**LICENSE THESIS TITLE**

LICENSE THESIS

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|  | Graduate: | **Firstname LASTNAME** |
|  |  |  |
|  | Supervisor: | **scientific title Firstname LASTNAME** |

**2022**

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| DEAN, |  | | HEAD OF DEPARTMENT, | |
| **Prof. dr. eng. Liviu MICLEA** |  | **Prof. dr. eng. Rodica POTOLEA** | |

Graduate: **Firstname LASTNAME**

**LICENSE THESIS TITLE**

1. **Project proposal:** *Short description of the license thesis and initial data*
2. **Project contents:** *(enumerate the main component parts) Presentation page, advisor's evaluation, 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:** November 1, 2020
6. **Date of delivery:** July 8, 2021

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| Graduate: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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| Supervisor: | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Declarație pe propria răspundere privind**

**autenticitatea lucrării de licență**

Subsemnatul(a)**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, legitimat(ă) cu \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ seria \_\_\_\_\_\_\_ nr. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
CNP \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, autorul lucrării \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_elaborată în vederea susținerii examenului de finalizare a studiilor de licență la Facultatea de Automatică și Calculatoare, Specializarea \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ din cadrul Universității Tehnice din Cluj-Napoca, sesiunea \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a anului universitar \_\_\_\_\_\_\_\_\_\_, declar pe propria răspundere că această lucrare este rezultatul propriei activități intelectuale, pe baza cercetărilor mele și pe baza informațiilor obținute din surse care au fost citate, în textul lucrării, și în bibliografie.

Declar că această lucrare nu conține porțiuni plagiate, iar sursele bibliografice au fost folosite cu respectarea legislației române și a convențiilor internaționale privind drepturile de autor.

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

In cazul constatării ulterioare a unor declarații false, voi suporta sancțiunile administrative, respectiv, *anularea examenului de licență*.

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

**General instructions**

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

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

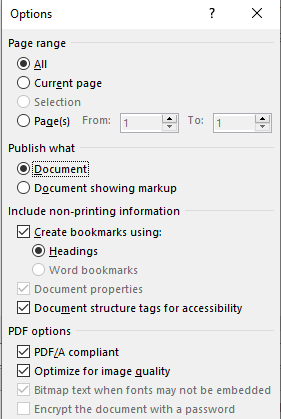
The summary page (the second one) must be signed both by the graduate and the supervisor.

The date used on the declaration page is the date when the thesis is submitted to the commissions’ secretaries.

1. You must use the correct titles of the supervisor on the title page. (Please use the Web page from where you downloaded this document 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, use the menu *References: Table of Contents->Update table*.

1. View this document (you can use this while editing as well) with hidden formatting symbols shown enabled (click on the pictogram **** 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, you can put it back using the *Breaks* submenu of the *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. Observe and obey the rest of the instructions included in each chapter.
6. When saving the document as a pdf file, select from *Options* as below



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# Introduction

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 license thesis,

Use about 5% of the paper.

## Project context

A section title uses Heading 2 Style uses 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 (default in *Normal Style*), and no additional space inserted between successive paragraphs.

### Subsection title

A subsection title uses Heading 3 style and Times New Roman 12 pt, 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 between 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

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

Each figure used in the document must be referred within the text (ex: in Figure x.y 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

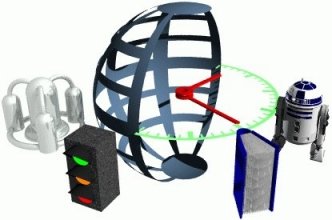


Figure 1.1. Figure name

Each chapter must start on a new page.

# Project Objectives

The project theme must be described in this chapter (as a research/design proposal, clearly formulated, with clear objectives – 2-3 pages – and, possibly, some explanatory figures).

This chapter should take about 10% of the paper.

# Bibliographic Research

Bibliographic research has as an objective the establishment of the references for the project, within the project domain/thematic. While writing this chapter (in general the whole document), the author will consider the knowledge accumulated from several dedicated disciplines in the second semester, 4th year (Project Elaboration Methodology, etc.), and other disciplines that are relevant to the project theme.

This chapter should take about 15% of the paper.

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 not recommended as it not easy to manage them, or by using the tools mentioned in the last paragraphs of this chapter.

In the *Bibliography* section, there are examples of references to conferences or workshops articles [1] [2], journal [3], and books [4]. References to applications or online resources (web pages) must include at least a short relevant description in addition to the link [5], and other information is available (authors, year, etc.). References that contain only the link to the online resource will be placed in the page footer.

No that if sources change you must update all citation fields in the document as specified by Microsoft documentation.

Each reference must be cited within the document text, see example below (depending on the project theme, the presentation of a method/application can vary).

In paper [1] the authors present a detection system for moving obstacles based on stereovision and ego motion estimation (note that this is not true about that the article contents). 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.

# Analysis and Theoretical Foundation

Together with the next chapter takes about 60% of the whole paper.

The purpose of this chapter is to explain the operating principles of the implemented application.

Here you write about your solution from a theory standpoint – i.e. you explain it and demonstrate its theoretical properties/value, e.g.:

* used or proposed algorithms,
* used protocols,
* abstract models,
* logic explanations/arguments concerning the chosen solution,
* logic and functional structure of the application, etc.

YOU SHOULD NOT write about implementation.

YOU SHOULD NOT copy/paste information on technologies and other alike from various sources, which do not pertain to your project (no fillers, please!).

# Detailed Design and Implementation

Together with the previous chapter takes about 60% of the paper.

The purpose of this chapter is to document the developed application such a way that it can be maintained and developed later. A reader should be able (from what you have written here) to identify the main functions of the application.

The chapter should contain (but not limited to):

* a general application sketch/scheme,
* a description of every component implemented, at module level,
* class diagrams, important classes and methods from key classes.

# Testing and Validation

This chapter should take about 5% of the paper.

# User’s manual

In the section describing the installation procedure you should detail the hardware and software resources needed for installing and running the application, and a step-by-step description of how your application can be deployed/installed. An administrator should be able to perform the installation/deployment based on your instructions.

In the section for the user you should describe how to use the application from the point of view of a user with no inside technical information; this should be adorned with screen shots and a stepwise explanation of the interaction. Based on user's manual, a person should be able to install and use your product.

# Conclusions

This chapter should take about 5% of the paper.

In this chapter you should include:

* A summary of your contributions/achievements,
* A critical analysis of the results achieved,
* A description of the possibilities of improvements/further development.

# Bibliography

|  |  |
| --- | --- |
| [1] | G. Boella și L. van der Torre, „Contracts as Legal Institutions in Organizations of Autonomous Agents,” în *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] | G. Cachon și M. Lariviere, „Supply chain coordination with revenue sharing contracts: strengths and limitations,” *Management Science,* vol. 51, pp. 30-44, 2005. |
| [4] | C. P. Pfleeger, S. L. Pfleeger și J. Margulies, Security in Computing, 5th Edition, Pearson, 2015. |
| [5] | Software Freedom Conservancy, „The Selenium Browser Automation Project,” [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

…

Relevant code sections

…

Other relevant info (proofs etc.)

…

Published papers (if any)

etc.