**MASTER’S THESIS TITLE**

MASTER’S THESIS

|  |  |  |
| --- | --- | --- |
|  | Master graduate: | **Firstname LASTNAME** |
|  |  |  |
|  | Supervisor: | **scientific title Firstname LASTNAME** |

**September 2025**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | |  | |
| DEAN, |  | | HEAD OF DEPARTMENT, | |
| **Prof.dr.eng. Vlad MUREȘAN** |  | **Prof. dr. eng. Rodica POTOLEA** | |

Master graduate: **Firstname LASTNAME**

**MASTER’S THESIS TITLE**

1. **Project proposal:** *Short description of the master’s thesis and initial data*
2. **Project contents:** *(enumeration of the main parts) Example: Presentation page, Title of chapter 1, Title of chapter 2, …, Title of chapter n, Bibliography, Appendices.*
3. **Place of documentation**: *Example*: Technical University of Cluj-Napoca, Computer Science Department
4. **Consultants**:
5. **Date of issue of the proposal:** *Example:*November, 2024
6. **Date of delivery:** *Example:* September 8th, 2025

|  |  |
| --- | --- |
| Master graduate: | \_\_\_\_\_\_*(signature)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  |  |
| Supervisor: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Declaraţie pe proprie răspundere privind**

**autenticitatea lucrării de disertație**

Subsemnatul(a)**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, legitimat(ă) cu \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ seria \_\_\_\_\_\_\_ nr. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
CNP \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, autorul lucrării \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_elaborată în vederea susţinerii examenului de finalizare a studiilor de disertație la Facultatea de Automatică și Calculatoare, Specializarea \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ din cadrul Universităţii Tehnice din Cluj-Napoca, sesiunea \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a anului universitar 2024-2025, declar pe proprie răspundere că această lucrare este rezultatul propriei activităţi intelectuale, pe baza cercetărilor mele şi pe baza informaţiilor obţinute din surse care au fost citate în textul lucrării şi în bibliografie.

Declar că această lucrare nu conţine porţiuni plagiate, iar sursele bibliografice au fost folosite cu respectarea legislaţiei române şi a convenţiilor internaţionale privind drepturile de autor.

Declar, de asemenea, că această lucrare nu a mai fost prezentată în faţa unei alte comisii de examen de disertaţie.

În cazul constatării ulterioare a unor declaraţii false, voi suporta sancţiunile administrative, respectiv, *anularea examenului de disertaţie*.

Sunt de acord ca, pe tot parcursul vieții, în cazul în care este necesar și se va dori verificarea autenticității lucrării mele, să fiu identificat și verificat în baza datelor declarate de mine.

|  |  |  |
| --- | --- | --- |
| Data  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  | *Nume, Prenume*  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  |  | Semnătura |
|  |  |  |

**Read first** (this page should be eliminated from the final version):

1. The three preceding pages (title page, summary page and declaration) should be printed on one side (not two-side) and should be included in the printed paper.

The summary page (the second one) must be signed both by the graduate and the supervisor. The date used on the declaration page is the date when the thesis is submitted to the commission secretaries.

1. You must use the correct titles of the supervisor on the title page. (Please use cs.utcluj.ro, section Personal, for a list of the academic staff and their titles.)
2. **The table of contents** should begin on an odd, new page (when two-sided printing is used).

All chapters begin on a new page. Page numbering starts at 1 with the first chapter (**Introduction**). To update the table of contents, right-click on the table (it will appear grayed) and choose *Update field*→*Update entire table.*

1. View this document (you can use this while editing as well) with hidden formatting symbols shown (click on the icon ¶ of *Home/Paragraph*).
2. Every chapter begins on a new page. This is achieved with the hidden formatting symbol *Section Break,* option *Next Page* which has already been used at the end of every chapter. If you accidentally delete it, you can put it back using the *Breaks* submenu of the *Page* *Layout* menu.
3. Please use the predefined styles in the document (Headings, Figure, Table, Normal, etc.)
4. The paper size is A4 and the margins are all 1 inch.
5. Please observe and comply with the rest of the instructions included in each chapter.
6. When saving the document as a pdf file, select from *Options* as below:

