République algérienne démocratique et populaire

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Université Abdelhamid Mehri – Constantine 2

Faculté des nouvelles technologies de l'information et de la communication (NTIC)

Technologies des Logiciels et des Systèmes d'Information (TLSI)

MÉMOIRE DE MASTER

pour obtenir le diplôme de Master en Informatique

Option: Génie logiciel (GL)

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SmartFarm Solution

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بسم الله الرحمن الرحيم

Acknowledgments

(This section allows you to thank all the people who have participated in the successful development of the end of studies project, and especially when writing your thesis. This **must not exceed 1 page maximum**.)

Dedicase

(In this section, you dedicate this thesis to important people for you. This **should not also exceed 1 page**.)

<div dir="rtl">

ملخص

)هنا تضع ملخص المذكرة باللغة العربية. يجب أن يكون الملخص موجزا وأقل من 200 كلمة. يمكن أن يحتوي الملخص على كلمات لاتينية، مثلا NTIC .(

الكلمات المفتاحية:) 6 كلمات مفتاحية على الأكثر مفصولة بفواصل " ، " (

</div>

Abstract

(You insert here the abstract of the manuscript in English. The abstract should be concise, **less than 200 words**.)

Keywords: (Maximum 6 keywords must be separated by commas ",")

Résumé

(Vous insérez ici le résumé du manuscrit en français, dont le nombre de mots **ne doit pas dépasser 200**.)

Mots clés : (6 mots clés au maximum doivent être séparés par des virgules ",")

Table of Contents

List of Figures

List of Tables

List of Algorithms

General Introduction

(The introduction, which **must not exceed 3 pages**, consists of the following four sections.)

Project Background

(In this section, you describe the context in which your project is being processed.)

Problem

(Here, you describe the problem that needs to be solved in the development of your thesis. It comes directly from the theme proposed by your supervisor(s).)

Proposed Solutions

(Here, you list the objectives of your thesis study, as well as the solutions you consider to answer the addressed problem.)

In this work, we propose...

Document Plan

This thesis is organized as follows: In the first chapter, we...

GG

(Here, you present the state of the art that situates the contribution of your project through the treated area. This part, which consists of one (01) or two (02) chapters maximum, **should not exceed 15 pages**. Each chapter should be structured as follows:)

Introduction

1.1 Project Context and Area

1.2 Related Works

1.3 Synthesis and Discussion

Conclusion

Contributions

(This part includes all the contributions proposed in your project. You describe the adopted approach and methodology and you explain how you carried out your project. The results obtained are also presented, analyzed and discussed. This part may consist of one (01) or two (02) chapters maximum, and **should not exceed 20 pages**. The general structure is as follows:)

Introduction

2.1 Theoretical Proposal

(This section may include the following: Project description, formal or semi-formal project design, system architecture, process used in project development, etc.)

2.2 Implementation et Experiments

Conclusion

General Conclusion

(Consisting of **2 pages maximum**, this part is reserved for conclusion and perspectives. In the conclusion, you provide a summary of your contributions, providing an answer to the addressed problem and specifying the context of project applicability. In addition, the limits and perspectives of the project are also discussed, by listing the works to be considered in the future.)

Synthesis

Perspectives

Template Items

This part contains the typographical elements of the template, to be used in writing your Master's thesis. A course on scientific writing using LaTeX is available at: `https://drive.google.com/file/d/1coBxyvq-XRw5Sr3GO-VDJhYsPSLOQpRD/`

This chapter aims to give you examples of the template. You must absolutely remove it during the final version of the thesis.

3.1 Title - Level 2

3.1.1 Title - Level 3

3.1.1.1 Title - Level 4

Title - Level 2 (Unnumbered)

Title - Level 3 (Unnumbered)

Title - Level 4 (Unnumbered)

3.2 Lists of Items

This is normal text. followed by a list of items:

- Item 1
- Item 2
  - Item A
  - Item B
    - Item I

- Item II
- ...

And here is an enumerated list of items:

1. Item 1
2. Item 2
   a) Item A
   b) Item B
      i. Item I
      ii. Item II
      iii. ...

3.3   Figures, Tables and Algorithms

You can define several types of floating elements: Figures, tables, and algorithms.

Figure 3.1: An example of figures

Table 3.1: An example of tables

Colonne 1	Colonne 2	Colonne 3
Ligne 1	Ligne 1	Ligne 1
Ligne 2	Ligne 2	Ligne 2
...	...	...
...	...	...
...	...	...

3.4   Cross-Referencing

By using labels, it is possible to reference different elements of the document. As examples, Chapter 3, Section 3.1, Figure 3.1, Table 3.1, Algorithm 3.1 and Definition 3.1.

Algorithm 3.1 An example of algorithms

Require: $i \in \mathbb{N}$
1: $i \leftarrow 10$
2: **if** $i \geq 5$ **then**
3:    $i \leftarrow i - 1$
4: **else**
5:    **if** $i \leq 3$ **then**
6:      $i \leftarrow i + 2$
7:    **end if**
8: **end if**

Definition 3.1 *(Title of the definition)*
An example of definitions, $E = mc^2$...

In addition to definitions, you can use theorems, proofs, remarks, notations, lemmas, or propositions.

3.5 Source Codes

You can also introduce source codes, like the following example which is written in Java language (The syntax highlighting can be customized in the file "`/macros.tex`"):

`/src/A.java`

```java
public class A {
    public String a1;
    package String a2;
    protected String a3;
    private String a4;

    public void op1() { ... }
    public void op2() { ... }
}
```

3.6 Bibliographic Citations

References are managed using the BibTeX tool. The sources are stored and organized in the file "`bibliography.bib`". To cite a source in the text, there are several possibilities:

- ▶ `\citet{bar73}` ⇒ Bardeen et al. [1973]
- ▶ `\citep{bar73}` ⇒ [Bardeen et al., 1973]
- ▶ `\citep[see][]{bar73}` ⇒ [see Bardeen et al., 1973]
- ▶ `\citet*{bar73}` ⇒ Bardeen, Carter, and Hawking [1973]

- ▶ `\citep*{bar73}` ⇒ [Bardeen, Carter, and Hawking, 1973]
- ▶ `\citealt{bar73}` ⇒ Bardeen et al. 1973
- ▶ `\citeauthor{bar73}` ⇒ Bardeen et al.
- ▶ `\citeauthor*{bar73}` ⇒ Bardeen, Carter, and Hawking
- ▶ `\citeyear{bar73}` ⇒ 1973
- ▶ `\citeyearpar{bar73}` ⇒ [1973]

Bibliography

James M Bardeen, Brandon Carter, and Stephen W Hawking. The four laws of black hole mechanics. *Communications in mathematical physics*, 31(2):161–170, 1973.

Acronyms

(You can list the acronyms used in the document, for example:)

NTIC New Technologies of Information and Communication

UML Unified Modeling Language