

TALLINN UNIVERSITY OF TECHNOLOGY
School of Information Technologies

**Author guidelines
and formatting requirements for thesis
preparation**

Tallinn 2020

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1 Formatting requirements and thesis template

This document presents author guidelines and formatting requirements for thesis defended at the School of Information Technologies at Tallinn University of Technology. These requirements are obligatory for all bachelor's and master's thesis (further referred as thesis). Sections 1 and 2 of this document constitute formatting requirements whereas Sections 3 and 4 provide helpful hints for word processing with MS Word and LibreOffice Writer correspondingly. Authors are strongly advised to familiarize with Sections 1 and 2 before starting to write thesis. This document is formatted according to the requirements declared in this document, and acts as an example of correct formatting.

1.1 Authors' toolkit

Authors are encouraged to download and use the templates prepared to ensure correct formatting of thesis. Templates are available for Word processing programs MS Word (version 2016 and newer) and LibreOffice Writer (version 7 and newer). The authors' toolkit is downloadable as a single archive file in ZIP-format.

The toolkit contains guidelines and templates to compose thesis in Estonian or in English. Authors should download the toolkit file, and unzip it to their computer to a folder of their choice. The toolkit archive contains the following:

- Author guidelines and formatting requirements document (PDF)
- **MS Word templates:**
 - Template with predefined styles, thesis structure and title page (*FIT_template_with_structure_ENG.dotx*);
 - Template with predefined styles and title page only (*FIT_template_ENG.dotx*);
- **LibreOffice templates:**
 - Template with predefined styles, thesis structure and title page (*FIT_template_with_structure_ENG.ott*).

To create a new text document based on the template authors should open it by double-clicking on the template file name. Opening template file with the *Open* command opens the template for editing.

1.2 General formatting requirements

Thesis must be formatted on an A4 page (210 x 297 mm), with margins from left and right set to 30 mm, and top and bottom 25 mm. The content text layout is in one column.

The thesis **font** is *Times New Roman* 12 pt *Regular*. Correct formatting of text is ensured with the use of the style *Body Text* that has the following properties: *Times New Roman* 12 pt *Regular*, line spacing 1.5, spacing after 12 pt, text alignment *Justify*. The style *Body Text* is based on style *Normal*. Table 1 lists all the requirements for different document parts and styles available in the template to ensure correct formatting.

Words or sentences which need highlighting can be presented as double-spaced, in **Bold** or *Italic* (e.g., expressions in foreign language).

The font colour of the paragraphs and headings is black. The use of colours on figures is not limited.

The content of the thesis is structured into sections using up to three levels of headings. Adding a new level is justified if it contains more than one paragraph of text. The use of level 4 headings (*Heading 4*) must be avoided. First level headings (*Heading 1*) always start a new page. Headings are numbered using Arabic numerals. Multilevel headings contain a reference to higher level heading, whereas the numbers are separated by a dot.

As an exception the following headings are not numbered: Author's declaration of originality, Abstract (*Annotatsioon*, *Аннотация*), List of abbreviations and terms, Table of contents, List of figures, List of tables, References, Appendixes. Headings for appendixes always start with a word *Appendix*, which is followed by a number, no automatic numbering is applied.

Correct formatting of headings is ensured with the use of styles available in the template: *Heading 1*, *Heading 2*, and *Heading 3*.

1.3 Formatting requirements and styles available in templates

To ensure correct formatting of thesis and help authors in this process the templates contain different style definitions applicable for different document parts. These styles are based on the style *Normal: Times New Roman 12 pt, Regular*, space before and after 0 pt, spacing *Single*. Table 1 lists document parts and styles defined for their correct formatting together with the requirements.

Table 1. Formatting requirements and applicable styles in the templates.

Document part	Style name	Settings
Thesis code	<i>Centred</i>	<i>Times New Roman 12 pt, centred</i> In further referred as Lettering.
Author's details		
Thesis type		
Supervisor's details	<i>Normal</i>	Lettering 12 pt, align left
Thesis title	<i>Heading_title</i>	<i>Times New Roman 20 pt, Bold, centred</i>
Thesis body text	<i>Body Text</i>	Times New Roman 12 pt, line spacing 1.5, spacing after 12 pt, justified
Headings: – References – Appendixes	<i>Heading_unnumber</i>	Lettering 16 pt, <i>Bold</i> , spacing before 60 pt, after 18 pt, align left. Starts a new page. No numbering.
Headings: – Table of contents – Author's declaration of originality – Annotatsioon – <i>Abstract</i> – List of abbreviations and terms – List of figures – List of tables	<i>Heading_center</i>	Lettering 16 pt, <i>Bold</i> , spacing before 60 pt, after 18 pt (like Heading 1). Starts a new page. No numbering.
Level 1 heading	<i>Heading 1</i>	Lettering 16 pt, <i>Bold</i> , align left, spacing before 60 pt, after 18 pt, numbered with Arabic numerals, space between number and heading text, starts a new page.
Level 2 heading	<i>Heading 2</i>	Lettering 14 pt, <i>Bold</i> , align left, spacing before 24 pt, after 12 pt, numbering with Arabic numerals and a reference to higher level heading with a dot between numbers (e.g. 1.1)

Document part	Style name	Settings
Level 3 heading	<i>Heading 3</i>	Lettering 12 pt, <i>Bold</i> , align left, spacing before and after 12 pt, numbering with Arabic numerals and a reference to higher level heading with a dot between numbers (e.g. 1.1.1)
Table header	<i>Table_head</i>	Lettering 11pt, <i>Bold</i> , align left, line spacing 1.15, space before and after 3 pt
– Table text – Terms in the list of abbreviations	<i>Table_text</i>	Lettering 11 pt, align left, line spacing 1.15, space before and after 3 pt
Figure/Table caption single line	<i>Caption</i>	Lettering 10 pt, line spacing 1.15 space before and after 6 pt, centered
Figure/Table caption multiline	<i>Caption_multiline</i>	Lettering 10 pt, line spacing 1.15 space before and after 6 pt, <i>Justify</i>
Program code	<i>Program_code</i>	<i>Consolas</i> , 11 pt, single line spacing, space before and after 2 pt, align left
Equations (on separate line)	<i>Equation</i>	Lettering 12 pt, single line spacing, space before and after 12 pt
Bulleted list	<i>List Bullet</i>	Lettering 12 pt, square bullet, line spacing 1.5; bullet indentation 0.63 cm; spacing 12 pt, <i>Justify</i> , no spacing between lines of bulleted list
Numbered list	<i>List Number</i>	Lettering 12 pt, line spacing 1.5; space 12 pt, indentation 0.63 cm; <i>Justify</i> , no spacing between lines of numbered list
Items in the list of abbreviations and terms	<i>Normal or Table_text</i>	Lettering 12 pt, line spacing 1.5; spacing 0
References	<i>References</i>	Lettering 11 pt, line spacing 1.15, spacing 11 pt
Footnotes	<i>Footnote Text</i>	Lettering 10 pt, line spacing 1.15, spacing before and after 0 pt, restart numbering for each page
Figure	<i>Figure</i>	Centred. The style adds a frame and necessary space around

Document part	Style name	Settings
References list	<i>List_bibliogr</i>	<i>Times New Roman</i> 11 pt, numbered with numbers in square brackets, spacing before and after 2 pt
Row in Table of contents: – Level 1 – Level 2 – Level 3	<i>TOC1</i> <i>TOC2</i> <i>TOC3</i>	Lettering 12 pt, line spacing 1.5; align left Lettering 12 pt, line spacing 1.5; indentation 0.42 cm Lettering 12 pt, line spacing 1.5; indentation 0.85 cm

1.4 Thesis volume

The volume of bachelor's thesis main content should remain in the range of 25 to 35 pages, and for master's thesis in between 30 to 60 pages. The main content does not include the title page, abstract, table of contents, list of references and appendices.

Despite the given ranges, the number of pages of the main content of the thesis should be as large as necessary and as small as possible. The text must be presented concisely and the excess number of pages is permissible only in well-justified cases.

2 Thesis structure and requirements

This section provides an overview of the requirements for thesis structure. The thesis consists of various required and optional parts always presented in the order specified herein. Table 2 lists the parts of the thesis document in the required order.

Table 2. Mandatory and optional parts of thesis in the required order of their presentation.

Thesis part	Conditions
Title page	Required Thesis written in foreign language (e.g., English) have 2 title pages, the first in the language of thesis and the second in Estonian
Author's declaration of originality	Required (see 2.3 Author's declaration of originality)
Thesis task page	Optional (see conditions in Section 2.3)
Abstract in thesis language	Required (see conditions in Section 2.5)
Abstract in other languages	Required (see conditions in Section 2.5)
List of abbreviations and terms	Required (see conditions in Section 2.6)
Table of contents	Required
List of figures	Optional; presented only if thesis contains figures
List of tables	Optional; presented only if thesis contains tables
Introduction	Required
Chapters of thesis subject development	Required
Summary	Required
References	Required
Appendix 1	Required (see Section 2.9 Non-exclusive licence) Appendix 1 presents Non-exclusive licence
Appendices	Optional (except required Appendix 1 Non-exclusive licence); presented only if thesis contains any

2.1 Title page

The title page is formatted using the same font as the rest of the thesis, i.e., *Times New Roman*¹. The top of the page must include the name of the university, school and department. The location and the year of the thesis defence are presented at the bottom of the page. Title page is formatted using a table, as shown in Appendix 2. It has separate header and footer from the rest of the thesis. Author's first, middle and last name, and student code are presented on separate lines. These are followed by thesis title and type (bachelor's/master's thesis). Supervisor(s) name(s) and detail(s) are presented after thesis type. If necessary, consultants are listed as last.

Thesis written in English (or any other foreign language) has two (2) title pages: the first in the language of thesis and the second in Estonian. Thesis written in Estonian has only one title page.

2.2 Page numbering

All pages must be numbered. Numbering must be pervasive and include every page from the title page until the last page of appendices. Page numbers are presented at the bottom of the page (in footer) and aligned centred using the style *Footer* or font 12pt. Page numbers are placed 1.5 cm from the bottom edge. There is no page number on title pages; still they are counted in the numbering.

2.3 Author's declaration of originality

Author's declaration of originality is a required part of every thesis that follows the title page (Appendix 3). The statement of author's declaration of originality is as follows:

I hereby certify that I am the sole author of this thesis and this thesis has not been presented for examination or submitted for defence anywhere else. All used materials, references to the literature and work of others have been cited.

Author: [First name Middle name(s) Last name]

[dd.mm.yyyy]

¹ It is allowed to use other serif fonts alike to *Times New Roman* such as *Times* for example

2.4 Thesis task specification

The thesis must contain an explicit description of the problems the author is solving in the thesis work.

For **Bachelor's thesis** the task is formalized as a separate task specification document (established by the department where the thesis will be defended; ask for the *task sheet form* from your supervisor), or is specified in the Introduction section of the thesis covering the following:

- Problems to be solved and initial conditions of the task,
- Special conditions applicable for solving the specified problem (if any).

Filled task sheet form is added to the thesis as a separate page after Author's declaration of originality.

For Master's thesis the task specification must be covered in thesis Introduction section through the following points:

- Problems to be solved and initial conditions of the task,
- Special conditions applicable for solving the specified problem (if any).

