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Title: LaTeX and Project Work (Course Description)

LaTeX

- Countless tutorials about how to install LaTeX on your PC can be found online, e.g. TeX Resources on the Web and Getting LaTeX.
- Basically, you can install LaTeX with a LaTeX editor locally or you can use it in a cloud, see Overleaf.
- I can recommend the LaTeX-editor TeXstudio. It is a cross-platform open-source editor which includes among others an interactive spelling checker, code folding, and syntax highlighting. Please note that LaTeX itself needs to be installed first as it is not shipped with this or any other editor.
- The following tutorial are worth a look:
  - Learn LaTeX in 30 minutes
  - Learn LaTeX in Y minutes
  - Wikibooks: LaTeX

Project Work

- Students complete this module *Data Science for Business* with a project work. The project work includes a written report and an oral presentation.
- Your task is going to be giving a lecture on a topic about *Data Science and R*.
- In particular, it consists of the following:
  1. Written course Description (about 2 pages)
  2. Giving a lecture in class or via Zoom
  3. Written material such as lecture notes, exercises, source code (R-script) and/or slides to support the learning process of students and to document the lecture and project, respectively (In the following, I refer to this written material by simply saying *lecture material*).

1. Course Description

- The course description should be written using LaTeX.
- On github, I offer a LaTeX template to write a course description.

2. Lecture

- The lecture should contain an application in R. This application should be written using RMarkdown.

3. Lecture Material

- I recommend to write the slides and the lecture notes, respectively, using Rmarkdown or markdown.
- The material should be uploaded to your github account so that everthing is online available.

Submission

To submit your project work, you need to submit all your written work to ILIAS and the examination office, respectively.

Procedure

- Today and in the following weeks, we will learn to use all necessary tools (github, LaTeX, markdown, R).
- Then, I will give an overview on some recent topics in *data science*.
- Then, you should suggest possible topics for a lecture to give. I will do the same.
- Then, we will dicuss the topics and **jointly** design a plan for a lecture.
- Then, we form and assign groups that work an a given topic. Moreover, we assign a date for the presentation.
- Then, you work.
- Then, you present your preliminary work to me. I will give you feedback.
- Then, you work harder.
- Then, you publish your course description, present your work, and publish your material.
- Then, I'll give you some final and short comments.
- Then, you can work on the material again before you submit it to ILIAS and the examination office, respectively.