John Longname Doe

Master of Science

Impressive Thesis Title

Dissertação para obtenção do Grau de Doutor em

Engenharia Informática

Orientadores: John Doe Adviser Name, Full Professor, NOVA University of Lisbon

John Doe Male Adviser Name, Associate Professor, Some University Somewhere

Co-orientadora: John Doe Co-Adviser Name, Associate Professor, Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa

Júri

Presidente: Name of the male committee chairperson

Arguentes: Name of a female raporteur

Name of another (male) raporteur

Vogais: Another member of the committee

Yet another member of the committee

FACULDADE DE CIÊNCIAS E TECNOLOGIA
UNIVERSIDADE NOVA DE LISBOA

DRAFT: 26 de Agosto de 2015

Impressive Thesis Title

Este documento foi gerado utilizando o processador (pdf)LaTeX, com base no template "unlthesis" [1] desenvolvido no Dep. Informática da FCT-NOVA [2]. [1] https://github.com/joaomlourenco/unlthesis [2] http://www.di.fct.unl.pt

Lorem ipsum.

Acknowledgements

The acknowledgements. You are free to write this section at your own will. However, usually it starts with the institutional acknowledgements (adviser, institution, grants, workmates, ...) and then comes the personal acknowledgements (friends, family, ...).

Abstract

Resumo

Contents

List of Figures

List of Tables

Listings

Glossary

computer An electronic device which is capable of receiving information (data) in a particular form and of performing a sequence of operations in accordance with a predetermined but variable set of procedural instructions (program) to produce a result in the form of information or signals. .

Acronyms

abbrev abbreviation of a longer text.

xpto and extension of a xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto.

Chapter 1

Introduction

1.1 A Bit of History

The *unlthesis* was originally developed to help MSc and PhD students of the Computer Science and Engineering Department of the Faculty of Sciences and Technology of NOVA University of Lisbon (DI-FCT-UNL) to write their thesis and dissertations Using LaTeX. These student can easily cope with LaTeX by themselves, and the only need some help in the bootstrap process to make their life easier.

However, as the template spread out among the students from other degrees at FCT-NOVA, the demand for am easier-to-use template as grown. And the template in its current shape aims at answering the expectations of those that, although they are not familiar with programming nor with markup languages, so still feel brave enough to give LaTeX a try and rejoice with the beauty of the texts typeset by this system.

1.2 Disclaimer

It is up to you, the student, to read the FCT and/or UNL regulations on how to format and submit your MSc or PhD dissertation.

This template is endorsed by the FCT-UNL and even linked from its web pages, but it is not an official template. This template exists to make your life easier, but in the end of the line you are accountable for both the looks and the contents of the document you submit as your dissertation.

CHAPTER 2

THESISDIFCTNL USER'S MANUAL

2.1 Introduction

These instructions are outdated! Please see also the "template.tex" file!

This chapter describes how to use the LaTeX *unlthesis* template (and the "`unlthesis.cls`" class file).

Let's start with some simple suggestions:

1. No! You don't have to use this template to write your thesis. You don't even have to use LaTeX. However, writing a thesis is serious stuff, and which tool you shall use to write it is not a decision to make lighthearted.

2. LaTeX is hard enough by itself. This template aims at making your life easier, but not easy. If you choose to use this template to write your thesis, you are very welcome. However, don't expect me to provide you help with LaTeX. Look for help with your friends (you have some friends, don't you?), or search the web, or try even to read some book(s) on LaTeX. In the end you will certainly find the experience rewarding.

3. So, don't forget, when you come to the point of "*How do I do this with LaTeX?*" look for help! Google is your best friend.

4. If you believe the difficulty is related with the *unlthesis* template itself (and not with LaTeX), please **do not** send me an email asking for help. Please look for help in the *unlthesis* Google Group (URL) and the *unlthesis* Facebook group (URL). If you can't find help there from previous posts/messages, then post your own question. Hopefully someone will answer you.

