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Title of the dissertation, Project work or Internship Report

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Dissertation / Project / Internship Report submitted to obtain the MSc degree in Name of the Study Cycle, in the Area of Specialization of Name of the Area

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DECLARAÇÃO DE INTEGRIDADE

Eu, [Nome Completo do Aluno], aluno n.º [Número de Aluno] do Mestrado em [Nome do Mestrado] do Instituto Superior de Engenharia de Lisboa, declaro por minha honra que o trabalho apresentado na presente dissertação, intitulada ”[Título da Dissertação]”, é original e de minha autoria.

Todas as fontes de informação utilizadas, incluindo citações de textos, figuras, tabelas e código, foram devidamente identificadas e referenciadas de acordo com as normas académicas e de direito de autor aplicáveis.

Lisboa, _____ de _____ de 20____

_____

(Assinatura do Autor)

RESUMO

Título: [Título do Trabalho em Português]

Este é o resumo do trabalho em português. Deve conter até um máximo de 300 palavras, descrevendo sucintamente o contexto, o problema abordado, a metodologia desenvolvida, os principais resultados obtidos e as conclusões gerais do Trabalho Final de Mestrado.

Palavras-chave: Palavra-chave 1, Palavra-chave 2, Palavra-chave 3, Palavra-chave 4, Palavra-chave 5.

ABSTRACT

Title: [Title of Dissertation in English]

This is the abstract in English. It must contain up to 300 words describing the background, problem statement, proposed methodology, main evaluation results, and conclusions of the Master's Final Work.

Keywords: Keyword 1, Keyword 2, Keyword 3, Keyword 4, Keyword 5.

CONTENTS

LIST OF FIGURES

LIST OF TABLES

LISTINGS

ACRONYMS

API Application Programming Interface

HTML HyperText Markup Language

ISEL Instituto Superior de Engenharia de Lisboa

JVM Java Virtual Machine

TFM Trabalho Final de Mestrado

1. INTRODUCTION

This is the introduction chapter. Here you introduce the domain of the research, state the motivation, and detail the main goals of the dissertation. According to ISEL rules, the thesis body starts numbering with Arabic numerals from page 1. As mentioned by Knuth [1], formatting is essential for technical reading.

Important: To enhance readability when reviewing code changes in Git diffs, enforce a hard word wrap on all text files, ensuring lines do not exceed 82 characters. Extensions such as Rewrap for Visual Studio Code can automate this process. Additionally, write each sentence or statement on a new line and end it with two trailing spaces ( ) to guarantee that auxiliary tools (e.g. Markdown) preserve line breaks properly.

2. BACKGROUND AND RELATED WORK

This chapter covers the state of the art and background concepts relevant to the study.

2.1 State of the Art

Here we discuss previous approaches in literature [2].

2.2 Related Work

A comparison between existing systems and the proposed solution.

3. IMPLEMENTATION

This chapter provides full details about the implementation of the system.

Below are code examples written in HTML, Java, and Kotlin, each containing approximately 10 lines with syntax highlighting.

3.1 Code Examples

3.1.1 HTML Listing

Listing 3.1 presents a standard HTML structure for a web application interface.

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>ISEL Dissertation Portal</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <header class="main-header">
        <h1>Master Dissertation System</h1>
    </header>
</body>
</html>
```

Listing 3.1: Sample HTML structure for thesis dashboard.

3.1.2 Java Listing

Listing 3.2 illustrates a Java service class handling student data.

```java
package pt.ipl.isel.thesis;

import java.util.List;
import java.util.ArrayList;

public class StudentService {
    private final List<String> students = new ArrayList<>();

    public void addStudent(String name) {
        if (name != null && !name.isBlank()) {
            students.add(name);
        }
    }
}
```

Listing 3.2: Sample Java service implementation.

3.1.3 Kotlin Listing

Listing 3.3 demonstrates a Kotlin data model and repository interaction.

```kotlin
package pt.ipl.isel.thesis

data class Dissertation(
    val id: Long,
    val title: String,
    val isApproved: Boolean = false
)

class DissertationRepository {
    private val items = mutableListOf<Dissertation>()
    fun findById(id: Long): Dissertation? = items.find { it.id == id }
}
```

Listing 3.3: Sample Kotlin data class and repository.

4. EVALUATION

This chapter presents the experimental setup, performance evaluations, and discussion of results.

4.1 Experimental Setup

Details about hardware and test sets.

4.2 Results Analysis

Analysis of metrics obtained.

5. CONCLUSIONS AND FUTURE WORK

Summary of main contributions and ideas for future extensions.

BIBLIOGRAPHY

[1] D. E. Knuth, “The TEXbook,” 1984.

[2] E. Gamma, R. Helm, R. Johnson, and J. Vlissides, *Design Patterns: Elements of Reusable Object-Oriented Software*. Pearson Education, 1994.