Sardar Vallabhbhai National Institute of Technology, Surat

Course - Distributed Computing
Course Code - CO601
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MidSem

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1. (a) Why distribution is required? Clearly indicate your answer with set of reasons. Also enlist the problems faced because of distribution.

   (b) Differentiate between preemptive and non-preemptive precess migration. Which one is mostly possible in receiver initiated scheduling algorithm?

   (c) It is considered that all three approached of location policy of sender-initiated algorithms cause system instability at high system loads. Present you reasoning with valid statement.

2. (a) Present a comparison among *distributed OS, Network OS and Middleware-based OS*. Use the following parameters: Degree of Transparency, Same OS on all nodes, Number of copies of OS, Basis for communication, Resource Management, Scalability, and Openness.

   (b) What do you mean by Secure multi-party Computation(SMC)? Present a scenario for secure multi-party computation to calculate average salary of employees of a company. Develop a protocol which should not reveal the individual's private information to any other employee during computation. Let us assume that the SMC for above application is restricted to four employees.

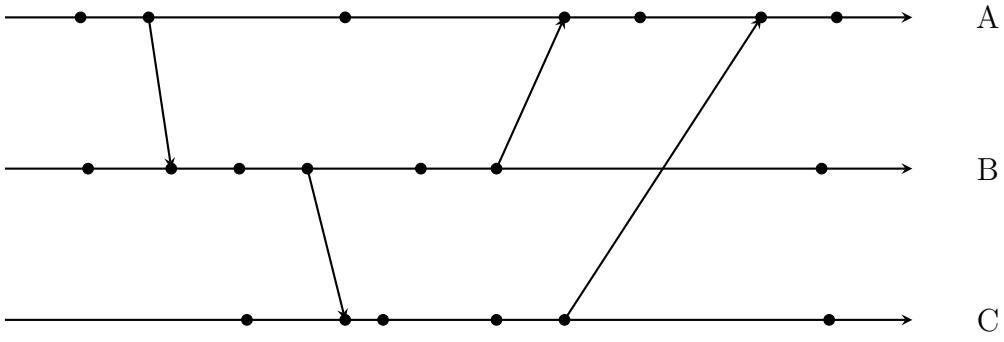
3. (a) Differentiate between RPC and RMI.

   (b) Explain following message communications with example: Persistent Synchronous, Transient Synchronous(delivery based).

   (c) Define the following terms: hit rate, latency, clock skew, clock drift

   (d) Explain Unix file sharing semantic with example.

   (e) Define "has happened before relation(<)". Write down the Lamport's clock and vector clock value at each event in the following diagram.



Answers