Now, let's go to a major issue for Windows users. Characters have to be encoded in files as numbers, and that is how character encodings were born. ASCII and EBCDIC standards are long lost in the past. The world now uses UTF-8. Well, not all the world... Windows is still stick in its *codepages*, and "latin1" is what windows uses as the codepage for Western Europe. This messes up with the template. Please be sure you use an editor with UTF-8 support. *Go to the preferences/options/... of your text editor and set up its default file encoding as UTF-8.*

2.2 Folder Structure

The *unlthesis* template is organized into files and folders. At the main level it includes the following files and folders:

`unlthesis.cls`	*file*	The main class file. It will include additional files from `unlthesis-files` folder.
`template.tex`	*file*	The main user file. Use this file as the main file for your thesis.
`bibliography.bib`	*file*	An example of a bibliography file. You may have has many as you want.
`template.pdf`	*file*	A possible result of applying pdfLaTeX to the `template.tex` file. The template supports multiple types of documents (e.g., MSc dissertation, PhD thesis, ...) and multiple Schools (e.g., FCT-UNL, FCSH-UNL, IST-UL, ...) and each will produce different results.
`Chapters`	*folder*	Examples of thesis chapters. Replace them with your own chapters.
`Examples`	*folder*	Some more examples of the use of the template for different document types and Schools.
`Scripts`	*folder*	Some (possibly useful) scripts for Unix-based systems (Linux, Mac OSx). If you are a windows user, ignore this folder (you may safely delete it if you want).
`unlthesis-files`	*folder*	Additional files for the `unlthesis.cls` file. Unless you know what you are doing, avoid messing up with the files and folders inside this folder (except for deleting the unused Schools, see below).

The `unlthesis-files` folder contains additional files and folders that complement the main `unlthesis.cls` file. These are:

`README.txt`	*file*	A file that should be read! :)
`fix-babel.clo`	*file*	Simple fixes to the `babel` package.
`lang-text.clo`	*file*	Translations of important strings used in the template. Currently fully supported are Portuguese and English, but French is on the way. If you add translations for your own language, please be so kind and send them to me. Thank you!
`options.clo`	*file*	Processing of `unlthesis.cls` options. *Don't mess with this!*
`packages.clo`	*file*	Additional packages to be loaded into the *unlthesis* template. *You should not mess with this!*
`spine.clo`	*file*	This file is loaded only if the option `spine=true`, and includes the typesetting of the book spine.
`ChapStyles`	*folder*	Contains a lot of files, one for each chapter style. If you really know what you are doing, you may add your own chapter style here.
`FontStyles`	*folder*	Contains a few files, one for each set of fonts (main text font, chapter font, section font, subsection font, etc). If you really know what you are doing, you may add your own set here.
`Schools`	*folder*	Configuration files for each school. This folder is organized into subfolders, one for each university. *You may safely delete all the subfolders except the one for your University.* Then open the subfolder of your University and *you may safely delete all the subfolders except the one for your School/Faculty*.

As stated above, the `Schools` folder contains per-university folders and per-school (faculty) subfolders. Currently these are the available folders:

`ul / ist`	*folder*	The folder for the *Instituto Superior Técnico* of the *University of Lisbon*.
`unl / fcsh`	*folder*	The folder for the *Faculty of Human and Social Sciences* of the *NOVA University of Lisbon*.
`unl / fct`	*folder*	The folder for the *Faculty of Sciences and Technology* of the *NOVA University of Lisbon*.
`unl / ims`	*folder*	The folder for the *Information and Management School* of the *NOVA University of Lisbon*.

2.3 `unlthesis.cls` Class Options

The *unlthesis* class can be customized with the options listed below.

---

doctype=OPT phd(*), phdplan, phdprop, msc, mscplan, bsc

The type of the document: PhD Thesis (default), PhD Plan, PhD Proposal, MSc Dissertation, MSc Plan, BSc Report

---

school=OPT unl/fct(*), unl/fcsh, unl/ims, ul/ist

The name of the school. This option changes the typesetting of the cover and some School specific formating, like margins, fonts, paragraph spacing and indentation, etc...

---

lang=OPT en(*), pt

The main language for the document. Currently only Portuguese and English are supported. Other languages are expected to be support in forthcoming versions.

---

fontstyle=OPT bookman, charter, fourier, kpfonts(*), mathpazo1, mathpazo2, newcent

The font set to be used in the document. Please note that a font set include definitions for the main text, headings, maths, etc.

---

chapstyle=OPT bianchi, bluebox, brotherton, dash, default, elegant(*), ell, ger, hansen, ist, jenor, lyhne, madsen, pedersen, veelo, vz14, vz34, vz43

The chapter style, i.e., the look of the chapter beginning.

---

converlang=OPT en, pt(*)

The language to be used when typesetting the cover page.

