Project Title

Author Name

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School Name

Abstract

The abstract (no more than 250 words) makes it possible to assess the interest of a document and makes it easier to identify it in a bibliographic search in databases where the document is referenced.

It is recommended that the summary briefly addresses:

- Main objectives and theme or motivations for the work;

- Methodology used (when necessary for understanding the report);

- Results, analyzed from a global point of view;

- Conclusions and consequences of the results, and link to the objectives of the work.

As this report template is aimed at work that focuses mainly on software development, some of these components may be less emphasized, and information on the work's analysis, design, and implementation may be added.

The abstract should not contain references.

Keywords: Keyword 1 · Keyword 2 · Keyword 3 · Keyword 4

Contents

List of Tables

List of Figures

CHAPTER 1

Introduction

The author must take the following general rules into account when preparing the document:

- The document should be written in Portuguese or English with an appropriate and grammatically correct style (both syntactically and semantically);

- Be especially careful with the use of adjectives (they easily lead to exaggeration), adverbs (they add nothing or almost nothing), and punctuation marks (especially the correct use of commas);

- The style adopted for writing should be consistent with the requirements of a scientific paper found in printed publications;

- You should generally use the 3rd person singular (possibly plural), except where this is inappropriate, for example in the acknowledgments section;

- Use the *itálic* style whenever terms are used in languages other than the language adopted in the report, to write mathematical symbols

- The correct use of units, their multiples and submultiples;

- Images and Tables should, as a rule, appear at the top or bottom of the page. Figure legends should appear immediately after the Figures and, in the case of Tables, the legends should precede them;

- All Figures, Tables, and other Listings should be mentioned in the text so that they fit in with the ideas conveyed by the author. As a general rule, this reference should be made before the figure, table or list occurs;

- Indicate the documentary references used throughout the text, especially in quotations (pure or literal), marked with quotation marks, as well as in the case of the reuse of graphs, Figures, Tables, formulas, etc. from other sources;

More specifically, in this first compulsory chapter, the author should [1]:

- Contextualize the work proposal in the context of the company, other work already carried out, from a scientific and/or technological point of view, etc;

- Clearly present the objectives you intend to achieve;

- Briefly but objectively describe the recommended solution or hypothesis;

- Briefly but present the developments made;

- Identify how the solution was validated and evaluated;

- Describe the organization of the document.

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[1]It is recommended to use a section for each item

CHAPTER **2**

Context and Technologies/Tools

This Chapter explains how to include Figures, Tables, and Equations in a paper.

2.1   Figures

This section will cover how to place a Figure in a LaTeX document. According to [1], in Basic LaTeX you need the *graphicx* package to include figures. That said, throughout the chapter, it's important to mention the meaning of the Figure, for example "In Figure 2.1 shows an example of a Figure will be illustrated". Secondly, the caption of a Figure is <u>always</u> after the figure. Sometimes it's necessary to place 2 Figures simultaneously, as illustrated in Figure 2.2.

Fig. 2.1: Example of a figure

(a) Figure 1   (b) Figure 2

Fig. 2.2: Figures Presented with *subfigure* Package.

In Figure 2.2 each sub-figure has a sub-caption, in Figure 2.3 two Figures will be illustrated with only one caption.
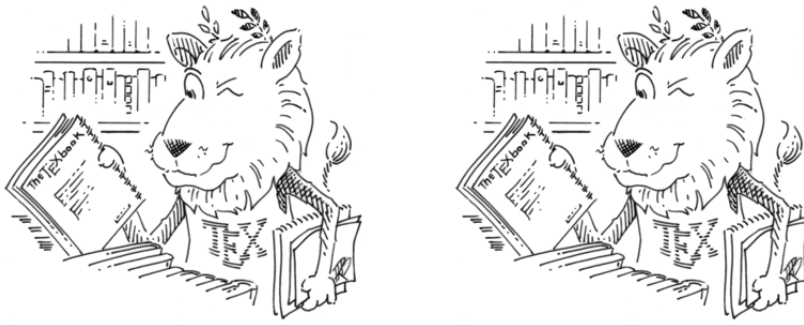
Fig. 2.3: Example of Two Pictures, One Next to the Other.

