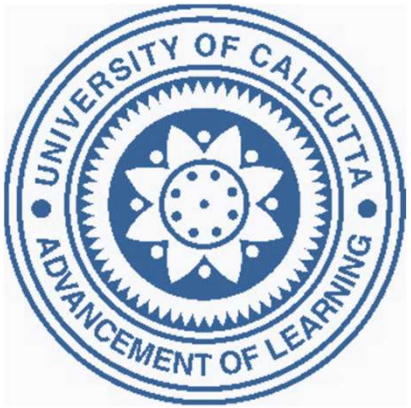
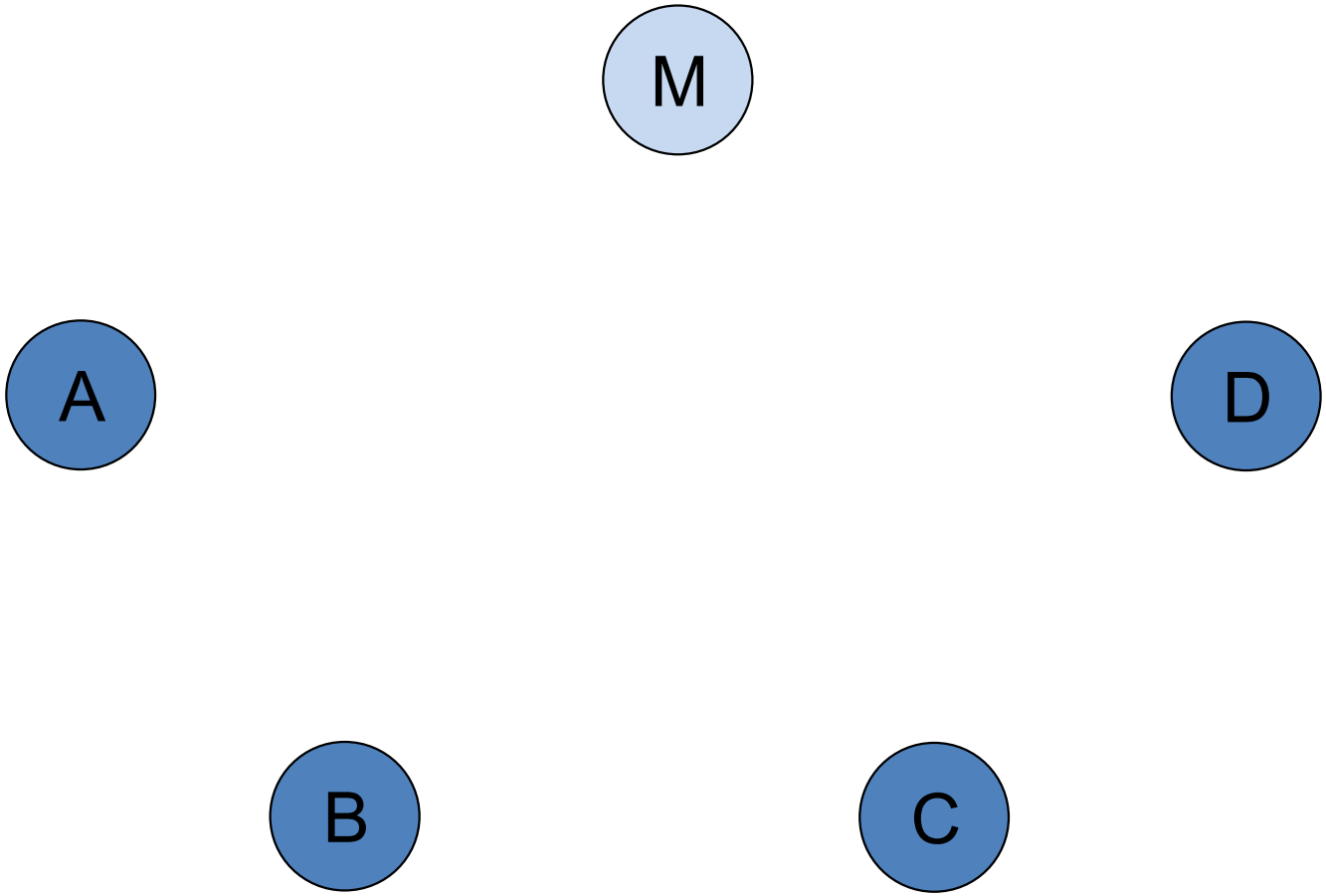