---

otherlistsat=OPT front(*), back

Where to put the other lists besides the table of contents. The default is (`front`) before the main text. But some scientific areas prefer them at the end of the document (`back`), just before the Appendixes.

---

aftercover=OPT true, false(*)

Include or don't include the contents of the "`aftercover`" file. The default is for this file to be ignored (if if it exists).

---

linkscolor=OPT darkblue(*), black

The color for all the hyperlinks in the PDF file. The "`media=paper`" option (see below) will override this option to "`black`"

---

spine=OPT true, false(*)

Generate the book spine and the last page in the PDF.

---

biblatex=OPT OPT={list of options for `biblatex`}

Customize `biblatex`, the bibliography management system used in this class. Probably you will want to change the value of the `biblatex` "`style`" option. For other customizations of `biblatex` check its manual.

---

memoir=OPT OPT={list of options for `memoir`}

*Customize the base class `memoir`. The `memoir` manual should be the first document to be consulted when looking for "**how can I do this?**" You may wnat to change the base font size from 11pt to a smaller (10pt) or larger (12pt) size. Also, remember to change the "`draft`" to final when your document is finished.*

---

media=OPT screen(*), paper

Behavior to be customized in the school options/configuration. Expected definitions for screen are: left and right margins are equal and use colored links. Expected definitions for paper are: left and right margins are different and use black links.

2.4 Additional considerations about the class options

In this section we will provide some additional considerations about some of the customizations available as class options.

2.4.1 The main language

The choice of the main language with the option "`lang=0PT`" affects:

- **The order of the summaries.** First is printed the abstract in the main language and then in the foreign language. This means that if your main language for the document in English, you will see first the "abstract" (in English) and then the "resumo" (in Portuguese). If you switch the main language for the document for Portuguese, it will also automatically switch the order of the summaries to "resumo" and then "abstract".
- **The names for document sectioning.** E.g., "Chapter" vs. "Capítulo", "Table of Contents" vs. "Índice", "Figure" vs. "Figura", etc.
- **The type of documents in the bibliogrpahy.** E.g., "Technical Report" vs. "Relatório Técnico", "PhD Thesis" vs. "Tese de Doutoramento", etc.

No mater which language you chose, you will always have the appropriate hyphenation rules according to the language at that point. You always get Portuguese hyphenation rules in the "Resumo", english hyphenation rules in the "Abstract", and then the main language hyphenation rules for the rest of the document.

2.4.2 Class of Text

You must choose the class of text for the document. The available options are:

1. **bsc** — BSc graduation report.
2. ***mscplan** — Preparation of MSc dissertation. This is a preliminary report graduate students at DI-FCT-UNL must prepare to conclude the first semester of the two-semesters MSc work. The files specified by `\dedicatoryfile` and `\acknowledgmentsfile` are ignored, even if present, for this class of document.
3. **msc** — MSc dissertation.

4. **phdprop** — Proposal for a PhD work. The files specified by `\dedicatoryfile` and `\acknowledgmentsfile` are ignored, even if present, for this class of document.

5. **prepphd** — Preparation of a PhD thesis. This is a preliminary report PhD students at DI-FCT-UNL must prepare before the end of the third semester of PhD work. The files specified by `\dedicatoryfile` and `\acknowledgmentsfile` are ignored, even if present, for this class of document.

6. **phd** — PhD dissertation.

2.4.3 Printing

You must choose how your document will be printed. The available options are:

1. **oneside** — Single side page printing.

2. ***twoside** — Double sided page printing.

2.4.4 Font Size

You must select the encoding for your text. The available options are:

1. **11pt** — Eleven (11) points font size.

2. ***12pt** — Twelve (12) points font size. You should really stick to 12pt...

2.4.5 Text Encoding

You must choose the font size for your document. The available options are:

1. **latin1** — Use Latin-1 (ISO 8859-1) encoding. Most probably you should use this option if you use Windows;

2. **utf8** — Use UTF8 encoding. Most probably you should use this option if you are not using Windows.

2.4.6 Examples

Let's have a look at a couple of examples:

- Preparation of PhD thesis, in portuguese, with 11pt size and to be printed single sided (I wonder why one would do this!)
  `\documentclass[prepphd,pt,11pt,oneside,latin1]{thesisdifctunl}`

- MSc dissertation, in english, with 12pt size and to be printed double sided
  `\documentclass[msc,en,12pt,twoside,utf8]{thesisdifctunl}`

2.5 How to Write Using LaTeX

Please have a look at Chapter 3, where you may find many examples of LaTeXconstructs, such as Sectioning, inserting Figures and Tables, writing Equations, Theorems and algorithms, exhibit code listings, etc.

