**COMP 7005**

**Computer Networks & Protocols**

*Assignment-02*

*Report*

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[**Purpose** 3](#_Toc189934092)

[**Requirements** 3](#_Toc189934093)

[**Platforms** 3](#_Toc189934094)

[**Language** 4](#_Toc189934095)

[**Compilers** 4](#_Toc189934096)

[**Documents** 4](#_Toc189934097)

# **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-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**

|  |  |
| --- | --- |
| **Client** | |
| **Task** | **Status** |
| Accepts the following inputs as command-line arguments:   * The IP address and port number of the server. * The name of the file to send to the server. * The keyword for the Vigenère cipher. | Fully implemented |
| Read the contents of the specified file. | Fully implemented |
| Connect to the server via a network socket using the given IP address and port number. | Fully implemented |
| Send the keyword and the file's content to the server. | Fully implemented |
| Receive the encrypted file content from the server and print it to the terminal. | Fully implemented |
| **Server** | |
| **Task** | **Status** |
| Accepts the following inputs as command-line arguments:   * The IP address and port number to bind the server. | Fully implemented |
| Listen to client connections on the specified IP and port using a network socket. | Fully implemented |
| Receive the keyword and file content from the client. | Fully implemented |
| Encrypt the file content using the Vigenère cipher with the received keyword. | Fully implemented |
| Send 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

# **Compilers**

* gcc (13.3.0)
* 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)