**COMP 7005**

**Computer Networks & Protocols**

*Assignment-01*

*Report*

##### Anmol Mittal A01397754

##### January 26, 2025

##### Course Reference Number (CRN): 92522

[**Purpose** 3](#_Toc188772630)

[**Requirements** 3](#_Toc188772631)

[Client 3](#_Toc188772632)

[Server 3](#_Toc188772633)

[**Platforms** 3](#_Toc188772634)

[**Language** 3](#_Toc188772635)

[**Documents** 4](#_Toc188772636)

# **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 COMP7005-assign01 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**

## Client

|  |  |
| --- | --- |
| **Task** | **Status** |
| Accepts the name of a file as a command-line argument. | Fully implemented |
| Reads the contents of the file. | Fully implemented |
| Send the file's content to the server via a UNIX Domain Socket. | Fully implemented |
| Receives the encrypted file from the server and prints it to the terminal. | Fully implemented |

## Server

|  |  |
| --- | --- |
| **Task** | **Status** |
| Accepts a shift value for the Caesar cipher as a command-line argument. | Fully implemented |
| Listens for client connections via a UNIX Domain Socket. | Fully implemented |
| Receives the file content from the client. | Fully implemented |
| Encrypts the file content using the Caesar cipher with the specified shift. | Fully implemented |
| Sends the encrypted content back to the client. | Fully implemented |

# **Platforms**

The **client.c** and **server.c** has been tested on:

* Ubuntu 24.04.1 LTS

# **Language**

* ISO C23
* Compiles with gcc (13.3.0) and clang (18.1.3)

# **Documents**

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