Ricart-Agrawala's Symmetric Algorithm

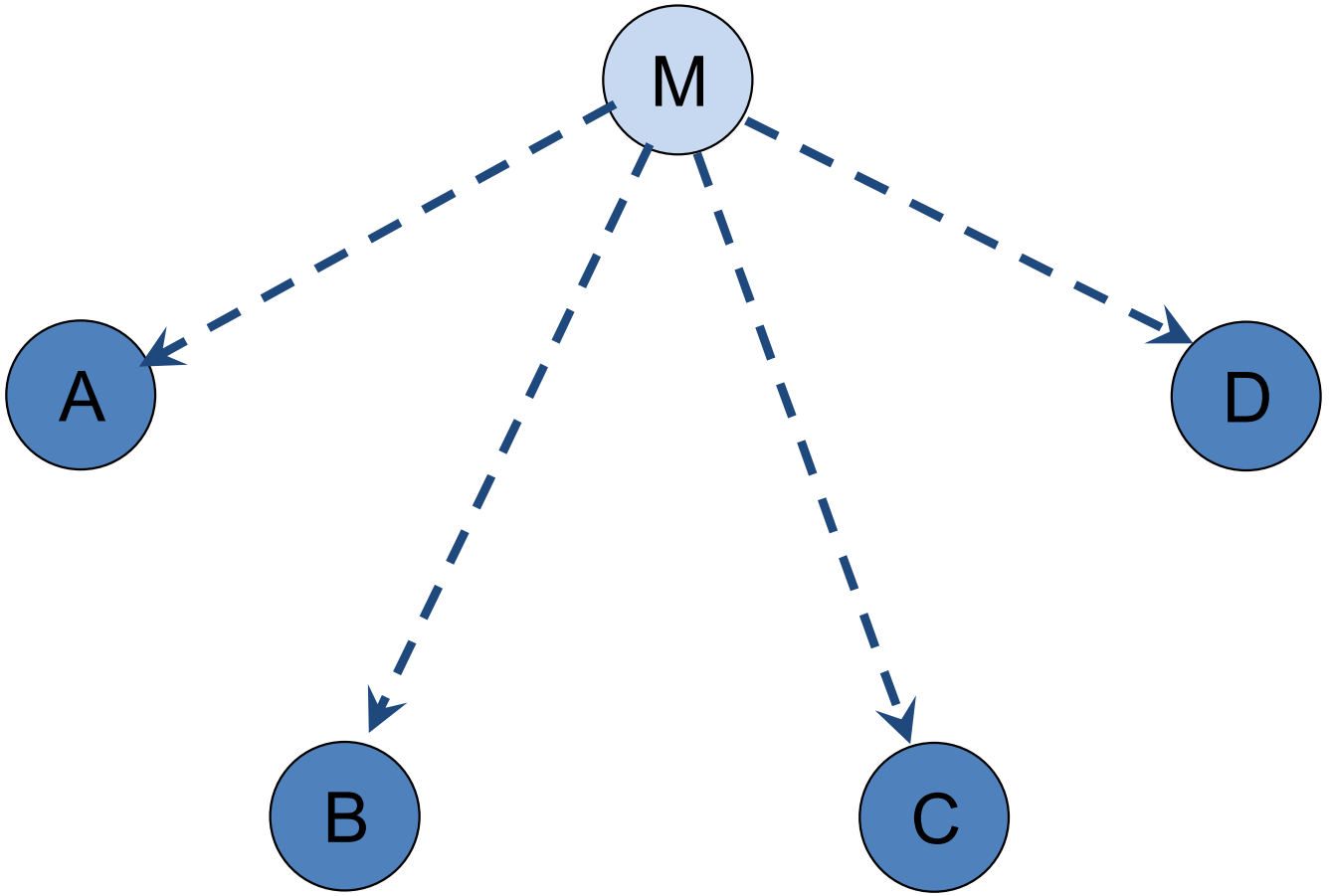
Assignment 02



