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at Friedrich-Alexander-Universität Erlangen-Nürnberg

at the School of Business, Economics and Society

**Chair of Digital Industrial Service Systems**

Term Paper

in the context of the seminar “Example”

**Title of the Paper**

Subtitles (If Desired)

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# Abstract

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# Abbreviations

BBN Bundeseinheitliche Betriebsnummer

CCG Centrale für Coorganisation

DFÜ Datenfernübertragung

dpi dots per inch

EAN Europäische Artikelnumerierung

GoM Grundsätze ordnungsmäßiger Modellierung

VBA Visual Basic for Applications

WWS Warenwirtschaftssystem

ZfB Zeitschrift für Betriebswirtschaft

ZuO Zuordnung

# Symbols

a0 Initial payment in t = 0

C Capital value

dt Deposit surplus in relation to t

i Target rate

n Operating life

q Interest factor 1 + i

rs Distance of step s from the margin in cm

s Step index

t Period index

# Introduction

Please follow the guidelines presented here when completing your thesis at the Chair of Digital Industrial Service Systems. Essentially, you should format your paper exactly like this document. The template includes specially formatted styles (e.g., abstract, normal, caption, headings) that should reduce the amount of formatting required for your final submission.

## Page Size and Spacing

At the top and bottom, your document (without header and footer) should have a spacing of 2.5, inside of 3.5 and outside of 1.5 cm (the document is optimized for **double-sided printing**).

A little warning in advance: Sometimes the names of the style sheets are predefined in the system and cannot be customized. I.e., if you use the English template in a German (or other language) Office setup, and vice versa, the names may differ. This also causes the header to be issued as an error. In such a case, just go to the header, right click on the error, select "Edit Field…" and in the pop up set the “Style Name” in the middle column "Field properties" to *Heading 1* or *Überschrift 1*, depending on the system language. As the template consists of several sections and even & odd pages are different to optimize double-sided printing, you may need to repeat this step.

Please note that Word, especially if you are using this template on an Apple operating system, may change these dimensions in unexpected ways. Please make sure that the line spacing is 1.5 and do not change the character or word spacing.

## Titles and Headings

For titles, subtitles, and the headings on levels 1-4, you should use the *identically named* styles in this template. Table 1‑1 shows how the styles are defined. Only create a heading if you introduce at least a second heading in the same level (so if you establish a heading "2.2.1 abc", there should also be a heading "2.2.2 xyz"). Additionally: Please do not go further than level four regarding headings, if possible.

For work in English, the following applies in particular: Be sure to capitalize your title and headings correctly (e.g., "The Next Frontier of Information Systems" as opposed to "the next frontier of Information systems". All proper nouns should be capitalized. Articles (the, a), coordinating conjunctions (and, but, or, for, yet, etc.) should not be capitalized unless they are used as the first word in the title. The same applies to prepositions (on, at, to, of, by, etc.). A special rule applies to hyphenated words. If the first word can stand alone, the second word should be capitalized. Here are some examples of headings: "Criteria to Disprove Context-Freeness of Collage Languages", "A User-Friendly and Extendable Data Distribution System", "Multi-flip Networks: Parallelizing GenSAT".

Table 1‑1 Font size and style for headings

|  |  |  |
| --- | --- | --- |
| **Heading level** | **Example** | **Font size and style** |
| **Title** | **My Master Thesis** | **Arial 18-point-bold, center** |
| Subtitle | An observation of … | Arial 14-point-normal, center |
| **Heading 1** | **1. Introduction** | **Arial 14-point-bold, align left** |
| **Heading 2** | **1.1 Motivation** | **Arial 12-point-bold, align left** |
| ***Heading 3*** | ***1.1.1 BPM*** | ***Arial 12-point-bold-italic, align left*** |
| *Heading 4* | *1.1.1.1 Process Mining* | *Arial 12-point-italic, align left* |

## Normal Text

For normal text, please use the "*Normal*" style - this style is configured as a 12-point Arial font. The right margins should be justified and not frayed.

## Figures, Tables, and Captions

Place figures and tables near the relevant text (or where they are referenced in the text).

For figures, use the "*Figure*" style with spacing of 18 pt. before and 12 pt. after the element (select figure and choose appropriate style). For captions, the "*Caption*" style should be used, configured as Arial 10-point, centered. They should be numbered to include the chapter number (e.g., "Table 1‑2" or "Figure 1‑1") and placed below the figure, or above the table. Please note that the words `figure` and `table` should be spelled out wherever they occur (e.g., Figure and not Fig.). In addition, the "*Table*" style should be used for text in tables, configured as Arial 10-point, centered.

Ein Bild, das Decke, drinnen, Boden, Raum enthält.

Automatisch generierte Beschreibung

Figure 1‑1 Entrance area LS Digital Industrial Service Systems

When using figures or tables, keep the following in mind:

* Consistent style
  + When using figures or tables from secondary sources, recreate them using PowerPoint or Visio, for example (exception: the shape of the original figure is the subject of the study).
  + Choose a consistent and legible font (this includes keeping the original aspect ratio and not dragging it in width or height).
  + Use subtle colors for emphasis (see the **tab Design 🡪 Colors** for the Wiso/our department colors).
  + If possible, use vector files (e.g., emf or svg) when including your illustrations.
* Mention in the text
  + Figures and tables must be mentioned in the text and explained if necessary.
* No space fillers
  + Figures and tables that take up unnecessary space should be avoided. Therefore, make your figures and tables compact but easy to read.
  + Consider placing very large figures and tables in the appendix.