2.5 Thesis abstract

Abstract is a mandatory part. It provides an overview about the aims, the most important issues, results and conclusions of the thesis. Abstract is a short overview of thesis which does not explain or justify the content but provides an overview of the most important aspects. An abstract in Estonian is called *Annotatsioon* and in Russian *Аннотация*. Depending on the thesis language the following abstracts must be included:

- If the thesis is written in English, the abstract is ½ A4 pages long and the abstract in Estonian (*Annotatsioon*) is of length of 1 A4 page (except in case of the graduation theses of degree curricula taught in English).
- If the thesis is written in any other foreign language not English nor Estonian (e.g., Russian), the abstract in thesis language is ½ A4 pages long, which is followed by an abstract in Estonian (*Annotatsioon*) of length of 1 A4 page, and an abstract in English of length of 1 A4 page.

For abstracts not in the main thesis language **thesis title in foreign language** is added in between the heading Abstract and the abstract content. Abstracts in different languages are presented on separate pages – abstract heading is a level 1 heading which starts with a new page.

The last paragraph of abstract is **obligatory** and must be written accordingly:

The thesis is in [language] and contains [pages] pages of text, [chapters] chapters, [figures] figures, [tables] tables.

The abstract in Estonian (*Annotatsioon*) has the following obligatory ending:

Lõputöö on kirjutatud [keel] keeles ning sisaldab teksti [lehekülgede arv töö põhiosas] leheküljel, [peatükkide arv] peatükki, [Figurete arv] Figuret, [tabelite arv] tabelit.

NB! Headings „Author’s declaration of originality”, „Abstract”, etc. are formatted as unnumbered and centred level 1 headings (style *Heading_center*) and are not presented in the table of contents. An example of Abstract is presented in Appendix 4.

2.6 List of abbreviations and terms

The list of abbreviations and terms must contain all new and ambiguous terms. For example, the abbreviation PC can be used as *Personal computer* or *Program counter*. Abbreviations and terms are presented in a table of two columns where the left column contains terms or abbreviations and the right column provides their explanations. Foreign words are presented in italic. This table does not have any border lines (for table formatting in MS Word please refer to Section 3.5 and in LibreOffice Section 4.7).

The text in the list of abbreviations and terms table is formatted using the style *Table_text*. Appendix 7 presents an example of this table layout¹. The width of this table is the maximum size of the content area; the distribution of the left and right column widths is up to the author.

The heading of this section is level 1 heading starting with a new page. Use the style *Heading_center* for correct formatting.

¹ To add a new row to the table with the same formatting press TAB in the last cell of the table.

Each abbreviation presented in the main text must be explained on the first occurrence. For example, if an abbreviation PC is used, then it should be accompanied with explanation in parentheses, e.g. PC (*Personal Computer*).

2.7 Table of contents, list of figures and list of tables

The table of contents lists the headings and corresponding start page numbers for all parts of the thesis – sections (chapters) and subsections – starting from Introduction and ending with Appendices. The table of contents is composed and structured according to headings.

If thesis is composed using the provided template and the author has used the heading styles as specified, the table of contents is generated automatically after an update is performed on the “Table of Contents” page.

The list of figures presents only the figures available in the main part of the thesis – figures presented in appendices are not listed here. The heading „List of figures” starts with a new page. An example is given in Appendix 5.

The list of tables presents only the tables available in the main part of the thesis – tables presented in appendices are not listed here. The heading „List of tables” starts with a new page. An example is given in Appendix 6.

The lists of figures and tables are generated automatically after an update if the author has applied correct captions as specified in the template.

2.8 Thesis content formatting

This section addresses formatting requirement for the main parts of thesis starting with Introduction.

It is advised to start thesis composition by downloading the author’s toolkit and using the provided template. The templates contain ready-made styles that follow the requirements established in this document. Table 1 (page 7) provides an overview of available styles and their settings.

2.8.1 Formatting the main parts of thesis

In thesis **Introduction** the author presents the topic of the thesis, its goals, and highlights which problems will be solved. Also, the division of the thesis subject development into chapters is presented. Introduction must contain starting conditions, subtasks and if needed – additional requirements (see Section 2.4).

In thesis **Summary** the author presents the main goal of the thesis and provides answers to problems stated in the Introduction. Summary must also present the main results and important findings of the thesis.

The division of thesis content into sections and subsections has to be rational – sections and subsections with only one paragraph of text must be avoided; they should be included into some other section. The maximum depth of headings is three (3) levels, the use of level 4 headings is not allowed.

In all sections and subsections, the heading must be followed with text content. Authors are discouraged to add new heading, figure or table immediately after heading. Level 1 headings always start a new page, the space before the heading is 60 pt and after 18pt. Correct formatting of first level headings is ensured by exploitation of style *Heading 1*; do note that different parts of thesis may have different requirements for headings (see Table 1). The peculiarities of adding level 1 headings in MS Word version 2013 and newer are presented in Section 3, page 22.

2.8.2 Figures and tables

All figures and tables in the thesis main part must be numbered and captioned with a title. Numbering of figures and tables must be separately pervasive. Figure number and caption are added under the figure, table number and caption are added above the table. Figure caption starts with a word “Figure” followed by a space, number, a dot, and figure title. Table captions start with a word “Table” and follow the same formatting pattern. Figure/Table caption always ends with a dot.

Single line captions are aligned to centre (use style *Caption*), whereas multiline captions are aligned as justify (use style *Caption_multiline*). Figure/Table caption must be on the same page with the figure/table. Adding captions to figures and tables in word processing

is described in more detail for MS Word in Section 3.6 and for LibreOffice Writer (LO) in Section 4.6.

Figures and tables are placed into document separate from content text – the content text is above and below figure/table and never on the left or right – and centred. All figures and tables must be referred to in text and appropriate explanations provided. A reference to a figure or table within text must occur before the figure or table itself.

For figures and tables in language other than the thesis main language the original text may be preserved, if necessary it is presented in *Italic*. Abbreviations used on figures or in tables must be explained in caption title; if the abbreviation is used also elsewhere in the thesis, it must be added to the list of abbreviations and terms. The use of marking and symbols different from the thesis main content is allowed for figures.

An extra empty line of cells without borders is added at the end of table, to ensure enough spacing between the table and the following text. If a table spans across multiple pages, the header row is duplicated at the beginning of each page (for an example see Table 1). It is recommended to avoid such tables whenever possible.

Figures (vector graphics) and illustrations (raster graphics) must be of printable quality. The lettering in figures should not use font sizes smaller than 6pt (~2mm character height). The correct process of adding figures into thesis document using the styles in the template is described in Section 3.3 for MS Word and in LibreOffice in Section 4.6. Figure 1 presents a correctly formatted example of figure with short single line caption.



Figure 1. Example: Taltech main logo.

Figure 2 presents correctly formatted example of a figure with long multiline caption.



Figure 2. Example: School of information technologies logo. The stand-alone or silhouette versions of the main logo can be locked up with up to four lines of text to denote different schools within TalTech University. The line height of the locked up lines is equivalent to 20% of the 'X' height of the main TalTech word mark, and should be applied with equal line spacing, as illustrated on the right hand side.

For multiline captions style *Caption_multiline* is applied to or align Justify.

Figure 3 presents the correct formatting and referencing of different parts of the figure in caption title in case of a multi-part figure.



Figure 3. Example: School of information technologies logo: (a) in Estonian, (b) in English.

2.8.3 Program code

Program code (source code) is formatted on the same principles as figures using monospaced font (for example *Courier*, *Courier New* or *Consolas*) with single line spacing. The template contains a defined style *Program_code* for this purpose. Figure 4 presents an example of formatted program code.

Program code must always be correctly intended. The code is presented continuously on the same page, whenever possible. This is achieved by style *Program_code* and its application during formatting.

The first line of the program code starts from the left border. To obtain visually horizontal centred alignment, select the whole code and use the *Increase Indent* option.

Program code is captioned as figure.

```
Public Function computeSomething()  
    Dim i, j As Integer  
    For i = 1 To 10  
        For j = 1 To 10  
            ' Do something in loop  
        Next j  
    Next i  
    Return i + j  
End Function
```

Figure 4. Correctly formatted and intended example of program code.

2.8.4 Mathematical expressions and equations

Numbering mathematical equations is mandatory in case there is a reference to them in the text. In all other cases numbering is optional. The number is placed on the same line with the equation on the right side of the page in parentheses. Equation (1) presents an example of correct formatting and referencing.

$$(x + a)^n = \sum_{k=0}^n \binom{n}{k} x^k a^{n-k} \quad (1)$$

The tab stop for the number on the right is set to 14.8 cm, and is included in the style *Equation*.

2.8.5 Citing and references

Numeric style should be used for references. There are two options to list references: ordering references by author name and title in alphabetical order, or in the order they are cited in text. The list is numbered with consecutive Arabic numbers in square brackets, year of appearance is added at the end of the reference record. All used sources must be cited, including printed and electronic materials. The list of references must only include the sources, which have been actually used in the thesis, and which have been referenced in the text. When the list of references and the references in the text are non-compliant, it will call into question the merits of the work, as well as formatting accuracy.

For citations in the text, please use square brackets and Arabic numbers. The reference in the text is always included into a sentence, either immediately after mentioning the source, at the end of the sentence (before the ending dot), or at the latest at the end of the related topic paragraph's last sentence. A reference must be placed to text at the first

(suitable) chance, repeated citing is allowed. The reference number is never alone outside a sentence. Sentence never starts with a reference. Multiple references are presented in the ascending order each number in separate square brackets, e.g., [5], [7], [33], with a range of references a dash can be used e.g., [8]–[13]. When referring or citing a specific idea, sentence or data, a page number(s) must be added to the reference, e.g. [2, p 35]. Reference to a whole book, a book chapter, article, or other source can be used if the reference is based on the argument of the work as a whole.

Word processing MS Word includes a reference processing system to manage sources – this is covered in Appendix 8.

If the number of referenced sources is not large, the numbered references list can be composed manually using the style *List_bibliogr* included in the template.

2.8.6 Appendices

Appendix 1 presents Non-exclusive licence, that is a required part of every thesis (see Section 2.9 Non-exclusive licence).

The following appendices are used to present materials that add value to the main part of the thesis, help to understand a problem, provide additional details etc. The main text must contain a reference for all added appendices (except Appendix 1 Non-exclusive licence); Appendices are not counted into the volume, and the use of them is optional (except required Appendix 1 Non-exclusive licence).

Appendices are numbered in the ascending order (no automatic numbering of headings is used) with Arabic numbers and formatted as first level headings aligned to left (style *Heading_unnumber*). Although the formatting of appendices is free, it is advisable to follow the guidelines and requirements applicable for the main part of the thesis.

2.9 Non-exclusive licence

The non-exclusive licence for reproduction and publication of a graduation thesis is a required part of every thesis and one of the prerequisites for allowing the author to defend his/her thesis and ensuring the protection of his/her copyright. An example of the non-exclusive licence is presented in Appendix 1. The non-exclusive licence is as follows:

I [First name Middle name Last name]

1. Grant Tallinn University of Technology free licence (non-exclusive licence) for my thesis "[Thesis title]" , supervised by [Supervisor's name]
 - 1.1. to be reproduced for the purposes of preservation and electronic publication of the graduation thesis, incl. to be entered in the digital collection of the library of Tallinn University of Technology until expiry of the term of copyright;
 - 1.2. to be published via the web of Tallinn University of Technology, incl. to be entered in the digital collection of the library of Tallinn University of Technology until expiry of the term of copyright.
2. I am aware that the author also retains the rights specified in clause 1 of the non-exclusive licence.
3. I confirm that granting the non-exclusive licence does not infringe other persons' intellectual property rights, the rights arising from the Personal Data Protection Act or rights arising from other legislation.

