The uol-physics-report class*

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Abstract

This document describes the usage of the `uol-physics-report` document class.

The document class is based on an initial laboratory report wirtten by me which I have been asked to share with other students at my university. The laboratory report class is mainly optimized for reports written during the Basic Laboratory Course for first semester students of physics at the Carl von Ossietzky University of Oldenburg. Therefore, there are some macros available for generating the titles and headers of every page.

1 Introduction

Writing a laboratory report is not easy as a first semester who is learning to use LaTeX in a professional setting. Furthermore, students need to write their laboratory reports with consistency and predefined formatting. To help with this, the class uses some packages like `siunitx` to help with the correct display of results and formatting of tables.

When using this class it is mandatory to set the date and the title with the commands `\date` and `\title`. Otherwise the command `\maketitle` exits with an error.

2 Usage

2.1 General

`\rom` `\rom` {⟨*number*⟩} prints out an uppercase roman letter number. The input argument is a positive integer excluding zero.

2.2 Report Setup

This section contains the macros used to set up the general report texts like headers and such. You may want to put those commands into a `header.tex` file since those values never change.

`\partner` `\partner` {⟨*First Name*⟩} {⟨*Last Name*⟩} {⟨*E-Mail Address*⟩} {⟨*Matriculation Number*⟩} Sets one of many partners participating in the protocol

\module	\module {⟨*number*⟩} {⟨*title*⟩} allows setting the module title and number which is printed in the file header
\tutor	\tutor {⟨*name*⟩} sets the name of the tutor who is present during the experiments
\supervisor	\supervisor {⟨*name*⟩} sets the name of the supervisor who is present during the experiments
\group	\group {⟨*number*⟩} sets the number of the group the two partners are in
\semester	\semester {⟨*semester*⟩} sets the semester in which the module takes place

3   Implementation

\rom The macro \rom {⟨*number*⟩} takes the supplied number and prints out the uppercase roman number

```
1 \newcommand{\rom}[1]{\uppercase\expandafter{\romannumeral #1\relax}}
```

\partner \partner {⟨*First Name*⟩} {⟨*Last Name*⟩} {⟨*E-Mail Address*⟩} {⟨*Matriculation Number*⟩} takes the name, matriculation number and email address of a partner and sets it in a way the similat to how the author command works.

```
2 \newcommand{\partner}[4]{%%
3     \addtocounter{partnerCounter}{1}
4     \PartnerFirstNames(\value{partnerCounter})={#1}
5     \PartnerLastNames(\value{partnerCounter})={#2}
6     \PartnerEmails(\value{partnerCounter})={#3}
7     \PartnerMatriculationNumbers(\value{partnerCounter})={#4}
8 }
```

\module \module {⟨*number*⟩} {⟨*title*⟩} uses the same structure as the author command

```
9 \newcommand{\module}[2]{
10     \renewcommand{\@moduleNumber}{#1}
11     \renewcommand{\@moduleName}{#2}
12 }
13 \newcommand{\@moduleNumber}{}
14 \newcommand{\@moduleName}{}
```

\tutor \tutor {⟨*name*⟩} uses the same structure as the author command

```
15 \newcommand{\tutor}[1]{
16     \renewcommand{\@tutor}{#1}
17 }
18 \newcommand{\@tutor}{}
```

\supervisor \supervisor {⟨*name*⟩} uses the same structure as the author command

```
19 \newcommand{\supervisor}[1]{
20     \renewcommand{\@supervisor}{#1}
21 }
22 \newcommand{\@supervisor}{}
```

\group \group {⟨*number*⟩} uses the same structure as the author command

```
23 \newcommand{\group}[1]{
24     \renewcommand{\@group}{#1}
25 }
26 \newcommand{\@group}{}
```

*This document corresponds to uol-physics-report v1.1, dated 2023/02/01.

`\semester` `\semester {`⟨*semester*⟩`}` uses the same structure as the author command

```
27 \newcommand{\semester}[1]{
28     \renewcommand{\@semester}{#1}
29 }
30 \newcommand{\@semester}{}
```

`\maketitle` `\maketitle` creates a title page for the laboratory report

```
31 \renewcommand{\maketitle}{%
32 \begin{titlepage}
33     \begin{center}
34         \singlespacing
35         \topskip0pt
36         \vspace*{\fill}
37         \pagenumbering{Roman}
38         {\Large \@moduleName \ -- \@semester }\\
39         \vspace{4em}
40         {\huge \textsc{\thetitle}}\\
41         \vspace{4em}
42         {\Large \thedate}\\
43         \vspace{0.5em}
44         {\Large Gruppe \@group}\\
45         \vspace{3em}
46         \begin{tabular}[t]{c@{\extracolsep{8em}}c}
47             {\Large\textbf{Betreuer}} & {\Large\textbf{Tutor}} \\
48             {\large \@supervisor} & {\large \@tutor} \\
49         \end{tabular}\\
50         \vspace{3em}
51         {\Large\textbf{Gruppenmitglieder}} \\
52         \multido{\iP=1+1}{\value{partnerCounter}}{%
53         {\large\slshape {\arrayx{PartnerFirstNames}(\iP) \arrayx{PartnerLastNames}(\iP)}} \\
54         Matrikelnummer: \arrayx{PartnerMatriculationNumbers}(\iP) \\
55         \arrayx{PartnerEmails}(\iP) \\ \vspace{1.5em}
56         }
57         \vspace*{\fill}
58         \thispagestyle{empty}
59         \newpage
60     \end{center}
61     \tableofcontents
62 \end{titlepage}
63 \pagenumbering{arabic}
64 }
```