



Documentation

For uulm/sp/article (v1.0.0)

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uulm/sp/article is a simple and uniform \LaTeX -class to build clean reports for student projects. The template document also contains respective sections which describe the content of the reflective report. These short descriptions are a guideline for students.

In this documentation, we will first describe the options which can be set for the whole document. After that, we give an overview of all the custom fields (e.g. the author) that can be set for the document. Then, precisely categorize them and explain why some attributes are required. The **appendix** will offer lists of all questions and all commands defined by the documentclass.

The template does contain the following features:

- create a simple and plain title page in English and German
- create an additional second page for copyright notes
- set a (*public*) license
- set an exam Id from a predefined list. (*So that default Ids do not need to be looked up.*)
- guideline for writing a good report

If your viewer supports it, the class should be **embedded** in this PDF.

Meaning of the formatting Throughout the document, text in **this style** is a hyper- or weblink and may be clicked to jump to the corresponding location or to obtain more information about a specific topic.

Syntax highlighting is used for \LaTeX code. For `\exampleCommand{<arg1>}{<arg2>}` the values `<arg1>` and `<arg2>` represent placeholders to be replaced by the desired/required information.

1 About the class

The documentclass is based on *KOMA-scripts' article* class.¹ It provides several variables which are required to set a formal report title page and takes care of default formatting options. Therefore, the class already loads several packages with various options.²

Therefore, loading the given documentclass results in the following addition to the preamble:

```
1 \usepackage[T1]{fontenc}
2 \usepackage[utf8]{inputenc}
3 \usepackage{parskip}
4 \usepackage{babel}
5 \usepackage{microtype}
6 % only if 'usefira' is set as option
7 \usepackage{FiraSans}
8 % only if 'usehelvetica' is set as option
9 \usepackage[scaled]{helvet}
10 \usepackage{hyperref}
11 \usepackage{tikz}
12 \usepackage{graphicx}
13 \usepackage{enumitem}
14 \usepackage[super]{nth}
15 \usepackage{translator}
16 \usepackage{etoolbox}
```

Note: If you do need to change any of the options passed to one of those packages, please use `\PassOptionsToPackage{<options>}{<package>}` **before** loading the documentclass. You may refer to [stackexchange.com](https://stackoverflow.com) for an example with babel.

2 Class Options

Q1: How to set the language of the document?

The uulm/sp/article class uses **babel** and **translator** to deal with translations. The respective options can be passed with `\documentclass[<options>]{uulm/sp/article}`. The default setting for the template is `ngerman` (which is German). The language can be changed to English by replacing `ngerman` with `english`.

Note for those knowing about translator: While all translations are performed using the command `\providetranslation[to=<lang>]{sp@translations@<key>}{<value>}`, some of them need to be expanded during the processing of the class. Therefore translation-alternatives *must* be set before the class is loaded in order to be reliable.

Q2: How to change the font?

The default font is **Fira Sans** determined by the class option `usefira` (see `\documentclass[<options>]{uulm/sp/article}`). If you prefer the font **Helvetica**, exchange `usefira` by `usehelvetica`.

¹For more information on the KOMA-script classes, refer to <https://www.ctan.org/pkg/koma-script>.

²The default options passed to the KOMA-script class are `oneside`, `fontsize=11pt` and `DIV=14`. Those options do not have to be understood by the average user but may be helpful in case of any problems

If a serif font shall be used, replace `sf-font` by `rm-font`. In this case you may omit any declaration of `usefira` and `usehelvetica` altogether.

Note: If you would like to load a custom font of your choice, just omit all of the options presented. Do neither use `sf-font` nor `rm-font`, use neither `usehelvetica` nor `usefira` and you are free to go.

3 Variable and Command Reference

In this section, all macros defined by the article class are listed. Each macro starts with its signature (e.g. `\title{<title>}`). On the right side of the signature, the default (English) value of the variable or the default setting of a command is shown. Please note, that those default variables are automatically translated for the given language (supported are German and English, see [Q1](#)). Following the signature, there is a description that lists all predefined options if provided.