2.10 Hints for text processing

In order to take full advantage of the provided template, word processing program should be used in a correct manner. Word processing is not typing a text on a typewriter. The following list draws attention to some common errors made during word processing:

- Words are separated by **only one space character between them**. If a word is followed by a punctuation mark, punctuation follows the word immediately, and a space character is added after punctuation. Redundant spaces should be removed, for instance by search and replace.
- Word processing automatically takes care of dividing text to lines. The division of text into paragraphs is done by author by pressing the **Enter key** on keyboard, which adds a non-printable paragraph end mark ¶.
- Sometimes it is necessary to keep words or symbols together so that they will not be distributed on separate lines, for example initials of given name and surname. To add such a **nonbreaking space** use keyboard combination Ctrl+Shift+Space.
- To hold together words separated with hyphen, use nonbreaking hyphen, which can be added with keyboard combination Ctrl+Shift+hyphen.

- A **dash** (–) is longer than hyphen and it is not the minus symbol. An easy way to add dash into text is Ctrl+Numpad minus symbol, or Alt+0150.
- Hyphenation should not be something to worry about. If you want to hyphenate a word manually, just add Ctrl+Hyphen.
- To break a long line (e.g., title), add a line break by pressing Shift+Enter.

3 Using MS Word for preparing thesis

This section addresses issues common of word processing in Microsoft Word, in particular composing text, inserting tables, figures, adding captions to the latter, managing list of references and so forth.

The MS Word template in the author's toolkit is established to help authors in preparing their thesis. Proper use of the template ensures correct formatting of thesis and the author can focus on content only.

Opening the template, you will see pre-defined document parts with constant text and changeable parts shown in square brackets – these should be changed according to thesis contents by clicking on the text and inserting new content – the template will take care of proper formatting.

The numbered headings in thesis are formatted using predefined styles *Heading 1*, *Heading 2*, *Heading 3*. After you have typed the heading, applied proper style and pressed the Enter key at the end of the heading line, the next line will be formatted to content text input automatically having its style set to *Body Text*. This style ensures proper formatting of paragraphs and their spacing.

NB! Due to the peculiarities of **MS Word as of version 2013** first level headings are formatted as indicated in Table 1. In order to start level 1 heading from a new page and guarantee that the text content begins at the correct height from top border it is necessary to add *Section Break (Next Page)* at the end of the text preceding the level 1 heading **AND** apply style *Normal* to it (Figure 5).

When cursor is on the new page, type the heading text and apply style *Heading 1* to it. Doing so will guarantee that there is a space of 60pt in front of the first level heading as required. Pressing the Enter key at the end of the heading line will take the cursor to a new line with proper style *Body Text* available for text insertion.

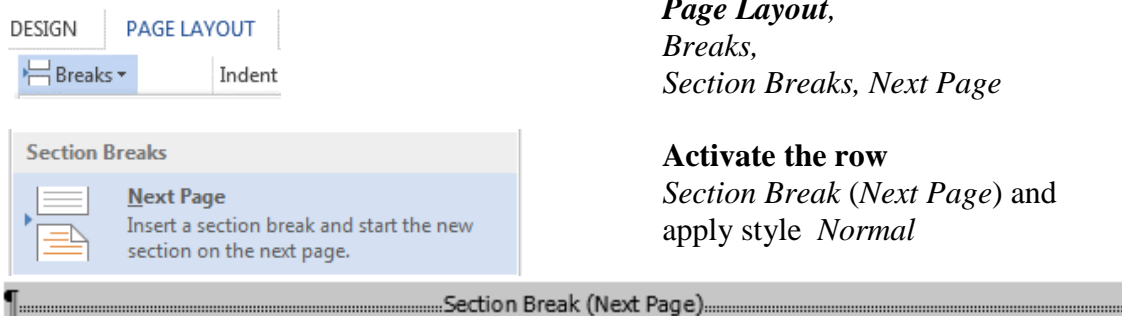


Figure 5. Preconditions for inserting level 1 heading in MS Word 2013 and newer.

3.1 Text entering and layout

The rules to follow while entering text are presented in Section 2.10. Text formatting should be done using available styles. All styles available in the template are listed in Table 1. To display the list of styles, choose from the menu **Home**, **Styles** and open the list from the arrow on the right bottom corner (Figure 6). Alternatively, you can use keyboard combination Alt+Ctrl+Shift+S.

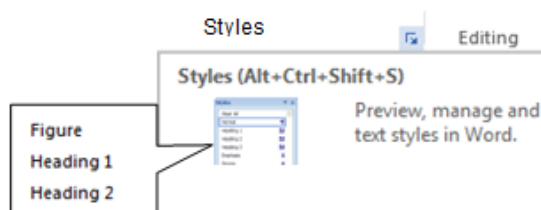

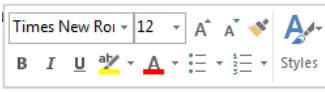


Figure 6. Displaying all styles.

A click on a style name (e.g., *Heading 1*) will apply it to the paragraph where the cursor is, or to selected paragraphs. To display all styles available in the document, choose from

the bottom of styles panel (Figure 6) **Options** and in the **Style Pane Options** window set *Select styles to show – In current document*.

To paste styles and formats you can also use the Format painter tool  **Format Painter** from

the **Home** menu or from right-click context-menu .

3.2 Footnotes

Footnotes are added at the bottom of the page, just above the bottom margin. Footnotes numbering is restarted on each page. The proper style for footnotes is *Footnote*. To add a footnote, place a cursor in the text at the place where you want your footnote reference to appear and choose **Reference, Insert Footnote**. From the *Footnote and Endnote* dialogue window (Figure 7) choose *Restart each page*.

To use the same footnote index multiple times referencing through *Cross-reference* should be used to avoid creating multiple footnotes with the same content.

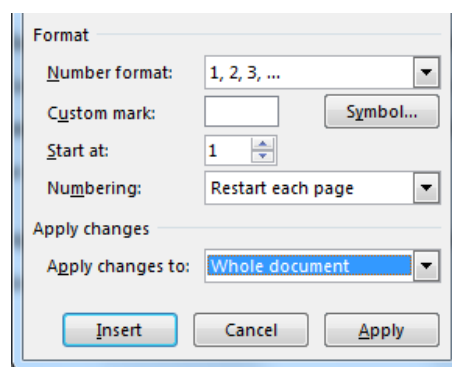


Figure 7. Footnote settings.

3.3 Adding figures and applying style formatting

Adding figures and captions correctly into text document is not easy. Therefore, thesis template provides a style *Figure* to simplify the process. This style adds a frame to a figure, and ensures proper spacing around it (Figure 8).



Figure 8. Taltech logo.

The following describes how to properly use the style *Figure* to add and format figures in thesis.

The line preceding to a figure must be ended with pressing the **Enter** key.

1. Figure should be inserted on this new line by choosing **Insert, Picture**.
2. Before applying style *Figure* to inserted figure, **make sure** that the layout of the figure is *In Line with Text*. For the latter activate the figure and open *Layout Options* from the button next to the figure as shown on Figure 9, or use the command **Picture Tools, Format, Wrap Text**, and choose *In Line with Text*.

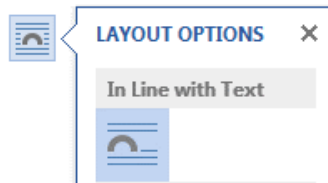


Figure 9. Setting figure layout options before applying the style *Figure*.

3. If the layout is *In Line with Text*, apply the style *Figure*. This forces the figure to be centred horizontally with proper space around it.
4. Making sure the figure is still active (if not, select it again) a caption is added by choosing **References, Insert Caption** (Figure 10), where a caption „Figure” is shown, followed by a space and a number added automatically. **NB!** Do not enter any caption title to this field!

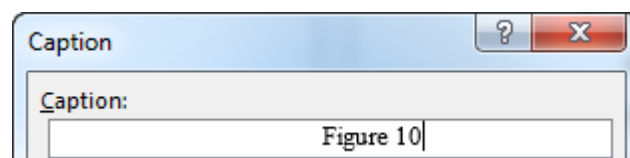



Figure 10. Adding caption to figure.

5. After pressing **OK**, the beginning of figure caption is placed under the figure. Add a dot and a space after the figure number, and type the caption title. The template ensures that the caption can occupy the whole width of the page. Proper formatting is ensured by style *Caption*. If your caption is **longer than one line**, apply style *Caption_multiline* to caption text, or choose align *Justify* (Figure 2).



Figure 11. Figure 8 formatted with the style *Figure*, and a frame surrounding the figure-caption pair.

The figure is placed into Frame together with its caption and anchored to the nearest text paragraph. **NB!** To display the anchor, toggle the *Show/Hide*  option in the menu and activate the frame (not the figure itself) in which the figure is.

Anchor can be relocated to another text paragraph, i.e., if text is pushed onto next page the figure will follow it in case it is anchored to the paragraph. If a figure is placed outside the margins, check the anchor and relocate the figure upwards or to the following page.

If a figure is a group of illustrations, the style *Figure* cannot be applied and an approach described in Appendix 9 must be used.


3.4 Bulleted lists and numbered lists

The style for the bulleted list is *List Bullet*, which provides a single-level bulleting, for example:

- One
- Two
- Three

To end bulleted list, press the Enter key twice. This forces the word processor to end the list although the style will remain to be *List Bullet*. Re-apply style *Body Text* to the paragraph following the bulleted list.

Creating and ending numbered lists is alike. The style in the template is *List Number*. A problem may occur when a new numbered list is created with the same style as the numbering is continued from the previous list, for instance:

6. This list is continued from a previous list presented on page 25. To restart numbering from 1, open a context menu with right click and choose *Restart at 1*:  [Restart at 1](#)

For multi-levelled lists use the *Multilevel List* option from the menu toolbar and define appropriate rules.

3.5 Using tables in MS Word

Tables are a convenient way to organize information and its layout. Tables can contain text, numbers and graphics. Tables can also be used to design page layout, for example as has been done with the title page of this document and thesis template.

3.5.1 Creating and altering tables

To insert a table into document, place a cursor on the line where you want the table to be placed and choose the *Insert* tab Table – a dropdown menu is opened with additional options (Figure 12 a).

The first option to add table is to select the required amount of boxes in the window with a mouse, and a table is immediately inserted.

The second option is to click on *Insert Table* which calls an options window (Figure 12 b) where the *Number of Columns* and *Number of Rows* can be specified together with column width. The default is *Auto*, which means the table takes up space from left to right page border.

