Centralized Deadlock Detection

2. The Ho-Ramamoorthy Algorithms

There are 2 algo in this

A) 2 phase   B) One phase

A) Two phase Algorithm

- every site maintains a status table that contains the status of all the processes initiated at that site.

- Status includes = all resources locked & all resources being waited upon.

- A designated site requests the status table from all sites, constructs a WFG from the information received, searches it for cycles.

- If no cycle, system is free from deadlocks. otherwise, designated site again requests stat tables from all the sites & again construct a WFG using only those transactions whi are common to both reports.

- If same cycle detected, it is deadlocked.

Limitation - It may indeed report false deadlock.

B) One phase Algorithm

- Only one status report from each site.
- Each site maintains 2 status tables

Resource Status Table	Process Status Table
Keeps track of the transactions that have locked by or waited for by all the transactions at that site.	keeps track of the resources locked by or waited for by all the transactions at that site.

- A designated site requests both the tables from every site, constructs WFG using only those transactions for which the entry in the resource table matches with process table. & searches for cycles.

- If no cycle so no deadlock.

* It does not detect false deadlock because it eliminates the inconsistency in state info by using only the information that is common to both tables.

* It is faster & requires fewer messages, more storage as have to store 2 tables.