Assignment 1 – Animal Scouter

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Web Semântica

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Section 1

## Introduction

The Semantic Web is an extension of the World Wide Web that allows data to be shared and reused across different applications, platforms, and systems. It is based on the principle of creating machine-readable data that can be easily understood and processed by computers. One of the key components of the Semantic Web is the use of linked data, which refers to a set of best practices for publishing and connecting structured data on the web.

In this report, we will discuss the conversion of a database from CSV (Comma Separated Variables) to N-Triples, a *Triplestore* database format, using a Python script. We will also explore the use of SPARQL, a query language used to retrieve and manipulate data stored in RDF formats. Additionally, we will showcase the features of a website that has been created to demonstrate the capabilities of the Semantic Web, including the ability to query and retrieve data using SPARQL.

The report will begin by describing the data and process of converting a database from CSV to N-Triples, and the advantages of using a *Triplestore* database. It will also be explained the basics of SPARQL and how it can be used to query and retrieve data from *Triplestore* databases.

Finally, the website that has been created to showcase the features of the Semantic Web will be discussed. The website will include a demonstration of how to use it, as well as examples of how the data can be visualized and analysed.

Overall, this report aims to provide an introduction to the Semantic Web, and to demonstrate the benefits of using linked data and *Triplestore* databases for managing and sharing structured data on the web.

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