

ASSIGNMENT - 2 - Distributed Snapshots

CS16BTECH11017

HARSHIT PATEL

CHANDY-LAMPORT:

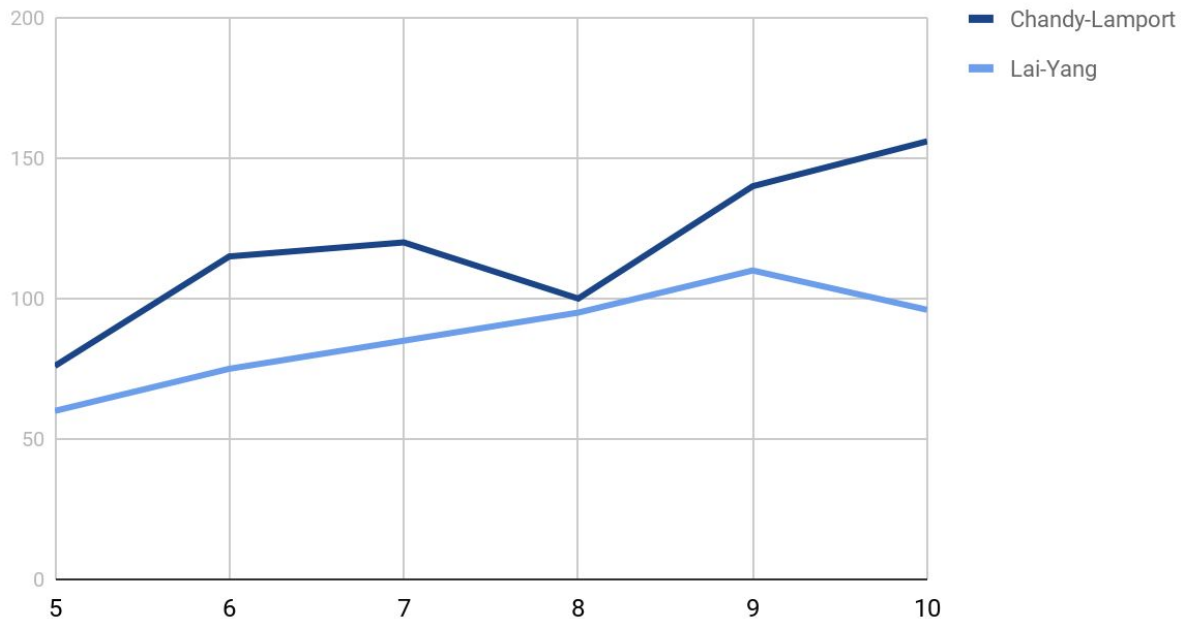
This algorithm runs on FIFO channels. Here markers are passed to differentiate between the messages sent before recording the state to the messages passed after recording the state. The coordinator process sends the marker messages to its neighbours. On receiving the marker the process executes marker receiving rule which internally calls the marker sending rule.

Lai-Yung

This algorithm runs on non-FIFO channels. Here the marker messages and the normal messages are squeezed into one. Each messages have its own colour which shows that whether that message was sent before the local state was recorded or after. Initially all the process are white and when a process records its local state it turns red. White process send white messages while red process send red messages. The white messages signifies that that message was sent before taking the snapshot while red messages shows that the message was sent after taking the snapshot. The process on taking a snapshot sends the history of the snapshot to the coordinator process which then defines the channel states.

Graph

Points scored



Here we can see that number of control messages sent by chandy-lamport is more than lai yung because here we are considering the control messages only as chandy-lamport sends marker messages also the number of control messages sent increases in chandy-lamport.

Anomaly : we can see that the messages decreases as we increase the number of process on reason can be as the number of process increases and the amount to be reached is same the number of required snapshot might decrease which may lead to decrease in control message.