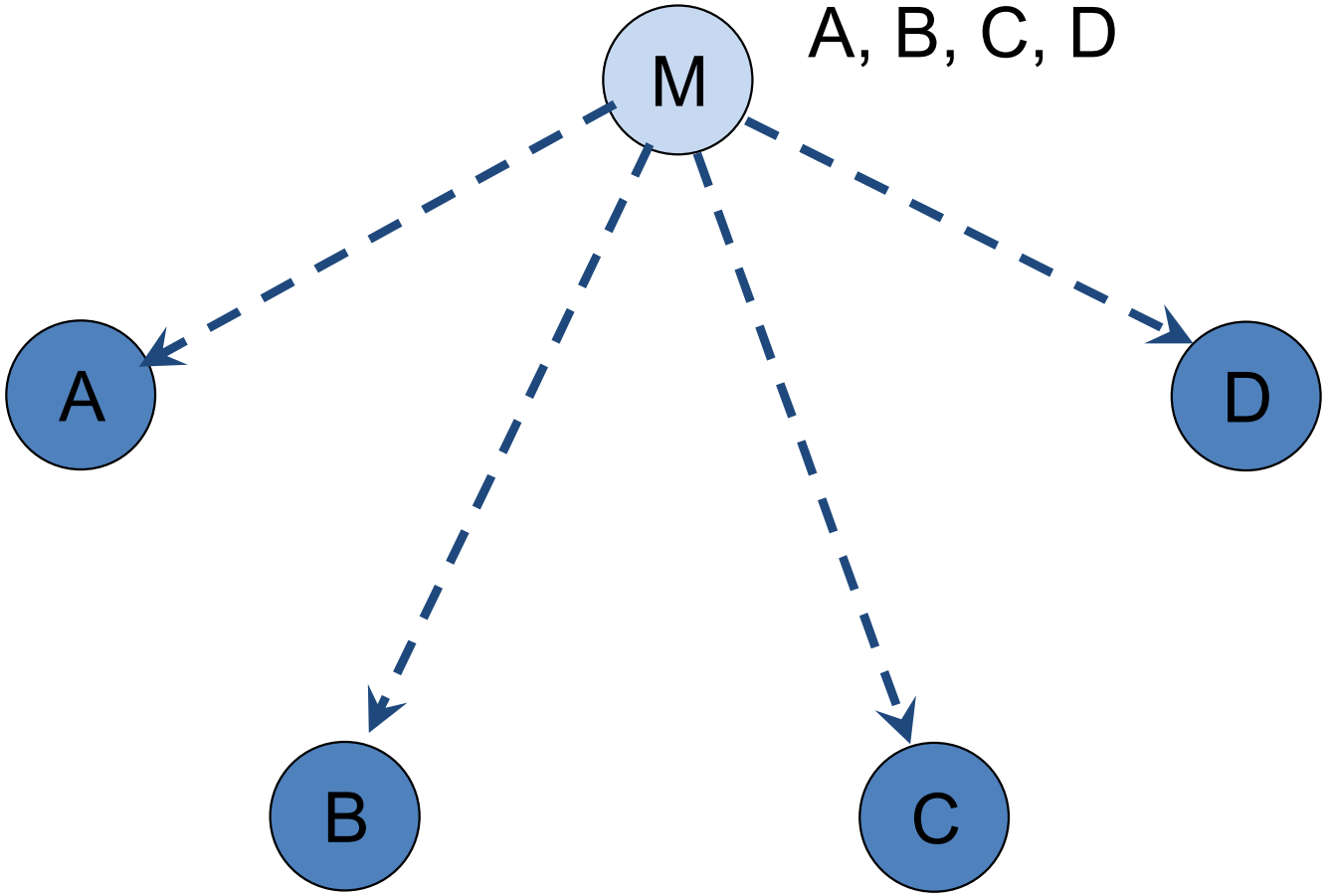
Ricart-Agrawala DME algorithm



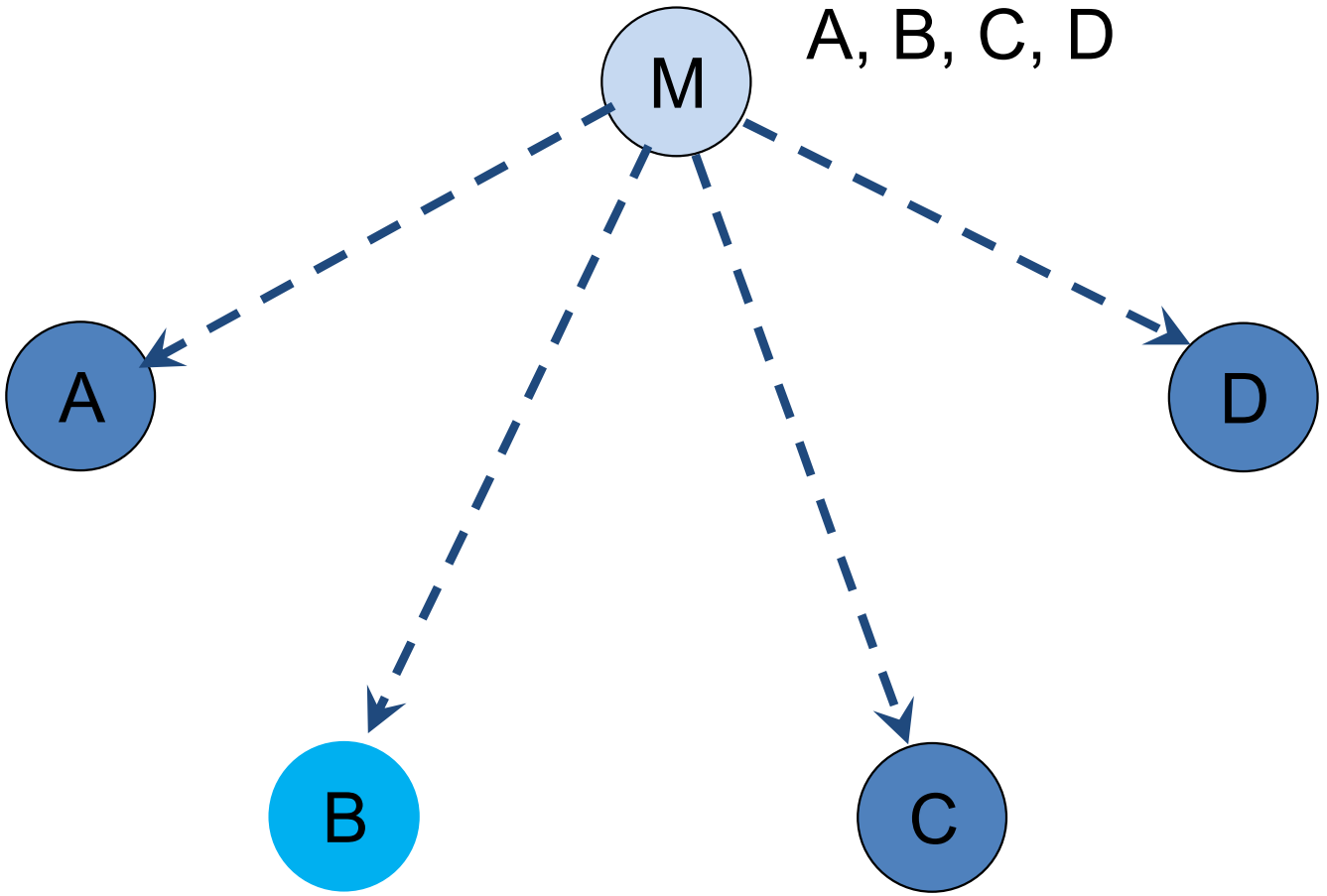