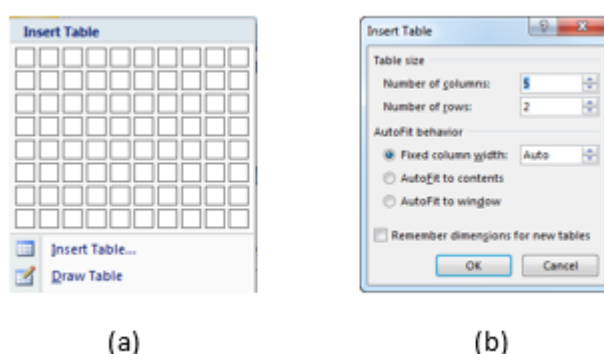


Figure 12. Options to create tables: (a) table creation settings, (b) table settings.

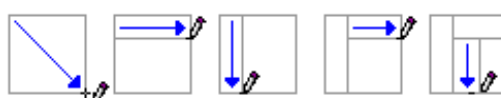


Figure 13. Drawing a table with the *Draw Table* option.

With the *Draw Table* option one can draw a table using an on-screen pen. This option is helpful in sketching layout design. Table drawing starts with setting the outer borders by drawing a rectangle followed by slicing it into cells (Figure 13).

After a table has been created and the cursor is in table **Table Tools** tab is displayed with two subtabs *Design*, and *Layout* (Figure 14).

The **Design** tab (Figure 14) has the following setting groups: *Table Style Options*, *Table Styles*, *Draw Borders*. Enabling the *Header Row* option under *Table Style Options* sets MS Word to **duplicate table header automatically** in case the table spans across multiple pages.

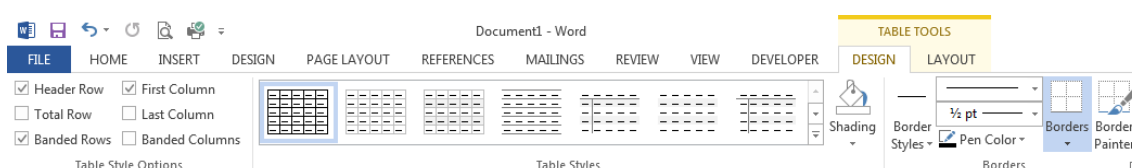


Figure 14. Table tools and the options of the *Design* tab.

The **Layout** tab (Figure 15) contains the option groups *Row & Columns*, *Merge*, *Cell Size*, *Alignment*, and *Data*.

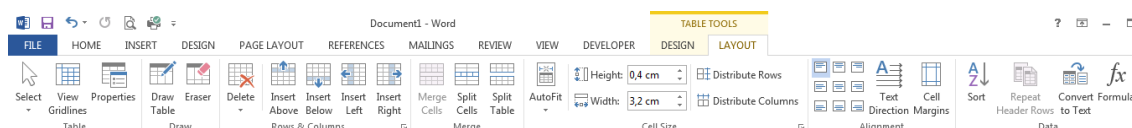


Figure 15. Table Tools and the options of the *Layout* tab.

After creating a table using one of the alternatives described above, it is ready to be filled with data. The cursor needs to be placed into the cell where data will be inserted. The data can be either text, numbers, lists, or graphics.

To move between the cells, use either the **Tab**-key or arrow keys on the keyboard. Pressing the Tab-key in the last cell of the table automatically **adds a new row** at the end of the table.

Pressing the Enter-key inside a cell creates a new line inside a cell (the height of the cell will increase) and paragraph spacing is applied. It is not recommended to use this option inside table cells.

If the text does not fit into the cell it will be automatically transferred to the next line within the cell. To break the text in a particular point, add a line break with the key

combination Shift+Enter. For formatting table layout, the options on the **Table Tools** toolbar under *Table Properties* can be used (Figure 16).

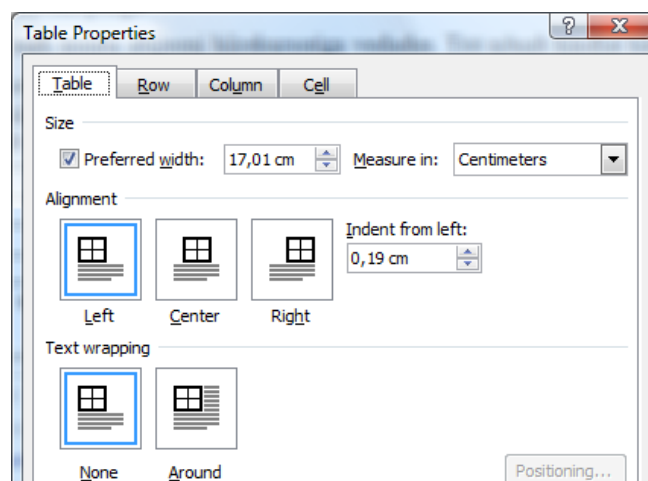



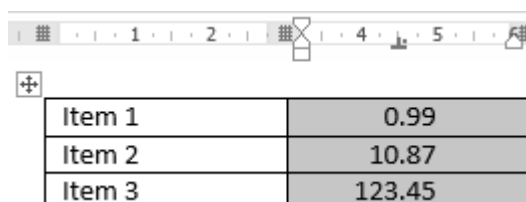
Figure 16. Options for formatting table, table row, column or cell.

NB! Table border lines are not always used and shown (e.g., the table of List of abbreviations and terms). Table gridlines can be displayed by activating *View Gridlines* from **Table Tools**, *Layout* under the *Table* group.

3.5.2 Aligning decimal numbers in table cell

Numbers should always be aligned by decimal place and not in any other way (align left, right, etc.). To align numbers by their decimal place in table column:

1. Display the ruler from *View*, *Ruler* and click the top left corner until the *Decimal Tab* icon  appears.
2. Activate the column containing decimal numbers and click an appropriate place on the ruler to place the decimal placeholder (Figure 17).



Item 1	0.99
Item 2	10.87
Item 3	123.45

Figure 17. Aligning decimal numbers in table cell.

3.6 Adding captions to figures and tables

There are two options to add a caption: use the command ***Insert, Reference, Caption***, or right-click on figure and from the context menu choose *Caption*. Captions that are added using the command *Caption* are automatically numbered and controlled by MS Word. After the command *Caption* a dialogue window is opened where the options for caption can be set, or a new label created by pressing the *New Label* button. **NB!** The title of the caption is not entered here in this window – it is typed in after the caption label has been placed to a figure or table.

MS Word will automatically update the numbers and their sequential order when adding a new caption into document. If any of the captions is removed, an update is needed – for this the whole document needs to be selected (*Select all* or *Ctrl+A*), right click on selected text and choose *Update Field* from the menu, or alternatively press **F9**. All captions are formatted using the style *Caption*. For captions that are longer than one line the style *Caption_multiline* or align *Justify* is applied in addition.

3.7 Using cross-references

Frequently there is a necessity to refer to a figure, table, section, footnote or any other part of a document that has a certain style applied to it. For text that is not defined by style, a bookmark can be set (*Insert, Bookmark*). Cross-references have a particular structure as shown on Figure 18.

1. To place a cross-reference at cursor, choose ***References, Cross-reference*** or ***Insert, Cross-reference***.
2. The *Cross-reference* dialogue window will open.
3. After the selection of *Reference type* (e.g., Table) a list of all titles connected to particular reference type in the document is displayed. Mark the *Insert as Hyperlink* to allow the cross-reference to act as a link inside the document.
4. From the *Insert reference to* list choose the appropriate option of presentation (e.g., *Only Label and Number*).
5. Press *Insert*. A field with cross-reference is added.

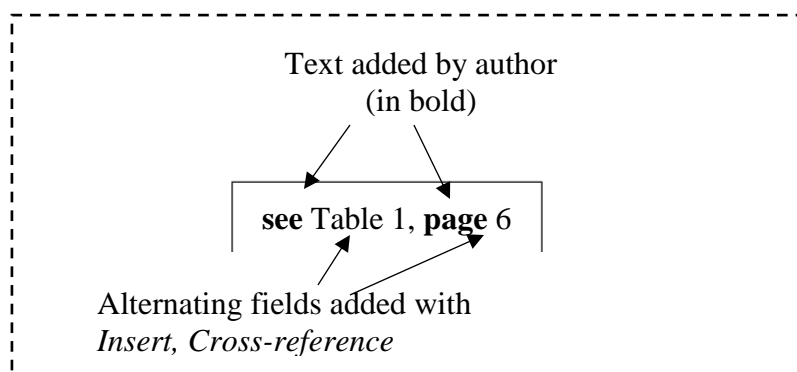


Figure 18. Structure of cross-references.

To update a cross-reference, choose the cross-reference field, perform a right-click on it and choose *Update Field*.

3.8 Creating and updating table of contents, lists of figures and tables

To generate a list of figures or tables activate the line *No table of figures entries found* under the heading “List of figures” / “List of tables” in the template, perform right-click and choose *Update field*. The field *No table of figures entries found* is replaced with a list of figures / tables found in the document, based on their captions. This procedure presumes that figures and tables are formatted as described in this document.

To update Table of contents, act alike – activate the list of contents, perform right-click and choose *Update field*.

To create Table of contents, List of figures, or List of tables use the command **References**, *Table of Contents* or *Insert Table of Figures*. The latter is necessary if you choose not to use the provided template.

3.9 Creating a numbered list of references

In case the number of references is small, the list of references can be added manually as a numbered list (or alternatively using a table layout). The style for numbered list of references is *List_bibliogr*.

The formatting using this style is shown after the heading “*References*” following this paragraph. In thesis the heading References is always a level 1 heading without a number (style *Heading_unnumber*).

References

- [1] S. Froning, “Low energy communities with district heating and cooling”, Dublin: PLEA, 2008.
- [2] Hovedrapport, “*Udvikling og Demonstration af Lavenergifjernvarme til Lavenergibyggeri*”, (in Danish), 2009.
- [3] DVGW, “*W551 - Trinkwassererwärmungs- und Trinkwasserleitungsanlagen*”, Bonn, (in German), 1993.

To use items from the reference list in your main text, cross-references can be used (**References**, *Cross-reference* or **Insert**, *Cross-reference*). The type of the reference is *Numbered Item* and the selection for the *Insert reference to* option is *Paragraph number (no context)*. As a result, the cross-reference is added into text as [1] . Ctrl+Left-click will take to the list of references to a referred source record.

NB! If the number of references is larger, you should opt for the MS Word built-in Citations & Bibliography option available under References (see Appendix 8).

3.10 Saving thesis as a PDF-document

It is advisable to save prepared and finished thesis *in* Portable Document Format (PDF). This will ensure the thesis is readable cross-platform and the layout is fixed. To save the document in PDF:

1. Choose **File**, *Export*, *Create PDF/XPS Document*,
2. Press the PDF/XPS button.
3. From the *Publish as PDF...* window set the *Options* (Figure 19) for the PDF-file to be created.

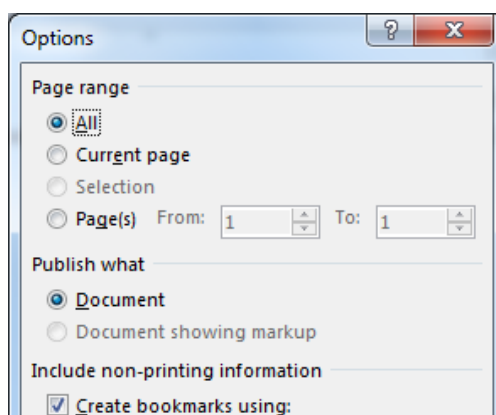


Figure 19. *File, Export Create PDF Document* options.