2.6 Exmaple glossary and acronyms

This is the first occurrence of an abbreviation: abbreviation of a longer text (abbrev).

And now the second occurrence of the same abbreviation: abbrev.

And a new acronym with capital letter: And extension of a xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto xpto (xpto) and reused xpto.

Lets add the term "computer" to the glossary!

Chapter 3

A Short LaTeX Tutorial with Examples

This Chapter aims at exemplifying how to do common stuff with LaTeX. We also show some stuff which is not that common! ;)

Please, use these examples as a starting point, but you should always consider using the *Big Oracle* (aka, Google, your best friend) to search for additional information or alternative ways for achieving similar results.

3.1 Document Structure

3.2 Dealing with Bibliogrpahy

3.3 Inserting Tables

3.4 Importing Images

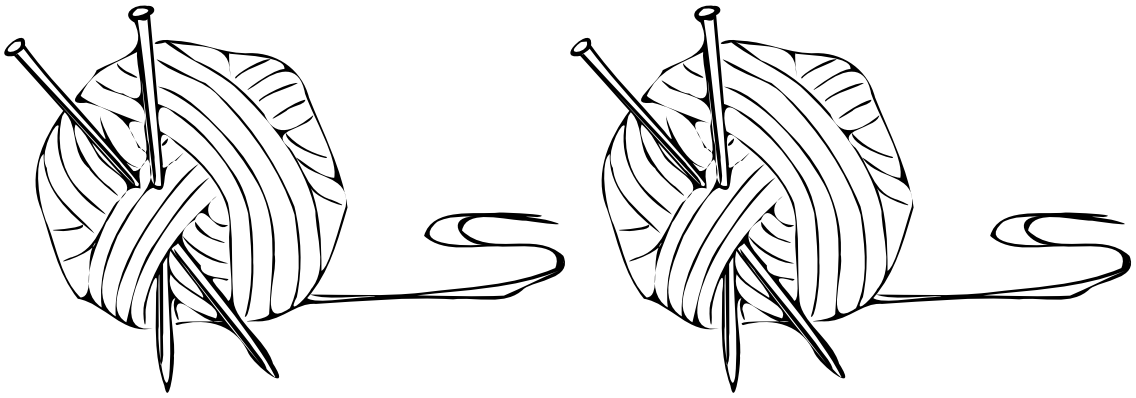
3.5 Floats, Figures and Captions

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend,

sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.



(a) One sub-figure (b) Another sub-figure

Figure 3.1: A figure with two sub-figures!

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

3.6 Text Formatting

3.7 Generating PDFs from LATEX

3.7.1 Generating PDFs with pdflatex

You may create PDF files either by using `latex` to generate a DVI file, and then use one of the many DVI-2-PDF converters, such as `dvipdfm`.

Alternatively, you may use `pdflatex`, which will immediately generate a PDF with no intermediate DVI or PS files. In some systems, such as Apple, PDF is already the default format for LATEX. I strongly recommend you to use this approach, unless you have a very good argument to go for `latex` + `dvipdfm`.

A typical pass for a document with figures, cross-references and a bibliography would be:

```
$ pdflatex template
$ bibtex template
$ pdflatex template
$ pdflatex template
```

You will notice that there is a new PDF file in the working directory called `template.pdf`. Simple :)

Please note that, to be sure all table of contents, cross-references and bibliographic citations are up-to-date, you must run `latex` once, then `bibtex`, and then `latex` twice.

3.7.2 Dealing with Images

You may process the same source files with both `latex` or `pdflatex`. But, if your text include images, you must be careful. `latex` and `pdflatex` accept images in different (exclusive) formats. For `latex` you may use EPS ou PS figures. For `pdflatex` you may use JPG, PNG or PDF figures. I strongly recommend you to use PDF figures in vectorial format (do not use bitmap images unless you have no other choice).

3.7.3 Creating Source Files Compatible with both latex and pdflatex

Do not include the extension of the file in the `\includegraphics` command. E.g., use
`\includegraphics{sonwman}`
and not
`\includegraphics{sonwman.eps}`.
If you use the first form, `latex` or `pdflatex` will add an appropriate file extension.

