Proseminar
Data Structures and Algorithms

TOPIC

AUTHORS
Supervisor: SUPERVISOR

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1 Introduction

Begin your paper with an introduction to your topic. Do not forget references such as [1].

1.1 Hello

bye.

2 Preliminaries

Introduces terms used in your topic by definitions. Furthermore, it can introduce theorems on which parts of your topic base. Hint: Use paragraphs to structure your text. This is the first paragraph.

And this is the second paragraph. By the way: Do not use abbreviations as don't, it's, or can't. In Figure 1 you can see an example of a picture embedded in a figure. The picture is created using the Ti*k*ZLibrary (cf. Ti*k*Z-Manual). In Table 1 you can see an example for a table.

Definition 2.1 (Name of the term) *This is how you define a term.*

Theorem 2.1 (Name of the theorem) *This is how you write a theorem. Do not forget to prove the theorem.*

Proof 2.1 *Here you write the proof of the theorem.*

In the next lines you can see some examples formulas and other constructs, which are useful in the math mode. A very useful webpage to find symbols and the packages to include is Detexify[2]. $\Sigma, \sigma, \ldots, \varphi, \xi$ You can use the math mode in the text, e.g. $1 \neq 0$, or write it in a whole line:

$$\begin{vmatrix} a_{1,1} & \ldots & a_{1,n} \\ & \vdots & \\ a_{n,1} & \ldots & a_{n,n} \end{vmatrix} = \begin{cases} \sum_{\sigma \in S_n} \left(\operatorname{sgn}(\sigma) \prod_{i=1}^{n} a_{i,\sigma(i)} \right) & \text{, if } \textit{True} \\ \frac{42}{1} & \text{, otherwise} \end{cases}$$



Figure 1: A digraph on the left and a directed tree on the right.

Table 1: This a a table.

	align left	centered	align right
row 1	box 1.1	box 1.2	box 1.3
row 2	box 2.1		box 2.2
row 2	box 2		

3 Topic

This section concerns the main topic. In the following you can see a small illustration of how to use itemizings and enumerations.

- Point 1.
- Point 2.

1. Point 1.
2. Point 2.

    I) Point 1.

    II) Point 2.

1. Point 1.
2. Point 2.

Term one: Description of term one.

Term two: Description of term two.

In Algorithm 1 you can see how we define an algorithm.

Data: this text
Result: how to write algorithm with LaTeX2e
initialization;
while *not at end of this document* **do**
    read current;
    if *understand* **then**
        go to next section;
        current section becomes this one;
    else
        go back to the beginning of current section;
    end
end

Algorithm 1: How to write algorithms

3.1 Example

Give an example to illustrate the idea of your topic. Import images in the following way. Store the images in a separate folder as precasted in our template.

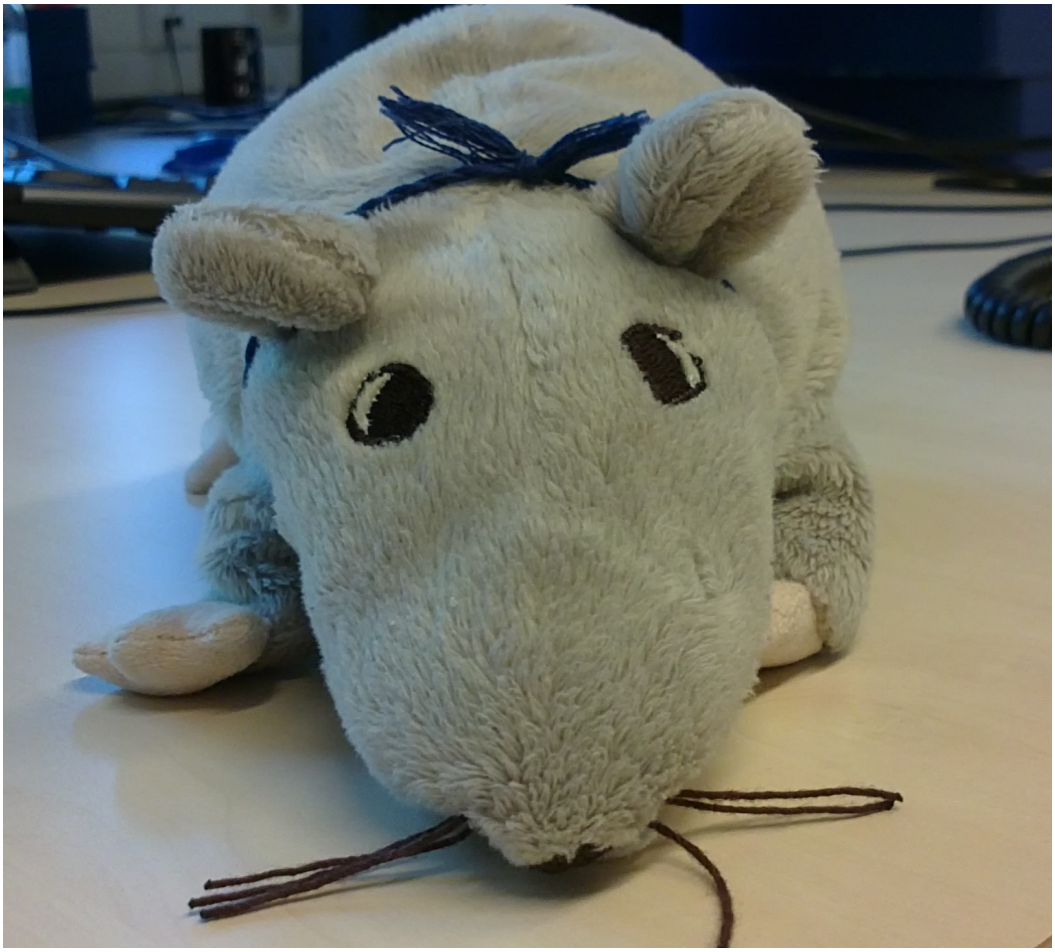


Figure 2: Proseminar supervisor's pet.

4 Conclusion

Give a conclusion on your topic. Give a few sentences to summarize the topic. If possible, point out the quality of the result and give a small prospect of subsequent works.

References

[1] C. Baier and J.-P. Katoen. *Principles of Model Checking*. The MIT Press, 2008.