



OSTBAYERISCHE
TECHNISCHE HOCHSCHULE
REGENSBURG

MathComm!
Gemeinsam besser lernen

Title of your Thesis

A Thesis

Presented to the Faculty of Computer Science and Mathematics
University of Applied Sciences Regensburg
Study Programme:
Business Informatics

Master Thesis

In Partial Fulfillment of the Requirements for the Degree of
Master of Science (M.Sc.)

Presented by: Max Müller
Student Number: 1234567

Primary Supervising Professor: Prof. Dr. Carsten Kern
Secondary Supervising Professor: Prof. Dr. Name des Zweitgutachters

Submission Date: ??.??.2019

Thesis Declaration

1. I am aware that this copy of the thesis will transfer into the ownership of OTH Regensburg as piece of graded work.
2. I hereby declare that I wrote this thesis myself and did not use it elsewhere as graded work. I have used none, but the specified sources and tools and denoted all quotations as such.

Regensburg, August 19, 2019

Max Müller

Zusammenfassung

In der folgenden Arbeit wird ...

Contents

I	List of Abbreviations	VI
1	Introduction	1
2	???	2
2.1	???	2
3	Conclusion and Future Work	3
4	L^AT_EXElements	4
4.1	L ^A T _E XDistributions for all Operating Systems	4
4.2	Pictures	4
4.3	Tables	5
4.4	Enumerates	6
4.5	Listings	6
4.6	Selfmade Illustrations	6
4.7	Tips	7
	Appendix	I
A	Domain Model	I

List of Figures

1	Board 01	5
2	Board 02	5

List of Tables

1	Example table	5
---	-------------------------	---

I List of Abbreviations

BA Bachelorarbeit

MA Masterarbeit

1 Introduction

You can use this L^AT_EX-Template as template for your thesis (Bachelorarbeit (BA), Masterarbeit (MA)) and modify it as you wish. The following pages give more information on L^AT_EX. Should any questions arise, please don't hesitate to contact me: `carsten.kern@oth-regensburg.de`

2 ???

2.1 ???

3 Conclusion and Future Work

4 L^AT_EXElements

This section contains information about L^AT_EXdistributions, editors and L^AT_EXelements, which will introduce you to L^AT_EX.

4.1 L^AT_EXDistributions for all Operating Systems

4.1.1 L^AT_EXDistributions

The following main L^AT_EXdistributions are available:

- Windows: MiKTeX Website: <http://www.miktex.org>
- Linux/Unix: TeX Live Website: <http://tug.org/texlive/>
- Mac OS: MacTeX Website: <http://www.tug.org/mactex/>

4.1.2 L^AT_EXEditors

The following websites show helpful L^AT_EXeditors:

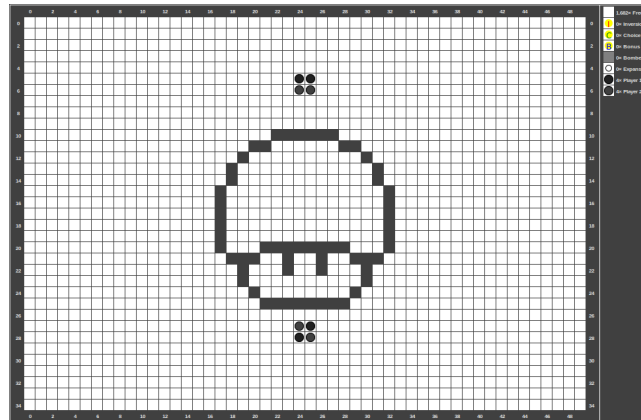
- Windows/Linux/Mac OS: <http://www.xmlmath.net/texmaker/>
- Windows: <http://www.texniccenter.org/>
- Mac OS: <http://pages.uoregon.edu/koch/texshop/>
- Online: <http://overleaf.com>

If the previously mentioned editors were not right for you, you can find a listing of many more L^AT_EXeditors:

