COMP 7003
Introduction to Information and Network Security

Assignment-02

Report

Anmol Mittal

A01397754

February 2nd, 2025

Course Reference Number (CRN): 91662

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)