4 Using LibreOffice Writer for preparing thesis

This section addresses issues common for word processing with LibreOffice Writer (version 5, in further noted also as LO), in particular composing text, inserting tables, figures, adding captions to the latter, managing list of references and so forth.

In parallel to installable software there also exists a portable version of LibreOffice that can be downloaded from <http://www.libreoffice.org/download/portable-versions/> and run from computer or external media (e.g., USB stick) without a need to install.

The LibreOffice Writer template in the author's toolkit is established to help authors in preparing their thesis. Proper use of the template ensures correct formatting of thesis and the author can focus on content only.

Opening the template, you will see pre-defined document parts with constant text and changeable parts shown in square brackets – these should be changed according to thesis contents by clicking on the text and inserting new content – the template will take care of proper formatting.

The numbered headings in thesis are formatted using predefined styles *Heading 1*, *Heading 2*, *Heading 3*. After you have typed the heading, applied proper style and pressed the Enter key at the end of the heading line, the next line will be formatted for content text input automatically having its style set to *Body Text*. This style ensures proper formatting of paragraphs and their spacing.

4.1 Text entering and layout

The rules to follow while entering text are presented in Section 2.10 of this document. Text formatting should be done using styles available in the provided template. All styles available in the template are listed in Table 1.

This section covers also necessary additional procedures for setting up LibreOffice Writer to start preparing thesis.

Formatting of single words or phrases – bold, italic, etc. – is done using the options on the toolbar (Figure 20).

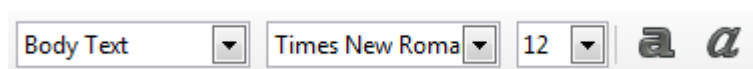


Figure 20. Toolbar with style options and settings for text properties.

In addition to paragraph styles, LO uses page, list, and frame styles. The *Styles and Formatting* panel opens in LO (version 6 and later) in the right column of the work window as shown on Figure 21.

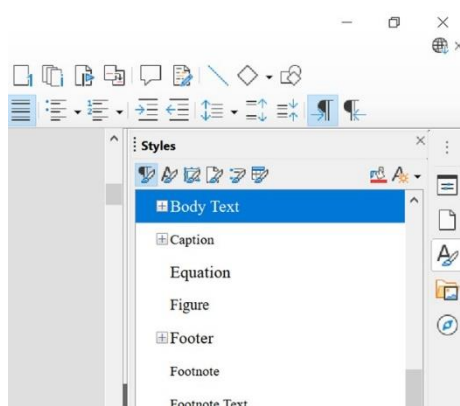


Figure 21. The *Styles and Formatting* panel.

The set of styles that are displayed on the *Styles and Formatting* panel can be set from the last row at the end of the panel, e.g., *Custom Styles*, *Applied Styles*, *All Styles*.

To apply a style to text, place cursor in the text and **double-click** on the style name (e.g., *Heading 1*). Styles can be applied through the panel (Figure 21) or using the toolbar button (Figure 20). To view or modify style settings, right-click on style name on the panel and choose *Modify*. For example, the *Text Flow* property of style *Heading 1* allows to specify that all first level headings start with a new page (Figure 22).

After applying heading style to section title and pressing the Enter key, a new line is created with the style *Body Text*, which is the proper style for all paragraph text content in thesis.

From the *Organizer* tab (Figure 22) it is possible to set the style that follows the current style; e.g., in case of *Heading 1* the selection is *Body Text*.

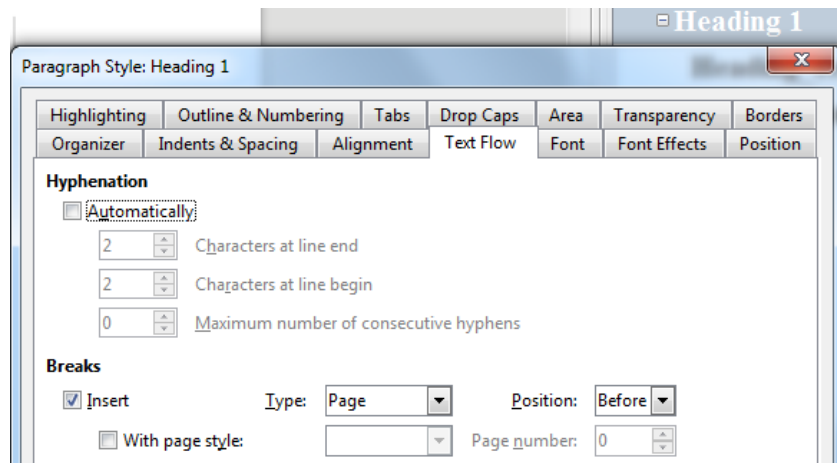


Figure 22. Style properties window.


4.2 Bulleted lists and numbered lists

The style for the bulleted list is *List Bullet*, which provides a single-level bulleting, for example:

- One
- Two
- Three

To end bulleted list, press the Enter key twice. This forces the word processor to end the list although the style will remain to be *List Bullet*. **Re-apply style *Body Text*** to the paragraph following the bulleted list.

Creating and ending numbered lists is alike. The style in the template is *List Number*. A problem may occur when a new numbered list is created with the same style as the numbering is continued from the previous list. To restart numbering place cursor at the end of the first numbered line, open a context menu with right-click and choose *Restart*

Numbering  **Restart Numbering**.

4.3 Footnotes

Footnotes are added at the bottom of the page, just above the bottom margin. Numbering of footnotes is restarted on each page. The proper style for footnotes is *Footnote*. Before adding a footnote, it is necessary to set its style. As this cannot be bound to defined styles in LO, it has to be done by the author manually by choosing **Tools, Endnotes/Footnotes** and setting the numbering style (Figure 23).

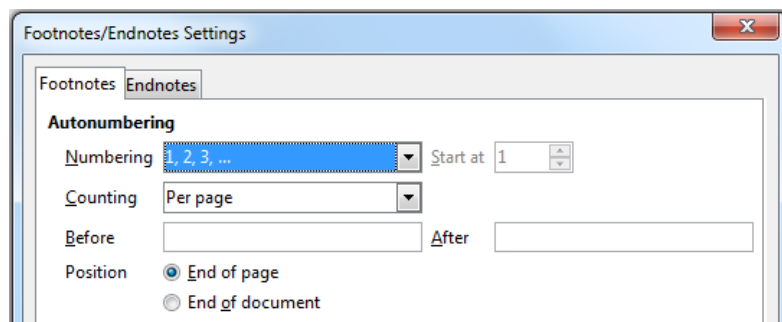


Figure 23. Footnote settings.

To add a footnote, place a cursor in the text at the place where you want your footnote reference to appear and choose **Insert, Footnote**. After confirming it with OK, a placeholder is created at the bottom of the page. Type your footnote text and apply style *Footnote*. The footnote is above the margin and is separated from the text with a short line.

4.4 Adding formulas

LibreOffice uses a program called *Math* to add equations. To use *Math* choose **Insert, Object, Formula**. For more information please refer to *LO Help*. The inserted equation is placed into a *Frame* that has a style *Formula*.

4.5 Inserting program code

In order to list program code in your thesis according to the requirements (Section 2.8.3) do the following:

1. Type/Copy program source code so that the first line starts at the left margin of the page.

2. Select program code and apply style *Program_code*.
3. In order to be able to add caption to program code it is necessary to select the code and add a frame to it (*Insert, Frame*), and then apply frame style *Program*, which places source code in a page-wide frame.
4. Activate (Select) the frame and add caption using the command *Insert, Caption*.
5. Apply style *Caption_multiline* as necessary (captions longer than one line only).
6. To locate program code horizontally to the centre of page, select the code and use the *Increase Indent* option on the toolbar.

The screenshot from LO text document on Figure 24 shows an example program code formatting.

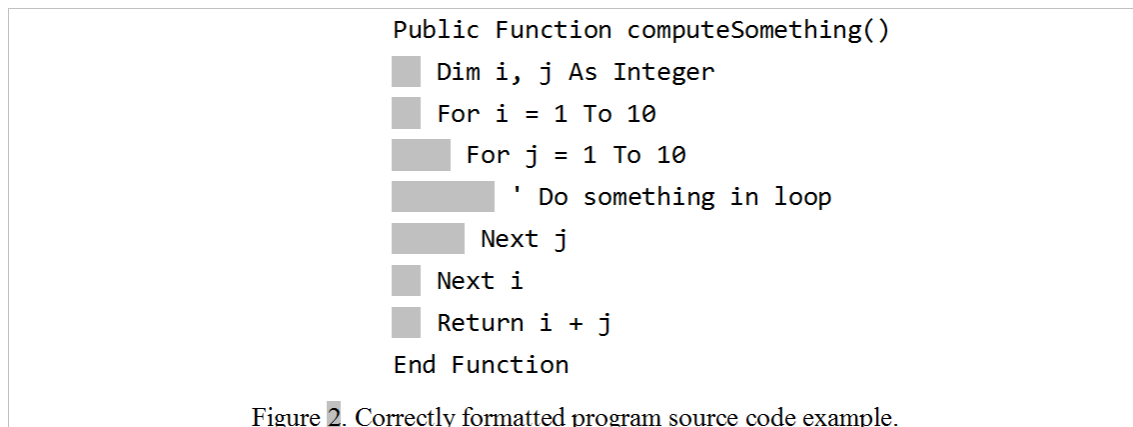


Figure 24. An example program code and its correct formatting as a screenshot from LibreOffice Writer.

4.6 Adding figures and their captions

To insert figures into thesis in LO use the command ***Insert, Image***. Then add a caption using the command ***Insert, Caption***. In the *Insert Caption* window (Figure 25) add the caption title text (field *Caption* on top of the window) and set necessary options – the final result is shown immediately on the *Preview* field.

From the *Options* (Figure 25) *Caption order* is set – in thesis the proper order is label Figure, followed by a space and figure number. There is a dot and space at the end of the figure number before caption text. Captions are formatted using style *Caption* or *Caption_multiline*; these styles place the figure in a page-wide frame. If a figure is narrow, e.g., the example shown on Figure 26, then figure caption obtains the maximum width of the figure. To change this (as necessary by the requirements presented in this

document) apply frame style *Figure* to the frame. In LO the frame around the figure is always shown on screen but never printed out.

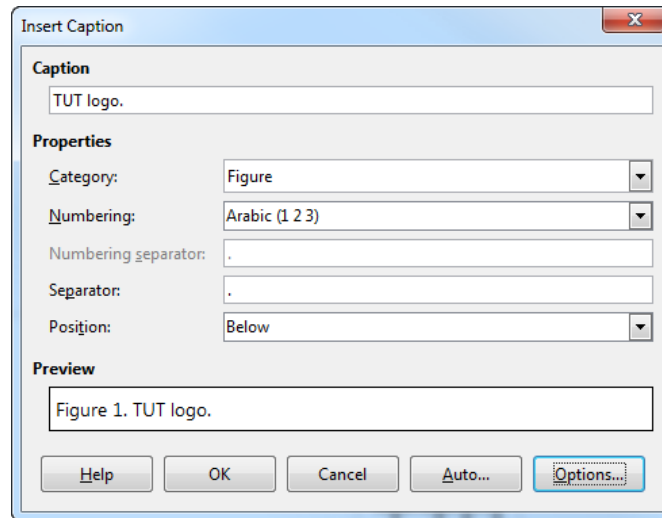


Figure 25. *Insert Caption* window in LibreOffice Writer.