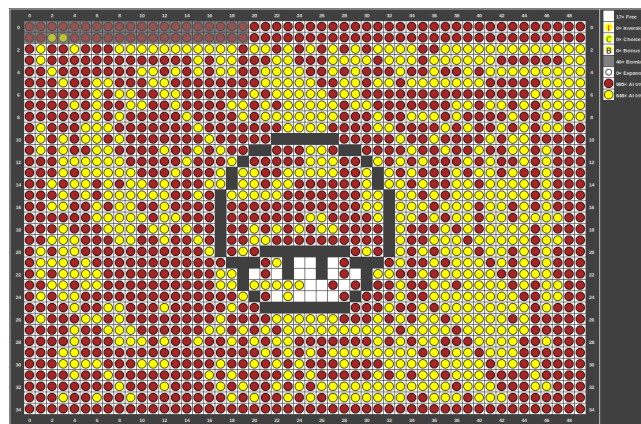
https://en.wikipedia.org/wiki/Comparison_of_TeX_editors

4.2 Pictures

To paste an image, see figure 1, use the *minipage* environment and the command `\includegraphics`. This positions, integrates and scales the pictures perfectly and in a simple way.

Figure 1: Empty board¹

After the game started and both game phases were passed thorough, the red player wins.

Figure 2: Final board²

4.3 Tables

In this section a table (see table 1) is depicted.

Name	Name	Name
1	2	3
4	5	6
7	8	9

Table 1: Example table

For easier creation of tables: <https://www.tablesgenerator.com/>

¹The is board does not have assigned players yet (hence the dark fields)

²The board after the draw and the bombing phase. The red player wins clearly.

4.4 Enumerates

For lists use the `enumerate` or `itemize` environment.

- Just
- an
- example.

4.5 Listings

Lastly, see listing 1 for an example on how to embed Code with Syntax-Highlighting.

```

1  private static int calcSum(int [][] feld, int x, int y, int xOffset, int yOffset){
2      int sum = 0;
3      for (int i=x; i<x+ xOffset; i++) {
4          for (int j=y; j<y+yOffset; j++) {
5              sum += feld[i][j];
6          }
7      }
8      return sum;
9  }
10
11 public static int maxTeilSum2DBruteForce(int [][] feld) {
12     int maxSum = Integer.MIN_VALUE;
13     for (int i=0; i<feld.length; i++) {           // x-start
14         for (int j=0; j<feld[0].length; j++) {     // y-start
15             for (int xSize=1; xSize<=feld.length-i; xSize++) {
16                 for (int ySize=1; ySize<=feld[0].length-j; ySize++) {
17                     // Aufaddieren
18                     int tmpSum = calcSum(feld, i,j,xSize, ySize);
19                     if (tmpSum > maxSum)
20                         maxSum = tmpSum;
21                 }
22             }
23         }
24     }
25     return maxSum;
26 }

```

Listing 1: Brute Force Approach for the MaxTeilsum2D problem

4.6 Selfmade Illustrations

With the help of the `tikz` package you can create nice illustrations (e. g. automata, graphs etc.) directly in L^AT_EX. Examples:

<http://www.texample.net/tikz/>.

4.7 Tips

Literature (books, Paper and journals) and web sources (websites, blogs etc.) are located in the *literatur.bib* file. A book and a web source have been added as examples. [Vgl. [Mus13], [Ker]]

Literature and sources will be split into two separate listings. As notation for web sources, add `keywords = {online}`.

Bibliography

[Mus13] Max Mustermann. *Ich bin ein Buch*. Verlag, 2013.

List of References

- [Ker] Carsten Kern. *<http://www.MathComm.net>*. Unterstützung von Studierenden in Mathematik. URL: <http://www.mathcomm.net>.

Appendix

Contents of the attached data storage device:

- ...
- ...

A Domain Model

An amazing appendix that is not supposed to be used as rubbish dump. All images and contents have to be explained in your own words. You have to be able to read the appendix by itself. Please also include references to the corresponding main part of the thesis (including page numbers with `\pageref`)

Screenshot

Ninja subsection that does not appear in the table of contents. *swings ninja sword*