► `\documentType{<doctype>}` Reflective Report

This variable sets the type of the report.

► `\title{<title>}`

This variable sets the subject of the document. In general, this is the project name for which the report is written.

► `\license{<shortcode or custom>}` cc-by

With this command, you can disable or enable a license note on the second page of the document. To disable the license note, use `\license{}`. There are furthermore two options to set a license. On the one hand, we support all **Creative Commons** licenses via the **doclicense** package. To use one of the predefined languages, use one of the following shortcodes:

- | | | | |
|------------------------|---------------------------|------------------------------|------------------------------|
| • <code>cc0</code> , | • <code>cc-by-sa</code> , | • <code>cc-by-nc</code> , | • <code>cc-by-nc-nd</code> , |
| • <code>cc-by</code> , | • <code>cc-by-nd</code> , | • <code>cc-by-nc-sa</code> , | |

All predefined licenses which start with `cc` are Creative Common licenses. The meaning of the apprivations are:

- `0`: (in words: zero) Public domain
- `by`: with attribution of the author
- `sa`: share alike, which means to share modified versions under same conditions
- `nd`: no derivatives, which means that a modified version is not allowed to be shared
- `nc`: no commercial use

The language of the note is automatically chosen by selecting the language for the **babel** package. Alternatively, you can set a custom license note by using a custom text as an argument for the `\license` command.

► `\author{<name>}`

This variable sets the author's name in the document's meta information and on the title page.

► `\email{<email>}`

This variable sets the author's email address on the title page. This is a mandatory argument for the report.

► `\studentId{<number>}`

With this variable, the student identifier (*German: Matrikelnummer*) can be set. This is a mandatory argument for the report.

► `\major{<major>, <degree>}`

With this variable, an author can set one's major and one's aimed degree. Usually, the abbreviations such as 'B. Sc.' (Bachelor of Science) or 'M. Sc.' (Master of Science) are used.

► `\semester{<count>}`

With this variable, the semester count of a student can be set. The count is only a simple integer number. The formatting regarding German or English is done automatically depending on the selected language for the **babel** package.

► `\examId{<exam-identifier>}`

With this variable, the identifier for the exam on the title page can be set. There are a few predefined options for the default target group of this template. The predefined options are:

- 'SEB': Software Engineering B.Sc. Project
- 'SEM/A': Software Engineering M.Sc. Project A
- 'SEM/B': Software Engineering M.Sc. Project B
- 'CS/FM': Computer Science M.Sc., Free Module
- 'CS/APSE': Computer Science M.Sc., Project Application of modern principles of software engineering in software development
- 'CS/IP': Computer Science M.Sc., Individual Project
- 'MI/APSE': Media Informatics M.Sc., Project Application of modern principles of software engineering in software development
- 'MI/IP': Media Informatics M.Sc., Individual Project

They are to be used without the given single ticks.

Example: `\examId{SEM/A}`

► `\examName{<name>}`

Software Project Software Engineering

The name of the exam.

► `\term{<term>}`

The semester in which the lecture takes place.

Example: `\term{Winter semester 2021}`

► `\examiner{<name>}`

The name of the examiner. In general the professor who is responsible for the lecture.

► `\examinerEmail{<email>}`

Sets the email address of the examiner.

► `\supervisor{<name>}`

The supervisor which took care of the student during the project

► `\supervisorEmail{<email>}`

Sets the email address of the supervisor

► `\cosupervisor{<name>}`

Usually used in projects in cooperation with a company.

► `\cosupervisorEmail{<email>}`

Sets the email address of the cosupervisor

3.1 Document settings

Q3: *How to set a license?*

Use the `\license{<license-name>}` command to attach the license note to the document. To not set any additional license text, use `\license{}` (with an empty parameter). For more information, see `\license`.

Q4: *How to set a custom license?*

A custom license notice can be set by `\license{<custom-license-note>}`. Hereby, `<custom-license-note>` represents your customized license note text.