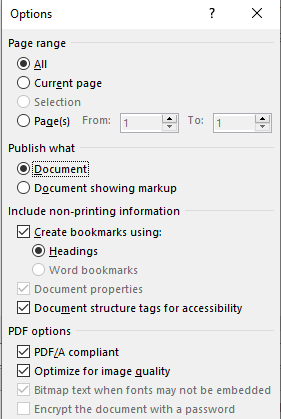


Table of Contents

[Chapter 1. Introduction (Heading 1 style) 1](#_Toc94448607)

[1.1. Project context (Heading 2 style) 1](#_Toc94448608)

[1.1.1. Subsection (Heading 3 style) 1](#_Toc94448609)

[Chapter 2. Objectives of the research 3](#_Toc94448610)

[2.1. Contents 3](#_Toc94448611)

[2.2. Section 3](#_Toc94448612)

[2.2.1. Subsection 3](#_Toc94448613)

[Chapter 3. Bibliographic Research/The current state-of-the art in the field 4](#_Toc94448614)

[Chapter 4. Project presentation 5](#_Toc94448615)

[4.1. Clarifications on the content and organization 5](#_Toc94448616)

[Chapter 5. Theoretical and experimental results 6](#_Toc94448617)

[Chapter 6. Conclusions 7](#_Toc94448618)

[6.1. Contents 7](#_Toc94448619)

[6.2. Technical details 7](#_Toc94448620)

[6.2.1. Size 7](#_Toc94448621)

[Bibliography 8](#_Toc94448622)

[Appendix 1 (only if needed) 9](#_Toc94448623)

[Appendix 2 Published papers 10](#_Toc94448624)

# Introduction (Heading 1 style)

The title of each chapter is formatted using Heading 1 style, numbering with one digit (Chapter x. Chapter Name ), font Times New Roman, size 16pt, Bold, spacing before 30pt, spacing after 18pt.

This chapter will present:

* Project context,
* Specification of the precise domain of the thesis,
* Answer the questions: **what** (has been done)?, **why** (it was done, i.e. motivation; what it is solved, what it is useful for, etc.)?, **how** (it was done, i.e. the particular approach, presented briefly).
* The introduction is ended with a description of the project contents, like this: Chapter X describes ..., Chapter Y presents ...
* The introduction represents a synthesis of the project, from which the reader should be able to decide whether or not the thesis is of interest to him.

Represents about 5% of the paper.

## Project context (Heading 2 style)

A section title uses Heading 2 Style, Times New Roman 14pt, Bold, spacing before 12pt, spacing after 6pt.

The font used for the text in this document is Times New Roman, size 12 points, as defined in the *Normal style*, Line spacing equal to 1.0 (Paragraph, Line spacing) and *Justify*.

The first line for each paragraph must be indented (implicit in *Normal Style*), and no additional space is inserted between successive paragraphs.

### Subsection (Heading 3 style)

A subsection title uses Heading 3 style and Times New Roman 12pt, Regular, spacing before 12pt, spacing after 6pt.

Each table used in this document is labeled as Table *x.y*, where x represents the chapter number, and y shows the table number within the current chapter. Leave a blank line before and after each table, relative to the adjacent paragraphs.

To refer to a table use the menu *References, Cross-reference* submenu and select from the popup *Table* →*only label and number*.

Example: in this row we have inserted a reference to Table 1.1.

Table 1.1 Table name (*References, Insert caption* →*Table*)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Times New Roman (12) | Xxxx | xxxx | Xxxx |  |
|  |  |  |  |  |

Each figure used in the document must be referred to within the text (ex: in Figure 1.1 the system components are presented...) and labeled. The labeling must be as Figure x.y where x represents the chapter number, and y shows the number of the figure within the current chapter. Use the menu *References, Insert caption → Figure*.

To refer to a figure use the menu *References, Cross-reference* submenu and select from the popup *Figure* →*only label and number*.

Example: in this row we have inserted a reference to Figure 1.1.

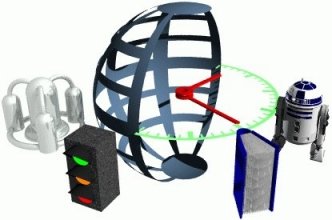


Figure 1.1 Description (*References, Insert caption → Figure*)

Each chapter must start on a new page.

# Objectives of the research

## Contents

* Detailed description of the actual research topic, formulated exactly, with clear objectives on 2-3 pages and possible explanatory figures.
* Represents about 5-10% of the thesis.

## Section

### Subsection

# Bibliographic Research/The current state-of-the art in the field

The bibliographic research aims to present the current state of the domain/ sub-domain in which the topic is located, to present similar research and to relate to them the approach in the paper.