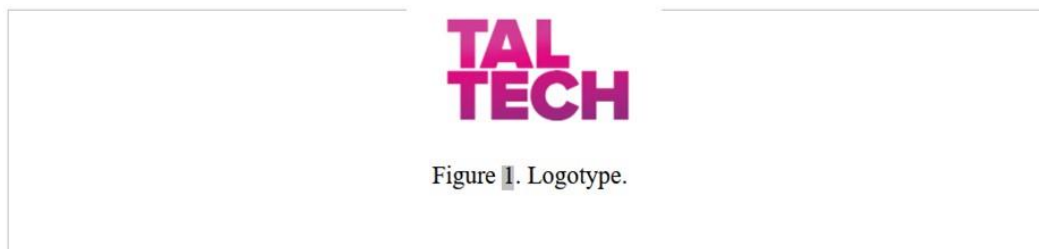


Figure 26. Example: adding figure in LibreOffice Writer.

4.7 Working with tables

Tables are a convenient way to organize information and its layout. Tables can contain text, numbers, lists and graphics. Tables can also be used to design page layout, for example as has been done with the title page of this document and thesis template.

To add a new table place cursor on new line and use the command *Table*, *Insert Table* or insert table button on the toolbar (Figure 27). The button *More options* under the *Insert Table* button allows setting of different options, including repeating heading rows on new pages (Figure 28).

After inserting a table, use the style *Table_head* to format table header row and style *Table_text* to format table content rows.



Figure 27. Toolbar to add tables. Insert Table button is the last in the row.

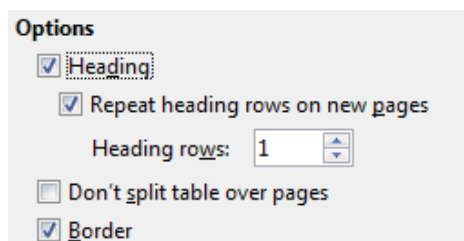


Figure 28. Setting repeating headings for table and adjusting table borders.

If a cursor is placed into table, then a table toolbar is displayed at the bottom of the LibreOffice window (Figure 29), providing tools to alter table options, add and remove rows/columns, align table data, or add table caption.

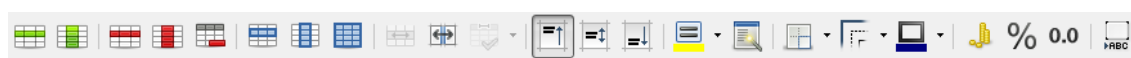


Figure 29. Table toolbar. The last button enables to add table caption.

4.7.1 Adding table caption

Table captions are inserted using the toolbar command button or menu command ***Insert, Caption***. The process is alike to adding captions to figures (Section 4.6), where in the *Insert Caption* dialogue window selection of settings has to be made (Figure 30). The title of table caption is inserted into the field *Caption*.

NB! Table captions are always placed above the table – select Position: *Above* (Figure 30).

After the caption has been placed above the table apply style *Caption* or *Caption_multiline* (only for captions longer than one line).

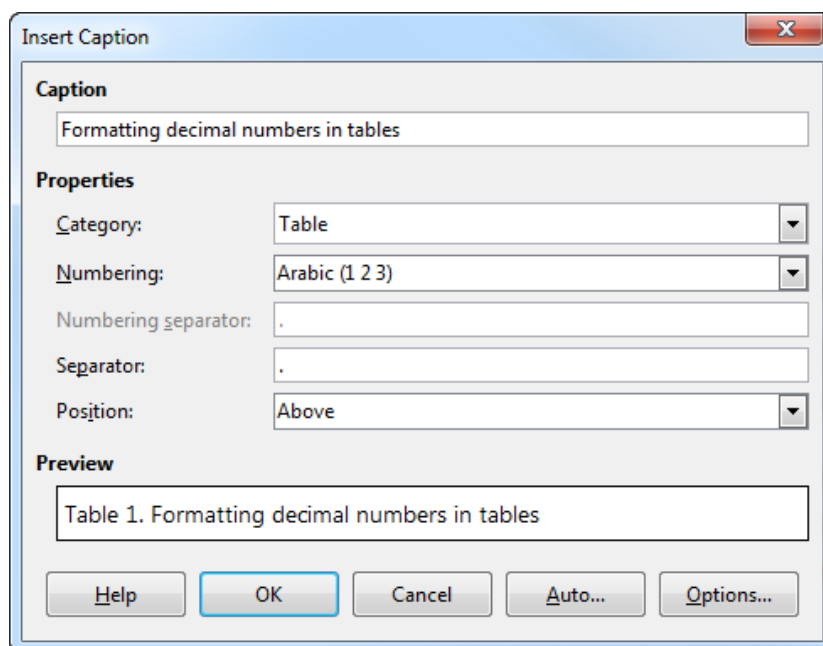




Figure 30. Settings in the *Insert caption* window for table captions.

4.7.2 Aligning decimal numbers in table cell


Numbers should always be aligned by decimal place in tables. To align numbers by decimal place, display the ruler (*View, Ruler*), and click on the top left corner until the *Decimal Tab* icon appears . Then select the column containing decimal numbers and click an appropriate place on the ruler to place the decimal placeholder (Figure 31).



Item 1	0.99
Item 2	10.87
Item 3	123.45

Figure 31. Aligning decimal numbers in table cell.

4.7.3 Centring a table

To centre a table horizontally use the Table toolbar *Table Properties* button  or the command **Table**, *Table Properties* and in the *Table Format* window mark *Center* as shown on Figure 32. The *Table Format* window also allows to set free space above and below the table.

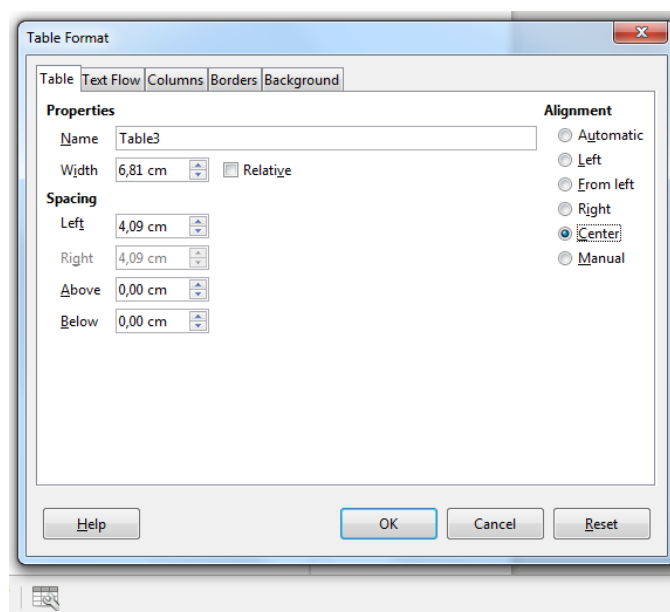


Figure 32. Setting table alignment to the centre of page.

4.8 Using cross-references

Frequently there is a necessity to refer to a figure, table, section, footnote or any other part of a document that has a certain style applied to it. For text that is not defined by a style, a bookmark can be set (*Insert*, *Bookmark*). Cross-references have a particular structure as shown on Figure 18.

1. To place a cross-reference at cursor choose **Insert**, *Cross-reference*.
2. The *Fields* window will open with options shown on Figure 33.
3. From the *Type* list select the type of cross-reference you want to add. For example, if you chose Table all titles for tables in the document are displayed in the *Selection* field. Choose the appropriate title there.
4. From the *Insert reference to* list choose the appropriate option of presentation (e.g., *Category and Number*).
5. Press *Insert*. A field with cross-reference is added at the current place of cursor.

If you click on the cross-reference, the document location that is referenced to, is shown.

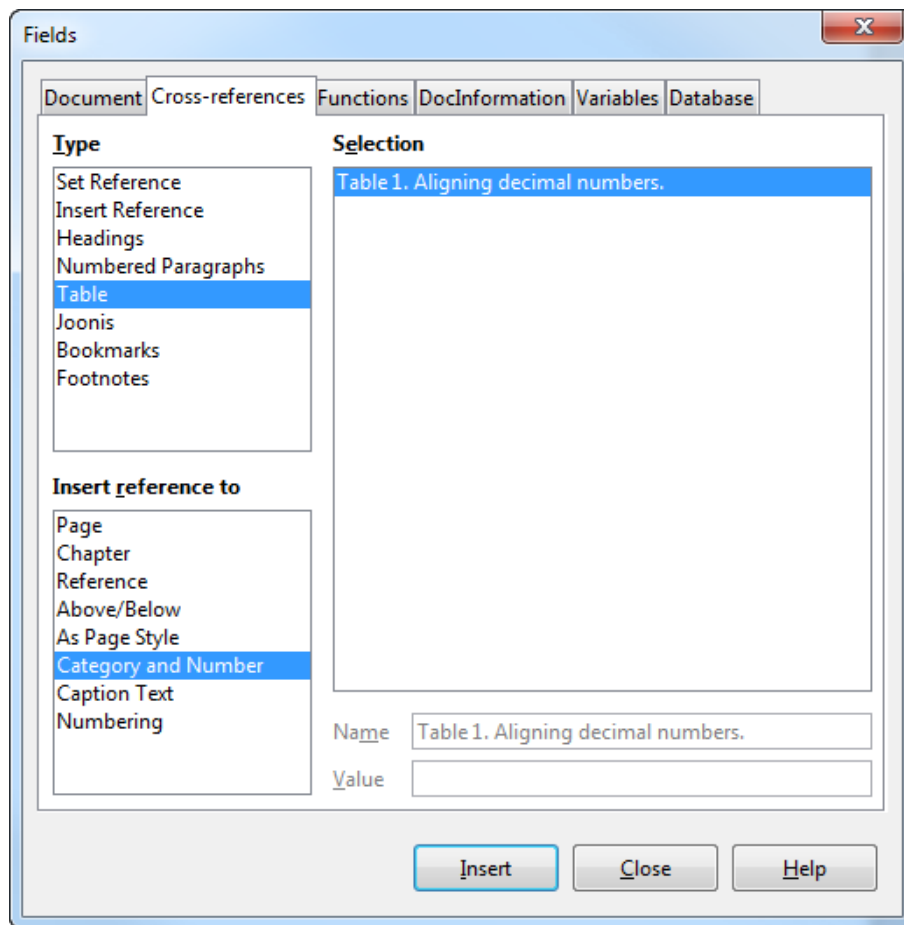


Figure 33. Adding cross-reference in LO. The options window.

4.9 Creating numbered list of references

In case the number of references is small, the list of references can be added manually as a numbered list (or alternatively using a table layout). The style for numbered list of references is *List_bibliogr*. The formatting using this style is shown after the heading “*References*” following this paragraph. In thesis the heading References is always a first level heading without a number (style *Heading_unnumber*).

References

- [1] S. Froning, “Low energy communities with district heating and cooling”, Dublin: PLEA, 2008.
- [2] Hovedrapport, “Udvikling og Demonstration af Lavenergifjernvarme til Lavenergibyggeri”, (in Danish), 2009.

