**COMP 7003**

**Introduction to Information and Network Security**

*Assignment-02*

*Report*

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##### February 2nd, 2025

##### Course Reference Number (CRN): 91662

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# **Purpose**

This report aims to serve as a comprehensive resource for stakeholders, developers, and future project teams. It outlines the functional and non-functional requirements of the COMP7003-assign02 project, provides detailed descriptions of relevant project documentation—including the design document, test cases, and user guide—and offers valuable insights to inform future initiatives.

# **Requirements**

|  |  |
| --- | --- |
| **Task** | **Status** |
| Protocols: Must support Ethernet, IPv4, IPv6, ICMP, ICMPv6, TCP, UDP, and DNS. | Fully implemented |
| Hex Dump: Implement functionality to produce a hex dump of each packet’s raw data. | Fully implemented |
| Field Extraction: Accurately parse and display relevant fields (e.g., source/destination MAC and IP addresses, protocol fields, source/destination ports for TCP/UDP details). | Fully implemented |
| Output Format: Match the style and clarity of the provided screenshots. Maintain consistent and organized formatting. | Fully implemented |
| Code Quality: Write clean, commented code that follows best practices in Python programming. | Fully implemented |
| Testing: Collect and analyze multiple packets from each supported protocol to verify that your program works correctly. | Fully implemented |

# **Platforms**

The **main.py** and **packet\_parsers.py** has been tested on:

* Ubuntu 24.04.1 LTS

# **Language**

* Python 3

# **Documents**

* Design (Refer report folder, design.pdf)
* Testing (Refer report folder, testing.pdf)
* User Guide (Refer report folder, user-guide.pdf)