This chapter represents about 10-15% of the thesis.

References will be included in the *Bibliography* section. The reference format must be IEEE or similar. The introduction of new references in the *Bibliography* section, and their citation within the document text can be done manually (by obeying the format), but it is less recommended, or by using the tools mentioned in the last paragraphs of this chapter.

Bibliographic references will be made for each book, article or material used for the elaboration of the dissertation.

In the *Bibliography* section there are examples of references to conference or workshop articles [1] [2], journal article [3], or books [4].

References to online applications or resources (web pages) should include at least a suggestive name in addition to the link itself [5], plus other information if available (authors, year, etc.). References that only link to the online resource will be placed in the footer of the page where they are referenced.

Citing references in the text is mandatory, see the example below (depending on the theme of the project, the presentation of the method/application may vary).

In paper [1] the authors present a system…. The method is … *discuss the algorithms, data structures, functionality, specific aspects related to the project theme, etc*…. Discussion: *pros and cons*.

In chapter 4 of [4], the *similar-to-my-project-theme algorithm* is presented, with the following features…

Starting with **MS Word 2007**, the integrated bibliography management system should be used: *References,* submenu *Citations & Bibliography.* More information can be found in the online documentation of MS Office (<https://support.microsoft.com/en-us/office/create-a-bibliography-citations-and-references-17686589-4824-4940-9c69-342c289fa2a5>).

# Project presentation

## Clarifications on the content and organization

Together with the next chapter, it takes about 70% of the thesis.

The title of this chapter is not imposed and it does not necessary represent a single chapter. The title rather indicates a part (important and central, in fact) of the thesis, in which it is presented what was actually achieved: the author's contributions. The organization of this part is dependent and specific to each work and is determined by each author as he sees fit for his theme. It can include the presentation of some theoretical concepts (mathematical tools or techniques used in the paper, the presentation or introduction of some theoretical concepts, etc.), an analysis of different methods/ algorithms/technologies, etc. considered or developed by the author, a presentation of a design (more or less detailed) or even details of a possible implementations/prototype, if applicable.

It should be noted, however, that this part represents the personal contribution of the author, and in no case can it be the synthesis of texts taken from other sources.

Therefore, any information presented here must correspond at least to a personal critical interpretation / analysis of the author, if not to his own original ideas.

# Theoretical and experimental results

Together with the project presentation part, it must represent about 70% of the thesis.

Here, there are presented the theoretical or practical methods of validation/verification of the solutions proposed in the previous part, the scenarios for testing the functional correctness, usability, performance, etc.

The results of experimental tests are also subject to interpretation and comparison with the results of other similar methods.

# Conclusions

## Contents

* A summary of your contributions/achievements,
* A critical analysis of the results: advantages, disadvantages, limits
* A description of the possibilities of improvements/further development.

## Technical details

### Size

About 3-5% of the whole.

# Bibliography

|  |  |
| --- | --- |
| [1] | G. Boella, L. van der Torre, „Contracts as Legal Institutions in Organizations of Autonomous Agents,” in *Proceedings of the Third International Joint Conference on Autonomous Agents and Multi Agent Systems* (AAMAS'04), New York, 2004. |
| [2] | G. Boella, J. Hulstijn și L. van der Torre, „A Synthesis Between Mental Attitudes and Social Commitments in Agent Communication Languages,” în *Intelligent Agent Technology 05 (IAT 2005)*, Compiegne, 2005. |
| [3] | A. Chambolle și T. Pock, „A First-Order Primal-Dual Algorithm for Convex Problems with Applications to Imaging,” *Journal of Mathematical Imaging and Vision,* vol. 40, pp. 120-145, 2011. |
| [4] | C. P. Pfleeger, S. L. Pfleeger și J. Marguiles, *Security in Computing*, 5th Edition, Pearson, 2015. |
| [5] | „The Selenium Browser Automation Project,” Software Freedom Conservancy, [Interactiv]. Available: https://www.selenium.dev/. [Accesat 17 martie 2021]. |

Note: After inserting or updating the bibliography, select the whole table and apply the style *Biblio*. The Normal style used indentation for the first line of a paragraph, and thus you will not get an appearance as above without applying this step

# Appendix 1 (only if needed)

…

Relevant code sections

…

Other relevant info (proofs etc.)

…

# Appendix 2 Published papers

Published papers (if any)

etc.