Assignment 1: Implement multi-threaded client/server Process communication using RMI.
What is RMI ?
What is the basic principle of RMI architecture ?
What are the layers of RMI Architecture ?
What is the role of Remote Interface in RMI
What is the role of the java.rmi.Naming Class ?
What is meant by binding in RMI ?
What are the steps involved to make work a RMI program ?
What is the role of stub in RMI ?
Explain Marshalling and de-marshalling.
Explain Serialization and Deserialization.
What is the method that is used by the RMI client to connect to remote RMI servers?
Define the following terms **Remote object , Server object , rmiregistry , rmic**
Why are stubs used in RMI?
What is the function or role of skeleton in RMI?
How does the communication with remote objects occur in RMI?
What is Remote Object & Reference
What is Remote Interface
What is binding in Client-Server
Assignment 2: Develop any distributed application using CORBA to demonstrate object brokering. (Calculator or String operations).
What is CORBA?
Where to use CORBA?
What are the advantages of using CORBA?
What is ORB?
Explain the architecture of CORBA.
How java supports CORBA.
What is idlj?
How to create CORBA objects using java IDL?

What is specification of IDL?
What is Massage Broker?
What is interface?
What is name binding?
Define name service.
Explain ORBD
Assignment 3: Develop a distributed system, to find sum of N elements in an array by distributing N/n elements to n number of processors MPI or OpenMP. Demonstrate by displaying the intermediate sums calculated at different processors.
What is MPI?
Where to use MPI?
What are the advantages of using MPI?
What is MPJ Express?
What is parallel programming and how MPI is used in parallel programming application?
What is SPMD?
What do mean by Multiprocessor and multicomputer system
What is Unicast & multicast
Explain steps in implementing the MPI program in multi-core environment
How to compile and run MPI program
Enlist different features of MPI
Assignment 4 : Implement Berkeley algorithm for clock synchronization.
What is a logical clock?
What is global clock
Which algorithm is used for clock synchronization?
How does the Berkeley algorithm achieve fault tolerant average and give better synchronization of time?
What is the purpose of clock synchronization in distributed system?
Explain clock skew or drift
Explain Any two physical clock synchronization
How clock synchronization is achieved through Berkeley algorithm?
What is the purpose of clock synchronization in distributed system?

Assignment 5 : Implement token ring based mutual exclusion algorithm.
What is mutual exclusion?
What are the requirements of mutual exclusion?
How mutual exclusion algorithm can be implemented?
Explain token and non-token based algorithm
What are the benefits of token ring algorithm?
What are the different reasons, due to which token may lost?
What will happen if token lost?
Assignment 6 : Implement Bully and Ring algorithm for leader election
What is Ring Election algorithm
What is Bully Election algorithm
Explain with example the concept of ring and bully algorithm.
What are the different types of distributed algorithm for leader election?
What is the Bully algorithm for electing a leader?
What is the algorithm for leader election?
Which algorithm is best bully or ring?
What is the difference between ring and bully election algorithm?
Assignment 7 : Create a simple web service and write any distributed application to consume
What is web service?
Enlist few examples of web services.
How to consume web services?
Enlist types of web services.
What is SOAP?
What is REST?
Explain web service architecture in general.
Explain is SOAP web service architecture
Explain is REST web service architecture
Differentiate between SAOP and REST
What is the java API used for SOAP
What is the java API used for REST
How to compile and RUN the web service application program

Explain step by step implementation of web service implementation
What is tradition web based system?
What is web server?
How fault tolerance is done in web based system?