

## Sri Sivasubramaniya Nadar College of Engineering

Course Code	UIT2702	Course Name	Cloud and Distributed Computing
Regulation	2021	Academic Year	<b>2025-2026</b>
Semester		VII	
Department Offering the Course		Information Technology	
Exercise: 01		Inter-Process Communication in Distributed Computing	

### **Exercise 1: Inter-Process Communication in Distributed Computing**

#### **AIM:**

To implement and understand inter-process communication using sockets in a distributed client-server setup.

#### **PROCEDURE:**

##### **Task 1 - Setup Basic Client-Server Communication:**

- Create a simple socket connection where the client sends a message and server responds.
- On server side, bind to a host and port, listen for client connections, and accept messages.
- Implement message handling where the server parses and sums numbers.

##### **Task 2 - Enhanced Communication with Object Serialization:**

- Define a custom data object (DataObject) with attributes (name and values) and enable object-based data transfer.
- Serialize and deserialize objects using Python's pickle module.
- Send a DataObject from client to server and compute the sum of values on the server.
- Send a response from the server back to the client, indicating the sum of values.