Ricart-Agrawala DME algorithm



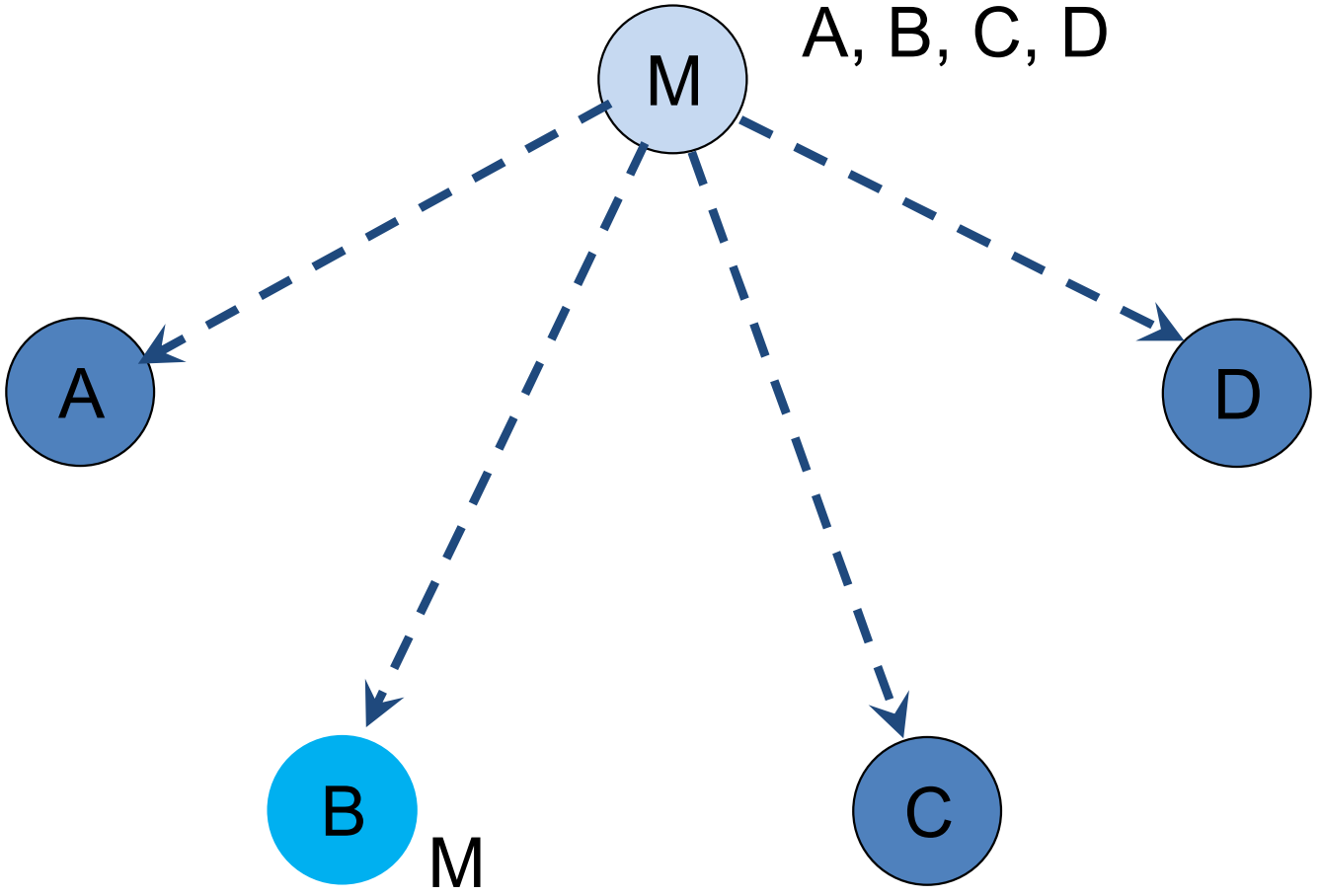
