

??

The HomeworkAssignment class*

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1 Abstract

This class provides a relative simple document-type for homework, mainly created for assignments at the University TH Aachen. This class is inherited from `article`, it is not perfect, but I am trying my very best.

2 Commands

2.1 Document Informations

`\subject` Sets the subject of the document. Takes the subject as argument. Standard Value is "Kein Kurs"
`\kurs` is deprecated.

`\tutorial` Sets the tutorial of the author. Takes it as an argument. Standard Value is empty, so that this command can be omitted.
`\tutorium` is deprecated.

`\deadline` Sets the deadline of the document. Takes it as an argument. Standard value is `\today`.
`\abgabe` is deprecated

2.1.1 Inherited from article

`\author` Sets the author of the document.
`\date` Sets the date of the document.

*This document corresponds to `HomeworkAssignment ? ,dated ?`.

2.2 Sectioning

2.2.1 ‘plain’ Sectioning

2.2.2 ‘better’ Sectioning

3 Pagestyle

3.1 Headers

4 Implementation

The following part is very boring, but i have not found a solution to create a .cls-file without including the implemetation into the document. Loads L^AT_EX2e and sets the Version

```
1 \NeedsTeXFormat{LaTeX2e}[1994/06/01]
2 \ProvidesClass{HomeworkAssignment}[2016/12/14]
```

Loads the `article`, which is the base-class.

```
3
4 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{article}}
5 \ProcessOptions \relax \LoadClass{article}
```

Loads required Packages

```
6 \RequirePackage{suffix} \RequirePackage{fancyhdr}
7 \RequirePackage{ifthen}
```

Sets the page-headers.

All headers are cleread before they get any Text — just to be sure.

The headers look like specified above (3.1). Also inserts the Titlepage.

```
8
9 \fancypagestyle{firstpage}{
10 %
11 \fancyhf{}
12 % clear all six fields
13 \renewcommand{\headrulewidth}{.7pt}
14 \renewcommand{\footrulewidth}{0pt} \fancyfoot[RE,LO]{\thepage}
15 \fancyhead[L]{\@tutorium } \fancyhead[R]{\@date } }
16 \fancypagestyle{followingpage}{
17 %
18 \fancyhf{}
19 % clear all six fields
20 \fancyhead[RE,LO]{\@author} \fancyhead[LE,RO]{\@kurs\ Abgabe:
21 \@abgabe} \fancyfoot[RE,LO]{\thepage}
22 \renewcommand{\headrulewidth}{0.7pt}
23 \renewcommand{\footrulewidth}{0pt} } \pagestyle{followingpage}
24 \AtBeginDocument{ \thispagestyle{firstpage}
25 \setlength{\headheight}{25pt} }
```

4.1 Commands

`\subject` Defines `\kurs`. `\subject` equals `\kurs`, except that `\kurs` emits a warning.

```

26 \def\hwa@kurs{Kein Kurs} \newcommand{\kurs}[1]{ \ClassWarning{You used
27     the \kurs-command, which is deprecated. Please use \subject}
28     \def\hwa@kurs{#1} } \newcommand{\subject}[1]{\def\hwa@kurs{#1}}
```

`\tutorial` Defines `\tutorial`. `\tutorial` equals `\tutorial`, except that `\tutorial` emits a warning.

```

29 \def\hwa@tutorial{} \newcommand{\tutorial}[1]{\def\hwa@tutorial{#1}}
30 \newcommand{\tutorial}[1]{\ClassWarning{You used the \tutorial-command,
31     which is deprecated. Please use \tutorial} \def\hwa@tutorial{#1}}
```

`\deadline` Defines `\deadline`. `\abgabe` equals `\deadline`, except that `\abgabe` emits a warning.

```

32 \def\hwa@abgabe{\today}
33
34 \newcommand{\abgabe}[1]{\ClassWarning{You used the \abgabe-command,
35     which is deprecated. Please use \deadline}\def\hwa@abgabe{#1}}
36 \newcommand{\deadline}[1]{\def\hwa@abgabe{#1}}
```

`\maketitle` Overrides `\maketitle`.

```

37
38 \renewcommand{\maketitle} {
39   \begin{centering}
40     \huge{\textbf{\hwa@kurs}} {\hrule height 2pt} \vspace{.25cm}
41     \large
42     Abgabe: \hwa@abgabe\\
43     \vspace{.5cm} \hrule \vspace{.25cm}
44     \normalsize{\@author}\\
45     \vspace{.25cm} \hrule \vspace{.25cm} \normalsize
46   \end{centering}
47 }
```

Defines and initialize all counters.

```

48 \newcounter{problem} \setcounter{problem}{0}
49 \newcounter{subproblem}[problem] \setcounter{subproblem}{0}
50 \newcounter{subsubproblem}[subproblem] \setcounter{subsubproblem}{0}
```

Defines ‘plain’ sectioning-commands. See ?? for more informations.

```

51 \newcommand{\problem}[1]{\@startsection{problem}%Name
52   {1}%Level
53   {\z@}%indent
54   {-2em \@plus -1em \@minus -1em}%beforeskip
55   {1ex \@plus .5ex}%afterskip
56   {\normalfont\Large\bfseries}%style
57   *{#1}}
58
59 \newcommand{\subproblem}[1]{\@startsection{subproblem}%Name
60   {2}%Level
```

```

61 {\z0}%indent
62 {-1em \@plus -.5em \@minus -.5em}%beforeskip
63 {.5ex \@plus .5ex}%afterskip
64 {\normalfont\large\bfseries}%style
65 *{#1}}
66
67 \newcommand{\subsubproblem}[1]{\@startsection{subsubproblem}%Name
68 {3}%Level
69 {\z0}%indent
70 {-.5em}%beforeskip
71 {.5em}%afterskip
72 {\normalfont\bfseries}%style
73 *{#1}}
74
75 \newcommand{\solution}[1][\@startsection{solution}%Name
76 {4}%Level
77 {\parindent}%indent
78 {-.1em}%beforeskip
79 {\z0}%afterskip
80 {\normalfont\bfseries}%style
81 *{L"osung\ifthenelse{\equal{#1}{}}{ }{ { #1}:~~ } }
82
83 \newcommand{\proof}[1][\@startsection{proof}%Name
84 {4}%Level
85 {\parindent}%indent
86 {-.1em}%beforeskip
87 {\z0}%afterskip
88 {\normalfont\bfseries}%style
89 *{Beweis\ifthenelse{\equal{#1}{}}{ }{ { #1}:~~ } }

```

Defines ‘better’ sectioning commands. See 2.2 and 2.2.2 for more informations.

```

90 \newcommand{\newproblem}[1][\stepcounter{problem}
91 \ifthenelse{\equal{#1}{}}{ }{ \setcounter{problem}{#1}}
92 \problem{Aufgabe \arabic{problem}} }
93
94 \newcommand{\newsproblem}[1][\stepcounter{subproblem}
95 \ifthenelse{\equal{#1}{}}{ }{ \setcounter{subproblem}{#1}}
96 \subproblem{Aufgabe \arabic{problem}.\alph{subproblem}} }
97
98 \newcommand{\newsproblem}[1][\stepcounter{subsubproblem}
99 \ifthenelse{\equal{#1}{}}{ }{ \setcounter{subsubproblem}{#1}}
100 \subproblem{\roman{subsubproblem}} }
101
102 \endinput

```

The End