Assignment 1: RMI Calculator

This assignment involves building a basic calculator where the user interacts with a "Client" program to perform calculations on a separate "Server" program. The Client sends the numbers and the operation to the Server, and the Server does the math (add, subtract, multiply, divide, square, square root) and sends the result back to the Client. RMI (Remote Method Invocation) is the technology that makes this communication between the Client and Server possible.

Assignment 2: CORBA String Reversal

This assignment focuses on creating a program that reverses a string. Like the first one, it has a Client and a Server. The Client sends a string to the Server, the Server reverses it, and sends the reversed string back to the Client. CORBA is the technology used here, which is a standard for distributed systems to communicate.

Assignment 3: MPI Summation

This assignment is about calculating the sum of 20 numbers using multiple processors working together. The main program divides the numbers among 4 processors. Each processor calculates a partial sum, and then the main program combines those partial sums to get the final answer. MPI (Message Passing Interface) is the tool used to coordinate the communication between these processors.

Assignment 4: Clock Synchronization

This assignment deals with keeping time consistent across multiple computers in a network. There's a Server that acts as the "master" clock, and Clients that adjust their clocks to match the Server's time. The Server calculates an average time and sends adjustments to the Clients.

Assignment 5: Token Ring Simulation

This assignment simulates how data is transmitted in a Token Ring network. In a Token Ring, a "token" (a special signal) is passed from one device to the next, and only the device with the token can send data. The program simulates this token passing and data transmission.

Assignment 6: Bully and Ring Algorithms

This assignment implements two different algorithms used for electing a coordinator in a distributed system.

- **Bully Algorithm:** The process with the highest ID becomes the coordinator. If the current coordinator fails, the process with the next-highest ID initiates an election and becomes the new coordinator.
- **Ring Algorithm:** Processes are arranged in a ring, and an election is initiated by sending an election message. The process with the highest ID is elected as the coordinator.

- Query successful

- **Assignment 7: Calculator Web Service**

As shown in "Ass 4 to 7_organized.pdf", this assignment creates a simple calculator web service using Java.

- **Web Service:** A web service allows applications to communicate over a network.
- **Calculator:** The service performs basic arithmetic operations (addition, subtraction, multiplication, division).
- **Implementation:** The code includes Java classes for the web service and a servlet to handle requests, along with an HTML page for user interaction.