To use items from the reference list in main text, cross-references can be used (*Insert, Cross-reference*). The type of the reference is *Numbered Paragraphs* and the selection for the *Insert reference to* option is *Number* (Figure 34). As a result, the cross-reference is added into text as for example: [1]

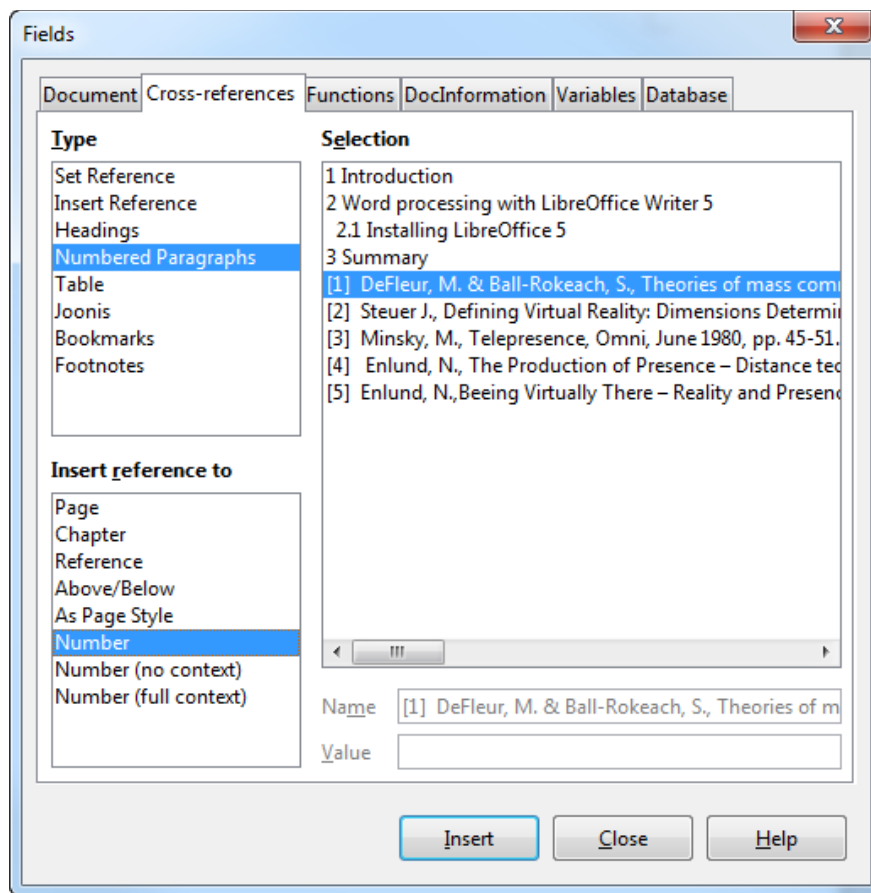


Figure 34. Adding a cross-reference to a bibliography reference.

If cursor is placed on the reference in square brackets, the item referenced is shown (Figure 35). Double-click will take to references list.

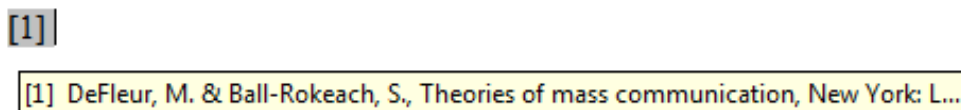


Figure 35. Cross-reference to a bibliography reference.

4.10 Saving thesis as a PDF-document

It is advisable to save prepared and finished thesis *in* Portable Document Format (PDF). This will ensure the thesis is readable cross-platform and the layout is fixed.

To save the document in PDF:

1. Choose **File**, *Export as PDF...*
2. In the PDF Options window set the options (Figure 36) and click *Export*.

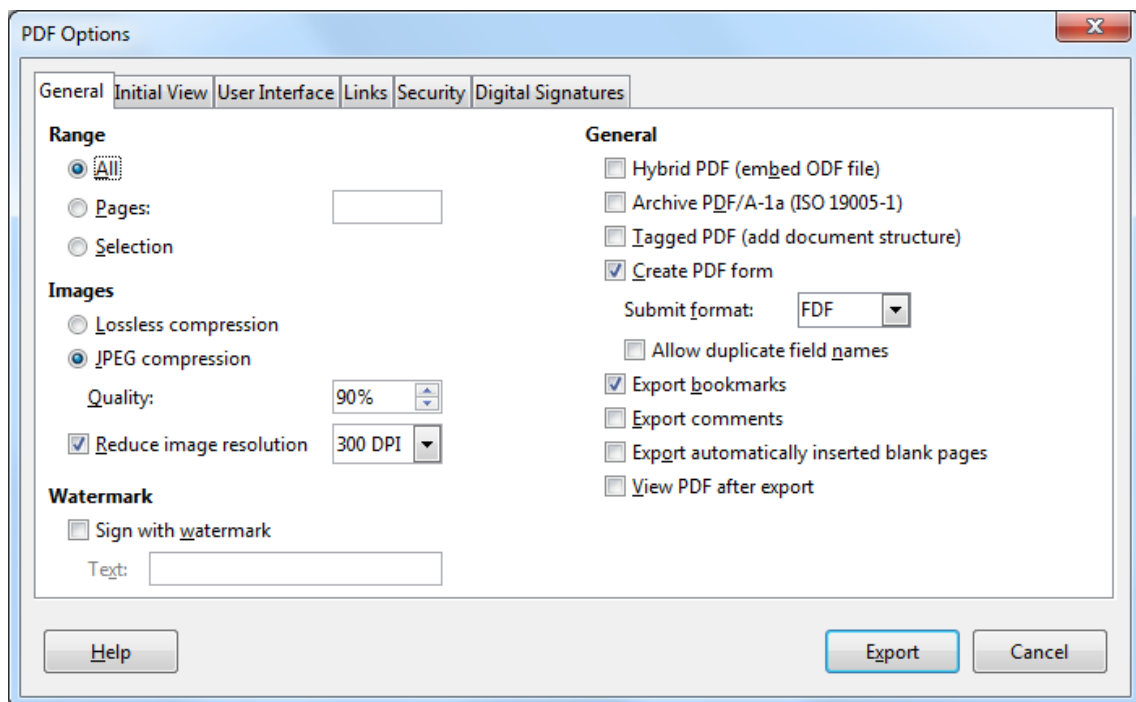


Figure 36. *PDF Options* window in LO for creating PDF documents.

Appendix 1 – Example of the non-exclusive licence for reproduction and publication of a graduation thesis

Appendix 1 – Non-exclusive licence for reproduction and publication of a graduation thesis¹

I [First name Middle name Last name]

1. Grant Tallinn University of Technology free licence (non-exclusive licence) for my thesis "[Thesis title]" , supervised by [Supervisor's name]
 - 1.1. to be reproduced for the purposes of preservation and electronic publication of the graduation thesis, incl. to be entered in the digital collection of the library of Tallinn University of Technology until expiry of the term of copyright;
 - 1.2. to be published via the web of Tallinn University of Technology, incl. to be entered in the digital collection of the library of Tallinn University of Technology until expiry of the term of copyright.
2. I am aware that the author also retains the rights specified in clause 1 of the non-exclusive licence.
3. I confirm that granting the non-exclusive licence does not infringe other persons' intellectual property rights, the rights arising from the Personal Data Protection Act or rights arising from other legislation.

[dd.mm.yyyy]

Appendix 2 – Title page layout

The layout of the title page here is displayed with table gridlines to highlight the structure. The rows below supervisor data can be used to add secondary supervisor, consultants etc. as necessary.

TALLINN UNIVERSITY OF TECHNOLOGY	
School of Information Technologies	
[First name Middle name Last name Student code]	
[Thesis title]	
[Bachelor's thesis / Master's thesis]	
Supervisor:	[Supervisor's name]
	[Academic degree]

Tallinn 2020

Appendix 3 – Example of Author’s declaration of originality

Author’s declaration of originality

I hereby certify that I am the sole author of this thesis and this thesis has not been presented for examination or submitted for defence anywhere else. All used materials, references to the literature and work of others have been cited.

Author: [First name Middle name Last name]

[dd.mm.yyyy]

Appendix 4 – Example of the Abstract page

Abstract

[Text]

This thesis is written in [language] and is [number of pages in main document] pages long, including [number] chapters, [number] figures and [number] tables.

Appendix 5 – Example of the List of figures

List of figures

Figure 1. TUT main logo in Estonian	10
Figure 2. The alternative dual-language logo for Tallinn University of Technology.	10
Figure 3. TUT main logo in black and white: (a) (positive), (b) negative.	11

Appendix 6 – Example of the List of tables

List of tables

Table 1. Formatting requirements and applicable styles in the templates.	12
Table 2. Mandatory and optional parts of thesis.	13

Appendix 7 – Example of the List of abbreviations and terms

The table below is shown with gridlines (these are not printed) to illustrate table structure.

List of abbreviations and terms

DPI	<i>Dots per inch</i>
TTU	Tallinn University of Technology

Appendix 8 – Managing bibliography references with Word

It is possible to use MS Word's built-in feature of bibliography references. The functionality is available from the **References** menu. In Appendix 8 the style used to exemplify the process is IEEE 2006. Using this style, the references are inserted in square brackets, e.g., [1].

Details of a new bibliography record are entered using the command **Manage sources**, and selecting **New**. The source type can be book, article, journal, etc. (Figure 8-1). After selecting source type, the details of the used source are entered (Figure 8-2).

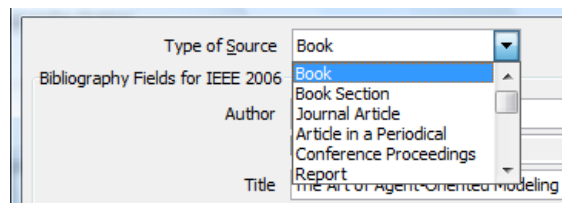


Figure 8-1. Adding reference details through *Source Manager*. Selection of source types.

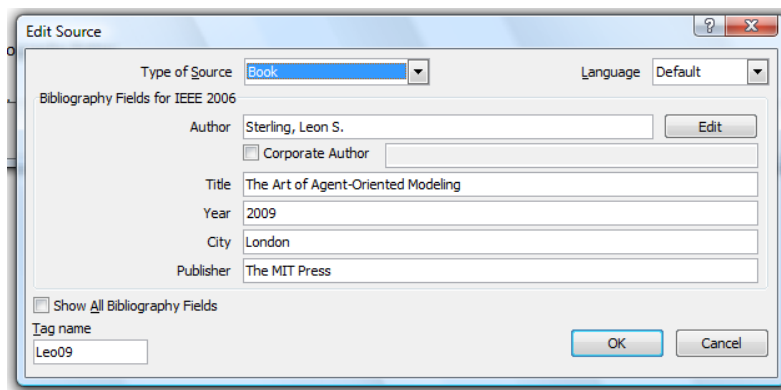


Figure 8-2. Inserting reference details.

By adding all used sources in this way into your thesis document, the outcome is a references source list with a *Master List* saved in the computer. This Master list will contain all sources that have been entered using MS Word. A list called *Current List* contains all bibliography references used in current document. Both of these lists are presented in the *Source Manager* window available through **References**, **Manage Sources** (Figure 8-3).

