**Requirements Document**

**Project Title:** Cross-Platform Service and Client

**Overview:**

The project aims to develop a cross-platform service that can be run on both Windows and Linux platforms, with corresponding clients written in Python for Windows and Ubuntu. The clients will connect to the service, receive the service, and display connection and disconnection times, and duration.

**Functional Requirements:**

1. Service:

- Provide a cross-platform service that can run on Windows and Linux.

- Implement the service logic using POSIX standards for cross-platform compilation.

2. Clients:

- Develop two clients, one for Windows and one for Ubuntu, using Python.

- Clients will connect to the corresponding service (Windows or Linux).

3. Interface:

- Provide a simple interface with three buttons: Connect to Windows, Connect to Linux, and Disconnect.

- Display connection time, disconnection time, and duration of the client's connection to the server.

**Non-Functional Requirements:**

1. Performance:

- Service response time < 5 seconds.

2. Security:

- Use secure communication protocols (TLS) for client-server communication.

3. Usability:

- User-friendly interface

- Clear and concise error messages.

**User Requirements:**

1. As a Windows user, I want to connect to the Windows service.

2. As an Ubuntu user, I want to connect to the Linux service.

3. As a user, I want to disconnect from the service.

**System Requirements:**

1. Hardware:

- Windows: Intel Core i5, 8GB RAM.

- Ubuntu: Intel Core i3, 4GB RAM.

2. Software:

- Windows: Windows 10.

- Ubuntu: Ubuntu 20.04.

- Python 3.x.

**Assumptions and Dependencies:**

1. Assumes a stable network connection.

2. Depends on the availability of the service on the respective platforms.

**Glossary:**

1. Service: A program that provides a specific functionality.

2. Client: A program that connects to the service.

3. Cross-platform: A program that can run on multiple platforms.