Ricart-Agrawala DME algorithm



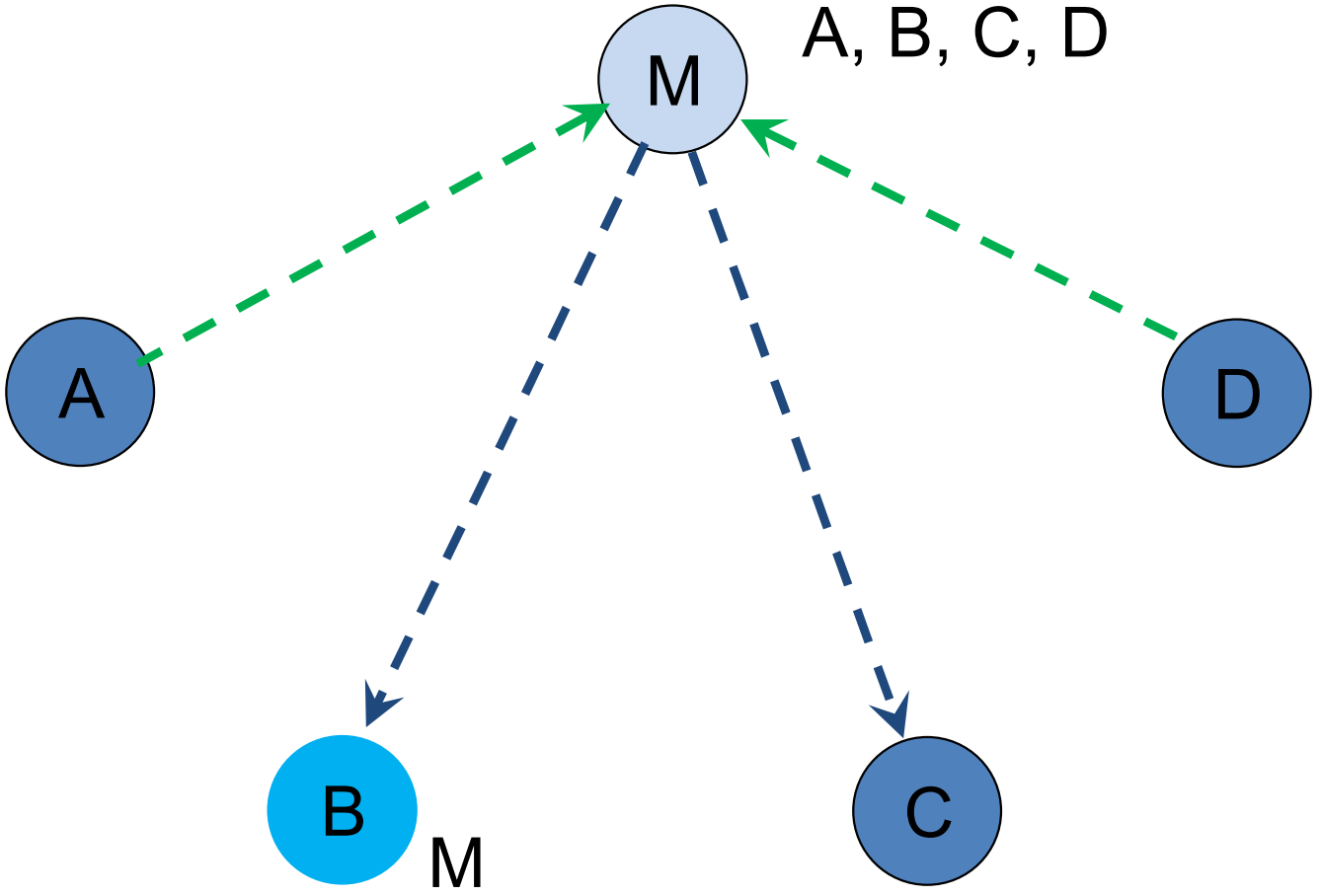
Ricart-Agrawala DME algorithm



