarrow$ label.

Hints:

○ *Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.*

○ *Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.*

```
\ghints[Hint! Look!! $\rightarrow$]{\textit{Subtitle}}
  \item ...
\gend
```

Hints: *Subtitle*

Hint! Look!! $\rightarrow$ *Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.*

Hint! Look!! $\rightarrow$ *Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.*

```
\ghints*[$\star$]{\textbf{Headline}}
  \item ...
\gend
```

Headline

⋆ *Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.*

Hideable solutions

```
\gShowSolutions % Remove to hide solutions

\gsolution{
  ...
}
```

Exercise 1. *(Solution hidden)* ——————————————————————————

  a) Teilaufgabe 1.

     i) Subtask 1
      Text before...

      Text after...

    ii) Another subtask.

Exercise 1. *(Solution visible)* ——————————————————————————

  a) Teilaufgabe 1.

     i) Subtask 1
      Text before...

  > **Solution:**
  > Some text...
  >
  > $$\sum_k \sqrt{\frac{k}{2}}$$
  >
  > - Item 1
  > - Item 2

      Text after...

    ii) Another subtask.

```
\renewcommand\gsolutionlabel{\textit{Whatever}}
```

> *Whatever*
> Solution content here...

```
\setlength\gsolmargin{1em}
```

> **Solution:**
> Solution content here...

```
\setlength\gsolsep{2em}
```

> **Solution:**
> Solution content here...

Text after...

CHANGE Lecture

CHANGE SoSe/WiSe XXXX

Exercise Sheet 1

```
\gsheet{}
  ...
\gend
```

Changing environment texts: Sheets

```
\renewcommand\gsheettitle{Lecture}
```

```
\renewcommand\gsheetsemester{SoSe/WiSe XXXX}
```

```
\renewcommand\gsheetlabel{Sheet}
```

```
\renewcommand\gsheetintro{%
  {\Large\textbf{\gsheettitle}} \\[3mm]
  {\gsheetsemester} \\[5mm]
  {\large\textbf{\gsheetlabel \thegctr}}
}
```

Changing environment texts: Header

```
\renewcommand\gheadertext{University of Wuppertal\\
    School of Mathematics and Natural Sciences}
```

```
\renewcommand\gheaderauthor{Authors}
```

```
\renewcommand\gsheetheader{\aiheader}
```

Changing environment texts: Deadline

```
\renewcommand\gdeadlinelabel{Deadline}
```

```
\renewcommand\gdeadlinetext{Deadline informationen.}
```

Changing environment texts: Exercises

```
\renewcommand\gtasklabel{Exercise~}
```

```
\renewcommand\gpointslabel{ Points}
```

Changing environment texts: Solutions

```
\renewcommand\gsolutionlabel{\textbf{Solution:}}
```

Changing environment texts: Pagebreaks

```
\renewcommand\gbackpagetext{Continued on the back.}
```

```
\renewcommand\gnextpagetext{Continued on the next page.}
```

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CHANGE Lecture

CHANGE SoSe/WiSe XXXX

Exercise Sheet 3

```
\gsheet[3]{some deadline}
   ...
\gend
```

Changing environment texts: Decoration

```
\renewcommand\gtaskdeco{.}
```

```
\renewcommand\gtaskstar{\raise-.4ex\hbox{\kern.5pt*}}
```

```
\renewcommand\gsubstar{\raise-.6ex\hbox{\kern.5pt*}}
```

```
\renewcommand\gtaskstyle{\bfseries\sffamily}
```

Changing environment texts: Hints

```
\renewcommand\ghintlabel{Hint}
```

```
\renewcommand\ghintslabel{Hints}
```

```
\renewcommand\ghintdeco{:}
```

```
\renewcommand\ghintstyle{\itshape}
```

Deadline: some deadline
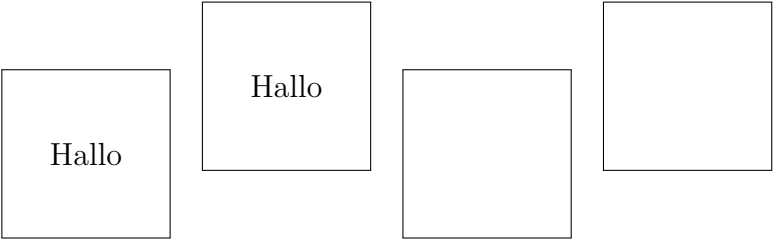
CHANGE Deadline information.

TikZ!

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

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Boxes!

Hallo

Hallo

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