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The HomeworkAssignment class[*]

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1 Abstract

This class provides a relative simple docuemnt–type for homework, mainly created for assignments at the University THis calss is inherited from `article`, it is not perfect, but I am trying my verry best.

2 Commands

2.1 Document Informations

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

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

`\deadline`
`\abgabe`
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.

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[*]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 verry boring, but i have not found a solution to create a `.cls`–file without including the implemetation into the document. Loads LaTeX2e 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. \tutorium equals \tutorial, except that \tutorium emits a warning.

```
29 \def\hwa@tutorium{} \newcommand{\tutorium}[1]{\def\hwa@tutorium{#1}}
30 \newcommand{\tutorum}[1]{\ClassWarning{You used the \tutorium-command,
31    which is deprecated. Please use \tutorial} \def\hwa@tutorium{#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    {\z@}%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    {\z@}%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    {\z@}%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    {\z@}%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{\newsubproblem}[1][]{\stepcounter{subproblem}
95    \ifthenelse{\equal{#1}{}} { } {\setcounter{subproblem}{#1}}
96    \subproblem{Aufgabe \arabic{problem}.\alph{subproblem}} }
97
98  \newcommand{\newsubsubproblem}[1][]{\stepcounter{subsubproblem}
99    \ifthenelse{\equal{#1}{}} { } {\setcounter{subsubproblem}{#1}}
100   \subproblem{\roman{subsubproblem})} }
101
```

The End

```
102 \endinput
```