This is the title of the thesis which can extend over several lines

Bacherlor's Thesis

for the purpose of obtaining the academic degree Master of Science (M.Sc.)

in

Hochschule für Technik und Wirtschaft Berlin (HTW Berlin - University of Applied Sciences) Fachbereich 4 Informatik, Kommunikation und Wirtschaft Internationaler Studiengang Medieninformatik

Supervisor: John Doe
 Supervisor: John Doe

Author: John Doe

Matriculation Number: s0000000

Date of Submission: February 13, 2022

Preamble

Abstract

Contents

1	Introduction	1
	1.1 Filler Text	1
2	Background	4
	2.1 Filler Text	4
3	Analysis	5
	3.1 Filler Text	5
4	Concept	6
	4.1 Filler Text	6
5	Technical Design	7
	5.1 Filler Text	7
6	Implementation	8
	6.1 Filler Text	8
7	Evaluation	9
	7.1 Filler Text	9
8	v i	10
	8.1 Filler Text	10
9	1	11
	9.1 Source code	11
	9.2 Picture	11

Contents

9.3	Text formatting etc	12
	9.3.1 Listen	12
	9.3.2 Text Highlighting	13
9.4	Table	14
9.5	Long-Table	14
9.6	References	15
9.7	References (Online)	15
9.8	Glossaries	15
9.9	abbreviations	15
List of	Figures	\mathbf{A}
List of	Tobles	В
LIST OF	Tables	Ъ
List of	Source Codes	\mathbf{C}
List of	Keywords	D
Bibliog	graphy	\mathbf{G}
Online	References	н
Image	References	Ι
Appen	dix	J
A.1	Diagram	J
A.2	Table	J
A.3	Screenshot	J
A.4	Graph	J
Declara	ation	K

Introduction

1.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet

aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

- First itemtext
- Second itemtext
- Last itemtext
- First itemtext
- Second itemtext

Background

2.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Analysis

3.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Concept

4.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Technical Design

5.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Implementation

6.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Evaluation

7.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Summary and Perspectives

8.1 Filler Text

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Example

The chapter Examples (see chapter 9) demonstrates the possible functions and possibilities of this LaTeX document.

9.1 Source code

Nachfolgend der Codeauszug 9.1.

```
/**
2 * The HelloWorldApp class implements an application that
3 * simply prints "Hello World!" to standard output.
4 */
5 class HelloWorldApp {
   public static void main(String[] args) {
      System.out.println("Hello World!"); // Display the string.
   }
9 }
```

Codeauszug 9.1: Hello World

9.2 Picture

The graphic on the right demonstrates the possibilities of the package "wrapfig". Graphics within a "wrapfigure" can be wrapped either left or right of text.

The following Figure 9.2 demonstrates the representation of a "*.jpg" image within the text (when pasting, the extension can be omitted as long as the name is unique). Additionally, it contains a subtitle which can be linked to the already used label. The subtitle appears in Abbildungsverzeichnis (Abbvz.).



Figure 9.1: sample picture [PEX]

9.3 Text formatting etc

This text contains a footnote¹

9.3.1 Listen

Lists can be created with bullet points as well as with numbers

- a list with bullet points
- a further element
- 1. a list with numbers
- 2. a further element

¹Footnotes are annotations that are extracted from the continuous text in the print layout to make the text easier to read.

9.3.2 Text Highlighting

The problem with internet quotes is that you can't always depend on their accuracy

— Abraham Lincoln, 1864

Inspiring quotes can be inserted with epigraph

The problem with internet quotes is that you can't always depend on their accuracy

Abraham Lincoln, 1864

line breaks can only be written directly after text, otherwise the latex cannot be compiled.



Figure 9.2: sample picture [PEX]

9.4 Table

Nachfolgend Table 9.1.

owner:
Alice
Peer (creator):
Bob
Public key of the owner:
F2 D2 0E ED FA 4E 9E 0A F2 DD 23 8A 32 44 F3 E9
validity:
2015-07-01 - 2016-06-30

Table 9.1: digital certificate

9.5 Long-Table

The "Long-Table"can be displayed over defined headers and footers across page breaks.

Version	Codename	API	Verteilung						
2.2	Froyo	8	0.1%						
2.3.3 - 2.3.7	Gingerbread	10	2.7%						
4.0.3 - 4.0.4	Ice Cream Sandwich	15	2.5%						
4.1.x	Jelly Bean	16	8.8%						
4.2.x		17	11.7%						
4.3		18	3.4%						
4.4	KitKat	19	35.5%						
5.0	Lollipop	21	17.0%						
5.1		22	17.1%						

continued on next page

... - Distribution of the Android versions (as of 2016-02-01)

Version	Codename	API	Verteilung
6.0	Marshmallow	23	1.2%

Table 9.2: Distribution of the Android versions (as of 2016-02-01)

9.6 References

Weil für die alte und die neue Rechtschreibung verschiedene Trennregeln gelten, sind Deutsch mit alter Rechtschreibung und Deutsch mit neuer Rechtschreibung zwei verschiedene Sprachen ([Kna09], S. 192).

9.7 References (Online)

see Google.de [Goo].

9.8 Glossaries

The glossary contains the description of terms used for a better understanding towards the reader. Examples are: Berlin, Outsourcing, Application Service Providing, Policy and PCI Express.

9.9 abbreviations

The list of abbreviations lists all abbreviations used. Some examples are Serial Attached SCSI (SAS), Compact Disk (CD), Local Area Network (LAN) and Internationale Organisation für Normung (ISO). The reuse only shows the abbreviation: SAS, CD, LAN and ISO.

List of Figures

9.1	sample picture [PE	X] .	 										12
9.2	sample picture [PE	X] .	 										13

List of Tables

9.1	digital certificate	14
9.2	Distribution of the Android versions (as of 2016-02-01)	15

List of Source Codes

9.1	Hello World			11
9 I	TIEHO VVOLICI			

List of Keywords

\mathbf{A}	${f T}$
alte	Trennregeln15
D	U
Darstellung	Untertitel12

Bibliography

[Kna09] Joerg Knappen. Schnell ans Ziel mit LATEX 2e -. ueberarbeitete und erweiterte Auflage. Muenchen: Oldenbourg Verlag, 2009. ISBN: 978-3-486-59015-9.

Online References

 $[Goo] \qquad Google. \ \textit{Google}. \ \textit{URL:} \ \texttt{http://www.google.de} \ (visited \ on \ 10/06/2015).$

Image References

[PEX] PEXELS. Black and white branches tree. URL: https://www.pexels.com/photo/black-and-white-branches-tree-high-279/.

Appendix A

- A.1 Diagram
- A.2 Table
- A.3 Screenshot
- A.4 Graph

Declaration

I hereby declare and confirm that this thesis is entirely the result of my own original work. Where other sources of information have been used, they have been indicated as such and Properly acknowledged. I further declare that this or similar work has not been submitted for credit elsewhere.

Berlin, February 2?, 2021

John Doe