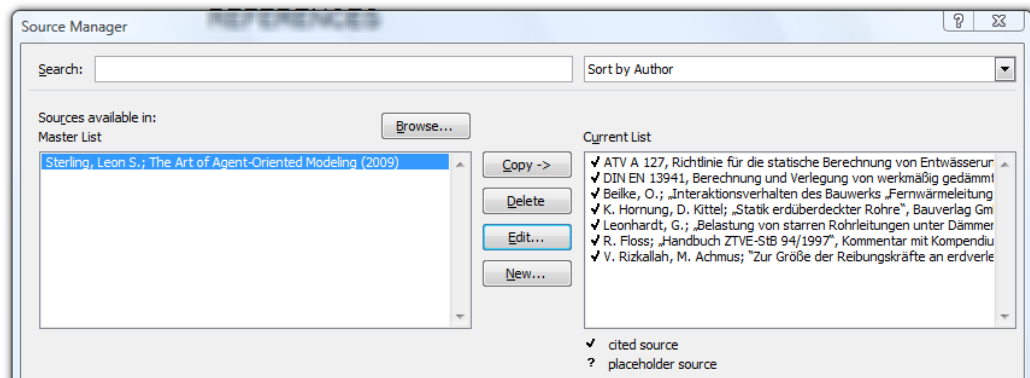


Figure 8-3. Using *Source Manager*.

To cite a book, article or any other source in the text use **References**, *Insert Citation* and choose the source record (Figure 8-4).

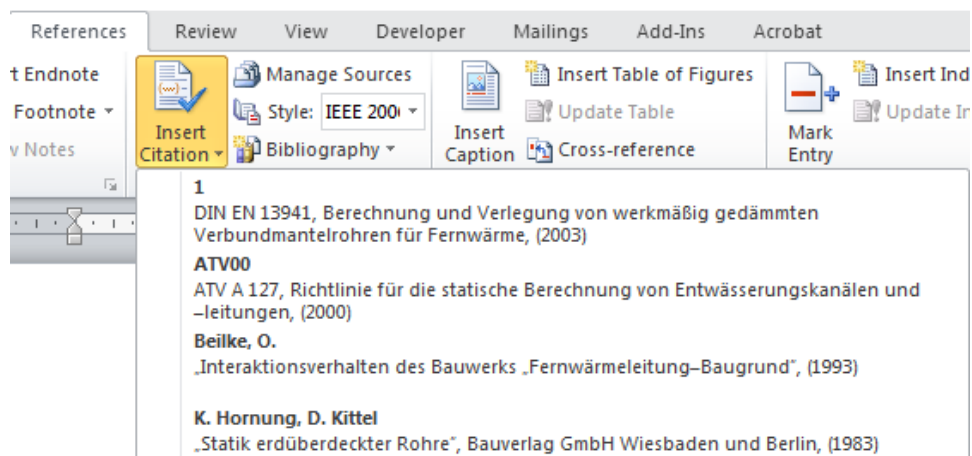
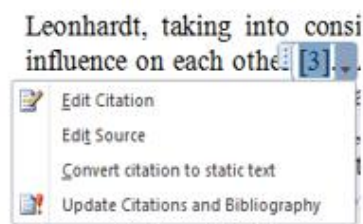
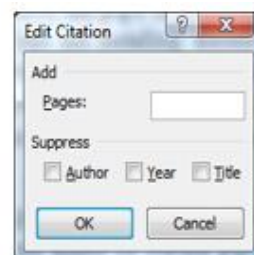


Figure 8-4. Selecting source to add as a reference in text.

A reference as a number in square brackets is inserted. The *Edit Citation* option (Figure 8-5 a) allows to modify the reference, e.g., add a page number (Figure 8-5 b).



(a)



(b)

Figure 8-5. Adding a source reference: (a) reference in the text, (b) changing reference details.

To generate the list of bibliography used in the document, use the **References, Bibliography** command (Figure 8-6). Choose the appropriate style or use *Insert Bibliography* at the bottom of the dialogue box.

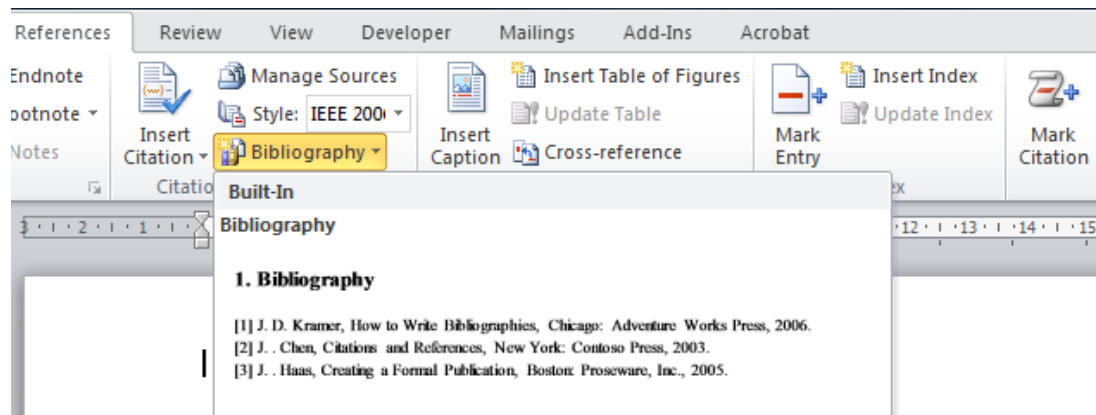


Figure 8-6. Generating the list of references.

As a result, a list of references is generated and inserted into document (as shown below):

References

[1] L. S. Sterling, The Art of Agent-Oriented Modeling, London: The MIT Press, 2009.

...or as *Building Block* seen on Figure 8-7.

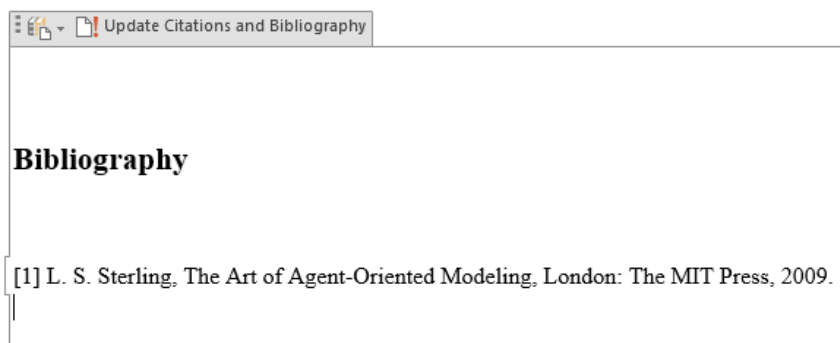


Figure 8-7. List of references added to document.

NB! In case the choice *Insert Bibliography* is used to add a list of references, the list is inserted as a table and the author needs to add a first level heading *References* for the list if it is not yet added into the document.

Appendix 9 – Adding and formatting figures with Word

Inserting figures into document is done using the ***Insert, Picture*** command. Clicking on the inserted figure activates (selects) it and text wrapping options are shown next to the figure (Figure 9-1).

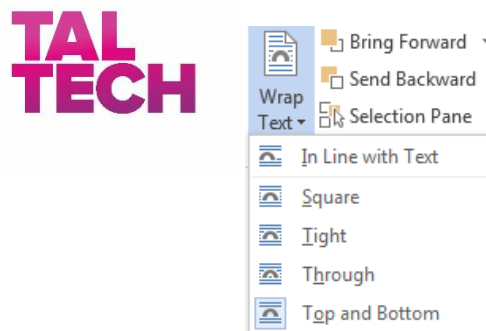


Figure 9-1. Text wrapping options. Presently *Top and Bottom* option is selected.

Figure formatting

1. Select figure
2. From the top menu select ***Picture Tools, Format***
3. Select *Wrap Text* and option *Top and Bottom*, this ensures there is no text on the left or right side of the figure
4. To centre the figure, choose *Format, Position, More Layout Options* and set figure alignment (Figure 9-2).

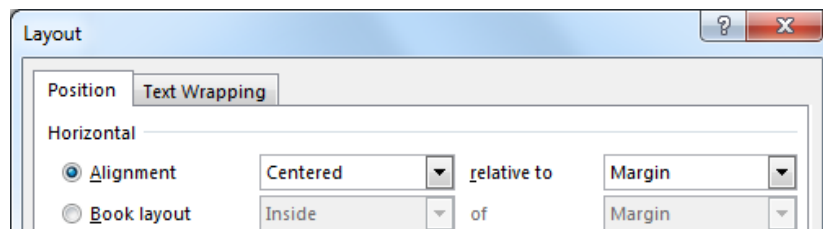


Figure 9-2. Horizontal layout options.

5. To ensure there is enough space below the figure choose from the *Text Wrapping* tab option *Distance from text* and set its *Bottom* value to 1 cm (Figure 9-3).

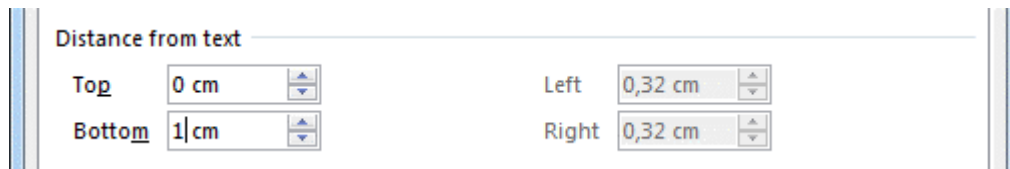


Figure 9-3. Setting the distance between text and figure.

6. From *Format, Position, More Layout Options* tab *Position* set the options shown on Figure 9-4 and verify that the figure is anchored to the paragraph it belongs to.

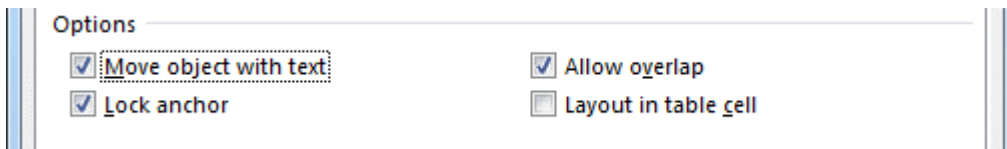



Figure 9-4. Anchoring figure to a text paragraph.

NB! The figure formatted as above is anchored to the nearest text paragraph, which can be verified when the *Show/Hide* option of invisible symbols is activated; the anchor is displayed as . It is possible to lock the anchor, which means it cannot be moved to another text paragraph.

The menu *Picture Tool, Format* also provides other options for figure formatting, such as brightness correction, contrast, and also compression under command *Compress Pictures*, which is useful to apply after cropping or to reduce file size (Figure 9-5). For printing the document resolution should be enough.

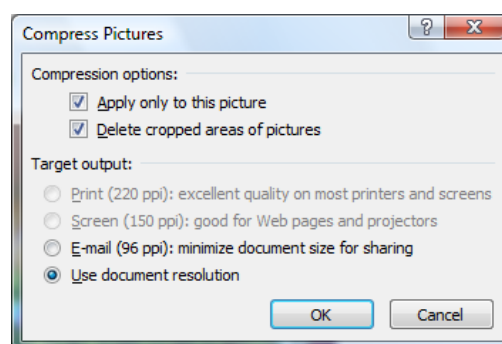


Figure 9-5. Figure compression options.