Table 1‑2 I am a table

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| Manifestation 2 | d | e | f |
| Manifestation 3 | g | h | i |

## Formulas

Displayed equations or formulas (“*Formula*” style) should be centered, italicized, and on a separate line (with an extra line or half line spacing at the top and bottom). Displayed expressions should be numbered for reference. Numbers should be consecutive within the paper, enclosed in parentheses, and placed in the right margin. Please do not include section numbers in the numbering. An invisible table with 3 columns helps with formatting (see example).

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## Program Code

Program listings or program commands in the text are normally set in typewriter font ("*Program Code*" style):

#include<stdio.h>

int main() {

printf("Hello World\n");

return 0;

}

## Presentation of Interview Data (in the Form of Quotations)

In the course of some theses, interviews with experts may be conducted, excerpts of which are to be presented. In order to present these clearly, they can be placed in a separate paragraph with the "*Interview*" style:

"Our greatest weakness is giving up. The sure way to success is always to try again after all." - Thomas Alva Edison

## Colors

In this template, the colors are stored (see the **tab Design 🡪 Colors**), which are based on the FAU Corporate Design 2021 (see Table 1‑3). These can be used for illustrations, for example, or if certain parts of the text are to be highlighted:

Table 1‑3 Colors in the template and their RGB code

|  |  |
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| Color | RGB |
| Accent 1 | 199/ 199/ 199 |
| Accent 2 | 151/ 27/ 47 |
| Accent 3 (Wiso red) | 197/ 15/ 60 |
| Accent 4 | 235/ 204/ 183 |
| Accent 5 (FAU blue) | 0/ 74/ 159 |
| Accent 6 | 4/ 49/ 106 |

# Language, Style and Content

To ensure academic quality, please pay attention to the following:

* Write in a straightforward style.
* Try to avoid long or complex sentence structures.
* Briefly define or explain any technical terms that may be unfamiliar to readers.
* Explain any acronyms when they are first used in your text - e.g., "primary care provider (PCP)" and include them in the list of abbreviations
* Explain local references (e.g., not everyone knows all the city names in a given country).

Also, for papers written in English: in terms of spelling and punctuation, you may use any dialect of English (e.g., British, Canadian, U.S., etc.) as long as it is done consistently. Hyphenation is optional.

# References and Quotes

Unless your supervisor insists otherwise, we generally use the widely used APA (American Psychological Association) citation style in the current 7th edition (<https://files.taylorandfrancis.com/tf_APA.pdf>). References must be complete, i.e., include volume, number, month, publisher, city and state, editor, last names and initials of all authors, page numbers, etc., as appropriate.

Reference managers (e.g., Mendeley or Citavi) often have these built in and apply the style for you. However, even these templates can contain errors, so you should always double-check that everything fits before submitting your work. There are many websites that describe APA in detail, so here is just a brief overview:

* In-Text Citation:
  + Business Process Management (BPM) is an integral management paradigm for building and leading effective and efficient organizations (Hammer, 2015; vom Brocke et al., 2014).
* If the author's name is dropped into the body text, it may be omitted in the parentheses:
  + See vom Brocke et al. (2014) for a comprehensive overview of BPM best practices.
* Direct citations:
  + Smart service systems are „service system in which smart products are boundary-objects that integrate resources and activities of the involved actors for mutual benefit“ (Beverungen et al., 2019, p. 12).
* List examples of a statement:
  + Digital platforms in the B2B context are different from studies in the B2C context, which has been the main focus of research to date (e.g., Basole & Karla, 2011; Cennamo et al., 2018; Ghazawneh & Henfridsson, 2013).
* Reference to a source that addresses a topic in more depth:
  + To date, numerous definitions of intelligent service systems have been established, with only slight differences between them (cf. Lim & Maglio, 2018).

A list of common abbreviations (e.g., "cf.", "e.g.,", "ibid.") in APA style and their correct usage can be found here: <https://blog.apastyle.org/files/apa-latin-abbreviations-table-2.pdf>.

Please follow the guidelines below for the bibliography:

* For the heading of the bibliography, use the "*Heading 1*" style without numbering.
* For the bibliography the style sheet "*Bibliography*" should be used, which is configured as Arial 10-point, justified, single-line spacing and includes a hanging special indent of 1.25 cm.
* The references in the bibliography depend on the type of literature (e.g., journal article):
  + Journal/ journal: see (Beverungen et al., 2019; Lim & Maglio, 2018; vom Brocke et al., 2014) in the sample bibliography.
  + Conference paper: see (vom Brocke et al., 2009) in the example bibliography.
  + Internet document: see (United Nations, 2015) in the example bibliography.
  + Book contribution: see (Hammer, 2015) in the example bibliography.
* The bibliography includes all sources cited in the text - no more, no less.
* References should be arranged in alphabetical order.

# Conclusion

It is important that you write for a general audience. It is also important that you present your work in a professional manner. This guide is designed to help you achieve that goal. We look forward to seeing a professional-looking, camera-ready thesis!

# References

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# Appendix (if needed)

For the heading of the appendix, use the "*Heading 1*" style without numbering.

# Declaration of Academic Integrity

Ich versichere, dass ich die Arbeit ohne fremde Hilfe und ohne Benutzung anderer als der angegebenen Quellen angefertigt habe und dass die Arbeit in gleicher oder ähnlicher Form noch keiner anderen Prüfungsbehörde vorgelegen hat und von dieser als Teil einer Prüfungsleistung angenommen wurde. Alle Ausführungen, die wörtlich oder sinngemäß übernommen wurden, sind als solche gekennzeichnet.

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