2.2   Tables

This section will cover how to place a Table in a LaTeX document. According to [3], a Table is defined between the commands `\begin{tabular}` and `\end{tabular}`, an example of which is shown below.

Table 2.1: Centered Table

Column	Column	Column
a	b	c
d	e	f

After `\begin{tabular}` is placed, between `{}`, ccc, which indicates that the Table will have 3 columns, all centered. The number of letters indicates the number of columns and the letter their alignment:

- c for columns with text aligned centrally;

- l for columns with left-aligned text;

- r for columns with right-aligned text.

To indicate a column separation use `&`. To indicate the number of lines use two bars together, `\`, which means a line break. The command `\hline` is responsible for placing a horizontal line in the Table and the command `\cline{-}` makes a horizontal line only between the indicated columns. To insert vertical lines, use between the letters indicating the column alignment.

Table 2.2: Table with Left Alignment

Column	Column	Column
A	B	C
D	E	F

If a column contains a long text and there needs to be a line break within the cell, instead of using the letters c, l, or r, use `p{}`, where `{}` includes the size of the line.

Table 2.3: Table using $p\{\}$.

C	C	Text column
A	B	Large text will be typed here, but the cell width is fixed at 5 cm.

It's possible to make the tables prettier by using `\usepackage{booktabs}`, i.e. this package removes the `\hline` and adds it:

- `\toprule`, to the top line of the table;

- `\midrule`, for the lines in the middle of the table;

- `\bottomrule`, for the line below the table.

Table 2.4: Table Using *booktabs* Package.

	Item		
Animal	Description	Price ($)	
Gnat	per gram	13.65	
	each	0.01	
Gnu	stuffed	92.50	
Emu	stuffed	33.33	
Armadillo	frozen	8.99	

2.3   Equations

In any mathematical formula, there are constants and variables. To modify the font and presentation of the elements according to their type, constant or variable, for example, $p'' = max\{f(y), g(x)\}$ [1].

$$f_X(x) = \frac{1}{\sqrt{2\pi\sigma^2}} and^{-\frac{(x-\mu)^2}{2\sigma^2}} \tag{2.1}$$

$$f_X(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

$$f_X(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

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[1] Whenever you start an equation you must have the caption "(2.1))'

$$f_X(x) = \frac{1}{\sqrt{2\pi\sigma^2}} and^{-\frac{(x-\mu)^2}{2\sigma^2}} \tag{2.2a}$$

$$f_X(x) = \frac{1}{\sqrt{2\pi\sigma^2}} and^{-\frac{(x-\mu)^2}{2\sigma^2}} \tag{2.2b}$$

$$f_X(x) = \frac{1}{\sqrt{2\pi\sigma^2}} and^{-\frac{(x-\mu)^2}{2\sigma^2}} \tag{2.2c}$$

$$\tag{2.2d}$$

For more information [2, 4].

CHAPTER **3**

Conclusion

The conclusions should summarize and provide a unifying perspective on the work carried out. A brief reference may be made to the work of others with similarities to the work carried out and to the knowledge that has resulted from the work carried out, as well as suggestions for future work. The coherence of the document means that the conclusions must be consistent with the ideas set out in the introduction.

Bibliography

[1] Overleaf: Inserting images. https://pt.overleaf.com/learn/latex/Inserting_Images

[2] Overleaf: List of greek letters and math symbols. https://www.overleaf.com/learn/latex/List_of_Greek_letters_and_math_symbols

[3] Overleaf: Tables. https://pt.overleaf.com/learn/latex/Tables

[4] ufpel: Lista de símbolos matemáticos. https://wp.ufpel.edu.br/fernandosimoes/files/2012/06/Simbolos-matematicos.pdf

Code