Q5: *How to set the project's name?*

The project's name can be set via the `\title` command.

Example: `\title{A wonderful project}`

3.2 Author Information

A student shall be identifiable via the title page for administrative reasons. Therefore, multiple attributes shall be provided by the author of the document – the student. These attributes are:

- the student's full name
- the student's email address
- the student's id

For formal reasons and visual clearance we also enforce to set the student's major and current major's semester count.

Q6: *How to set the author's name?*

Use `\author{Jon Doe}` to set 'Jon Doe' as the full name of the author.

Q7: *How to set the email address of the author?*

Use `\email{jon.doe@uni-ulm.de}` to set Jon Doe's email address.

Q8: *How to set the student's Id?*

Use `\studentId{123456}` to set the student's id to 123456.

Q9: *How to set the student's major?*

Use `\major{<major>, <degree>}` to set a student's major and aimed degree.

Example: `\major{Software Engineering, M. Sc.}`

Q10: *How to set the student's semester count?*

Set the semester count via the `\semester{<count>}` command. The placeholder `<count>` is an integer value.

3.3 Exam Information

Q11: *How to set a predefined exam Id?*

You can set an exact and individual exam Id via the `\examId{<exam-identifier>}` command. But we also provide default exam identifiers to prevent typos and to simplify work for the students since they do not have to look up the exam identifiers for the default exams. We list all predefined options for `\examId` in Section 3.

Q12: *How to set the exam name?*

Set the exam name via `\examName{<exam-name>}`. Remember that per default "as part of the" (in German "im Rahmen des") is set as a prefix for the project's name.

Q13: *How to set the term for the exam?*

The term describes the semester in which the project took place. Usually, this is either Summer semester `<year>` or Winter semester `<year>`, while `<year>` represents a four-digit year number or a mixed year number like 2020/21. The term can be set via `\term{<term>}`.

Example: `\term{Winter semester 2020/21}`

Q14: *How to set the examiner, supervisor, or cosupervisor?*

For a student's project, there are several roles. The important roles are in general *examiner*, *supervisor*, *cosupervisor*. The *examiner* evaluates the student's work and determines the grade of the student. A *supervisor* provides academic advice and practical support. The *supervisor* often represents the Product Owner in the project. A *cosupervisor* also provides academic advice and practical support. Most projects have a *cosupervisor* from the university if the *supervisor* is an external or from another institute than the one which provides the exam. For each role, we provide a command to set the full name and optionally an e-mail address.

The predefined commands are:

- `\examiner{Emily Examiner}`: To set the full name of the examiner
- `\examinerEmail{emily.examiner@uni-ulm.de}`: To set the examiner's email
- `\supervisor{Sullivan Supervisor}`: To set the full name of the supervisor
- `\supervisorEmail{sullivan.supervisor@uni-ulm.de}`: To set the supervisor's email
- `\cosupervisor{Charly Cosupervisor}`: To set the full name of the cosupervisor
- `\cosupervisorEmail{charly.cosupervisor@uni-ulm.de}`: To set the cosupervisor's email

For more information about roles, see [Roles and Responsibilities](#), University of Otago, New Zealand.

Command overview

<code>\author{<name>}</code> , 3	<code>\license{<shortcode or custom>}</code> , 3
<code>\cosupervisor{<name>}</code> , 5	<code>\major{<major>, <degree>}</code> , 4
<code>\cosupervisorEmail{<email>}</code> , 5	
<code>\documentType{<doctype>}</code> , 3	<code>\semester{<count>}</code> , 4
<code>\email{<email>}</code> , 3	<code>\studentId{<number>}</code> , 4
<code>\examId{<exam-identifier>}</code> , 4	<code>\supervisor{<name>}</code> , 5
<code>\examiner{<name>}</code> , 4	<code>\supervisorEmail{<email>}</code> , 5
<code>\examinerEmail{<email>}</code> , 5	<code>\term{<term>}</code> , 4
<code>\examName{<name>}</code> , 4	<code>\title{<title>}</code> , 3

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