This means that, if you plan to use only `pdflatex`, you need only to keep (preferably) a PDF version of all the images. If you plan to use also `latex`, then you also need an EPS version of each image.

To be included in the sections above

Para fazer citações, deverá usar-se a chave da referência no ficheiro BibTeX. Se for uma única referência [2], usar um "~" para ligar o `\cite{...}` à palavra que o precede (`...referência~\cite{Artho04}`). Caso queira fazer múltiplas citações [6, 7, 8], deverá agrupá-las dentro de um úinico `\cite{...}`.

Note que o ficheiro de bibliografia pode ter tantas entradas quantas quiser. Apenas aquelas cuja chave seja referenciada no texto é que serão incluidas na listagem de bibliografia.

Footnotes[1] will be numbered and shown in the bottom of the page.

A Tabela 3.1 ilustra alguns conceitos importantes associados à contrução de tabelas:

i) Não usar linhas verticais;

ii) A legenda deve ficar por cima da tabela;

iii) Usar as macros `\toprule`, `\midrule` e `\bottomrule` para fazer a linha horizontal superior, interiores e inferior, respectivamente.

Table 3.1: Test results summary.

Test	Anomalies	Warnings	Correct	Categories	Missed
[3] Connection	2	2	1	*C*	1
[1] Coordinates'03	1	4	1	*2B*, *1C*	0
[1] Local Variable	1	2	1	*A*	0
[1] NASA	1	1	1	—	0
[2] Coordinates'04	1	4	1	*3C*	0
[2] Buffer	0	7	0	*2A*, *1B*, *2C*, *2D*	0
[2] Double-Check	0	2	0	*1A*, *1B*	0
[4] StringBuffer	1	0	0	—	1
[9] Account	1	1	1	—	0
[9] Jigsaw	1	2	1	*C*	0
[9] Over-reporting	0	2	0	*1A*, *1C*	0
[9] Under-reporting	1	1	1	—	0
[5] Allocate Vector	1	2	1	*C*	0
Knight Moves	1	3	1	*2B*	0
Total	**12**	**33**	**10**	**5A, 6B, 10C, 2D**	**2**

As figuras a inserir no documento deverão ser de qualidade, preferencialmente em formato vectorial (PDF vectorial) e não em *bitmap* (PNG, JPG, etc). As imagens *bitmap* (Figura 3.2) não escalam bem e têm reflexos negativos na qualidade do seu docuemnto. Pelo contrário, as imagens *vectoriais* Figura 3.3 escalam muito tanto quanto o necessário sem degradar a qualidade da imagem.

Só deve usar *screenshots* se não tive mesmo nenhuma alternativa. Em vez e gerar um *screenshot*, tente usar uma impressora virtual PDF e imprimir para um ficheiro PDF.

[1] This is a simple footnote.

Regra geral obterá um PDF vetorial. Mesmo que o seu PDF contenha imagens, elas terão sempre qualidade maior ou igual à que obteria com um *screenshot*.

Para agregar várias figuras numa única... Poderá assim referenciar o conjunto 3.4, a priemira delas 3.4(a) ou a segunda 3.4(b).

Para incluir listagens de código no seu documento, deverá incluir o pacote *listings* e depois usar o ambiente *lstlisting*, como exemplificado na Listagem 3.1.

Listing 3.1: Hello World

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

3.8 Equações

O LaTeX é uma ferramenta poderosa para escrever em estilo matemático. Permite inserir fórmulas no meio do texto como por exemplo esta: $ax^2 + bx + c = 0$. Também permite que as fórmulas sejam destacadas numa linha separada e centradas na página

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

ou numeradas

$$aaa \tag{3.1}$$

que depois pode ser referida no texto como sendo a equação 3.1

$$aa$$

$$a \tag{3.2}$$

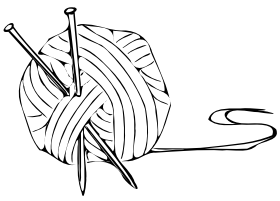
$$b \tag{3.3}$$

$$c \tag{3.4}$$

$$\tag{3.5}$$

Figure 3.2: Imagem em formato *bitmap* (JPG)

Figure 3.3: Imagem em formato PDF vectorial



(a) Novelo de lã

(b) Tempestade com neve

Figure 3.4: Exemplo de utilização de *subbottom*

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Appendix A

Lorem Ipsum

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