



School of Information Technologies  
Department of Computer Systems

Name Surname

## THESIS TITLE

**[Pick one, delete the other]** Bachelor's | Master's Thesis

Supervisor name  
Supervisor title (~ Ph.D.)  
Supervisor work title (~ Professor, Researcher)

TALLINN 2020

## Declaration of Originality

*Declaration: I hereby declare that this thesis, my original investigation and achievement, submitted for the [NB! Choose one, delete the other] Bachelor's / Master's degree at Tallinn University of Technology, has not been submitted for any degree or examination.*

*Deklareerin, et käesolev diplomitöö, mis on minu iseseisva töö tulemus, on esitatud Tallinna Tehnikaülikooli [NB! Choose one, delete the other] bakalaureusekraadi / magistrikraadi taotlemiseks ja selle alusel ei ole varem taotletud akadeemilist kraadi.*

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Date: January 19, 2020

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## **Abstract**

Short introduction of your thesis. Think of a person who's going to read it. What should that person expect to find in your work?

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

## **Annotatsioon**

Annotatsioon on lõputöö kohustuslik osa, mis annab lugejale ülevaate töö eesmärkidest, olulisematest käsitletud probleemidest ning tähtsamatest tulemustest ja järeldustest. Annotatsioon on töö lühitutvustus, mis ei selgita ega põhjenda midagi, küll aga ka jastab piisavalt töö sisu.

## Nomenclature

Nomenclature goes here. Can be automated in LyX, below just an example of it.

ATI	TTÜ Arvutitehnika instituut
DPI	<i>Dots per inch</i> , punkti tolli kohta

# Contents

<b>1</b>	<b>Introduction</b>	<b>9</b>
<b>2</b>	<b>Background</b>	<b>10</b>
2.1	Figures and Tables . . . . .	10
2.2	Program Code . . . . .	11
2.3	Math . . . . .	11
2.4	Citing Research . . . . .	12
<b>3</b>	<b>Conclusions</b>	<b>13</b>
	<b>References</b>	<b>14</b>
<b>A</b>	<b>First Appendix Title</b>	<b>15</b>
<b>B</b>	<b>Second Appendix Title</b>	<b>16</b>

## List of Figures

1	Logo of Alpha Control Lab (2019) . . . . .	10
2	Example of program code . . . . .	11

## List of Tables

1	Units . . . . .	10
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## **1. Introduction**

Provide basics here

## 2. Background

Unless a literature review is provided in the Introduction section, it must be placed here. Depends on the thesis project.

### 2.1. Figures and Tables

Below a few examples of figures and tables and their formatting is provided. For example, consider Fig. 1. Notice the nonbreaking space between “Fig.” and the number.



Figure 1. Logo of Alpha Control Lab (2019)

Example of a table is provided in Table 1. Note that caption goes *above* the table (unlike in case of figures).

Table 1. Units

Quantity	CGS	MKS	MTS
distance, displacement, length, height, etc. ( $d, x,$ $l, h,$ etc.)	centimetre (cm)	metre (m)	metre
mass ( $m$ )	gram (g)	kilogram (kg)	tonne (t)
time ( $t$ )	second (s)	second	second
speed, velocity ( $v, v$ )	cm/s	m/s	m/s
acceleration ( $a$ )	gal (Gal)	m/s <sup>2</sup>	m/s <sup>2</sup>
force ( $F$ )	dyne (dyn)	newton (N)	sthene (sn)
pressure ( $P$ or $p$ )	barye (Ba)	pascal (Pa)	pièze (pz)
energy ( $E, Q, W$ )	erg (erg)	joule (J)	kilojoule (kJ)
power ( $P$ )	erg/s	watt (W)	kilowatt (kW)
viscosity ( $\mu$ )	poise (p)	Pa·s	pz·s

## 2.2. Program Code

Here's one way you can insert program code. See Fig. 2.

```
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 2. Example of program code

Program code should be correctly formatted.

## 2.3. Math

Here's an example equation:

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

Please note that because equations are parts of text, they have to have proper punctuation as well.

$$\begin{aligned} f(x) = \sum_{n=0}^{\infty} a_n (x - c)^n &= a_0 + a_1(x - c)^1 + a_2(x - c)^2 + a_3(x - c)^3 \\ &\quad + a_4(x - c)^4 + a_5(x - c)^5 + a_6(x - c)^6 + a_7(x - c)^7 + \dots. \end{aligned} \quad (2)$$

Here's how you can provide a theorem.

**Teoreem 2.1 (Vieta's Theorem for Quadratic Equation)** *For a quadratic polynomial equation*

$$x^2 + px + q = 0 \quad (3)$$

*There holds a relationship*

$$\begin{cases} x_1 + x_2 = -p \\ x_1 \cdot x_2 = q. \end{cases} \quad (4)$$

Here's how to typeset an example.

**Example 2.1** Let us solve the quadratic equation

$$y = x^2 + 4x - 5$$

using (4) found in Theorem 2.1:

$$\begin{cases} x_1 + x_2 = -4 \\ x_1 \cdot x_2 = -5. \end{cases}$$

Thus, the solution is  $x_1 = -5$ ,  $x_2 = 1$ .

## 2.4. Citing Research

Examples of references to web [1], books [2, 3, 4], conference proceedings [5, 6], journal articles [7, 8, 9].

### **3. Conclusions**

Draw conclusions here.

## References

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## A. First Appendix Title

Some content.

## B. Second Appendix Title

Some more content.