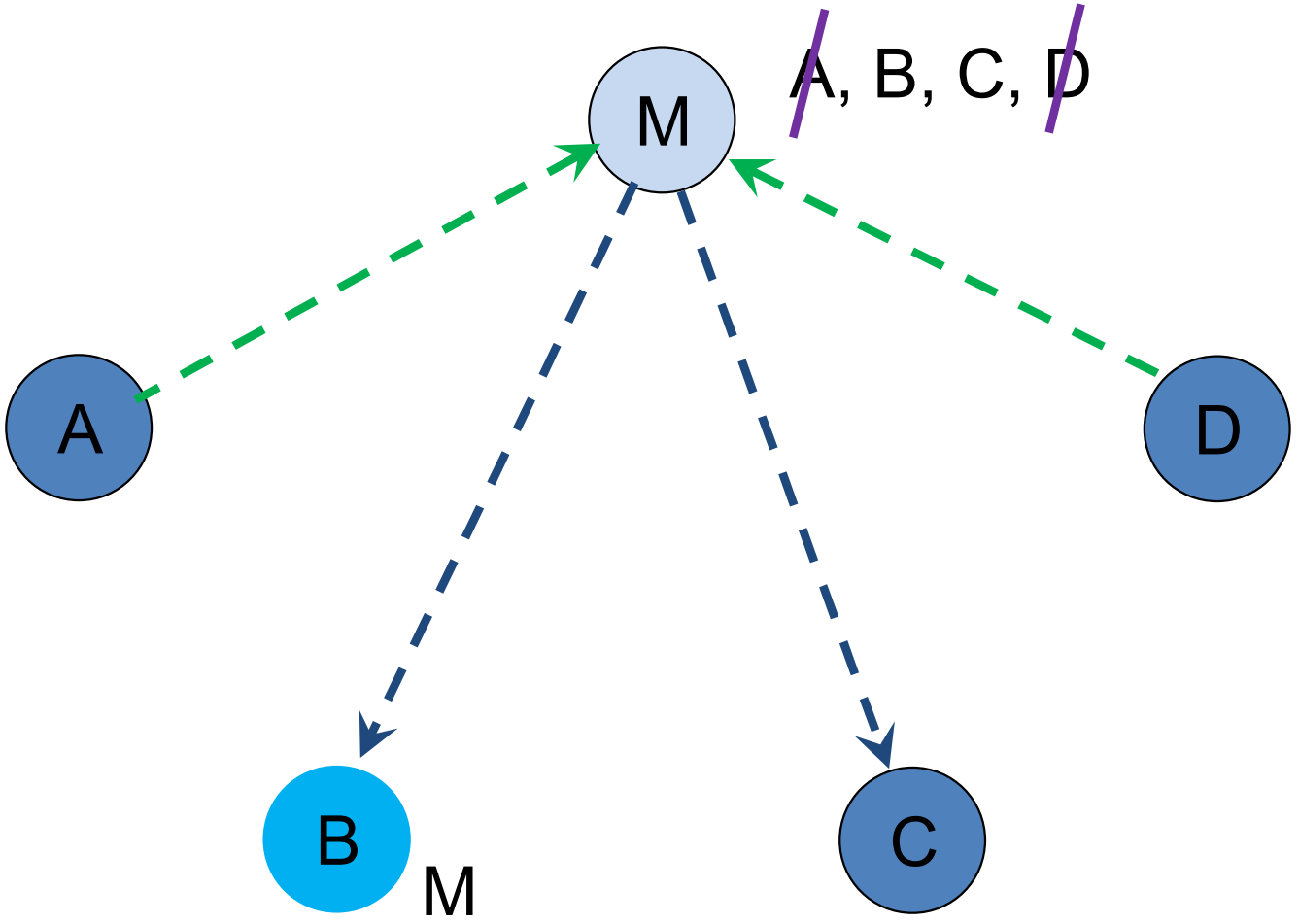
Ricart-Agrawala DME algorithm



Ricart-Agrawala DME algorithm



Ricart-Agrawala DME algorithm



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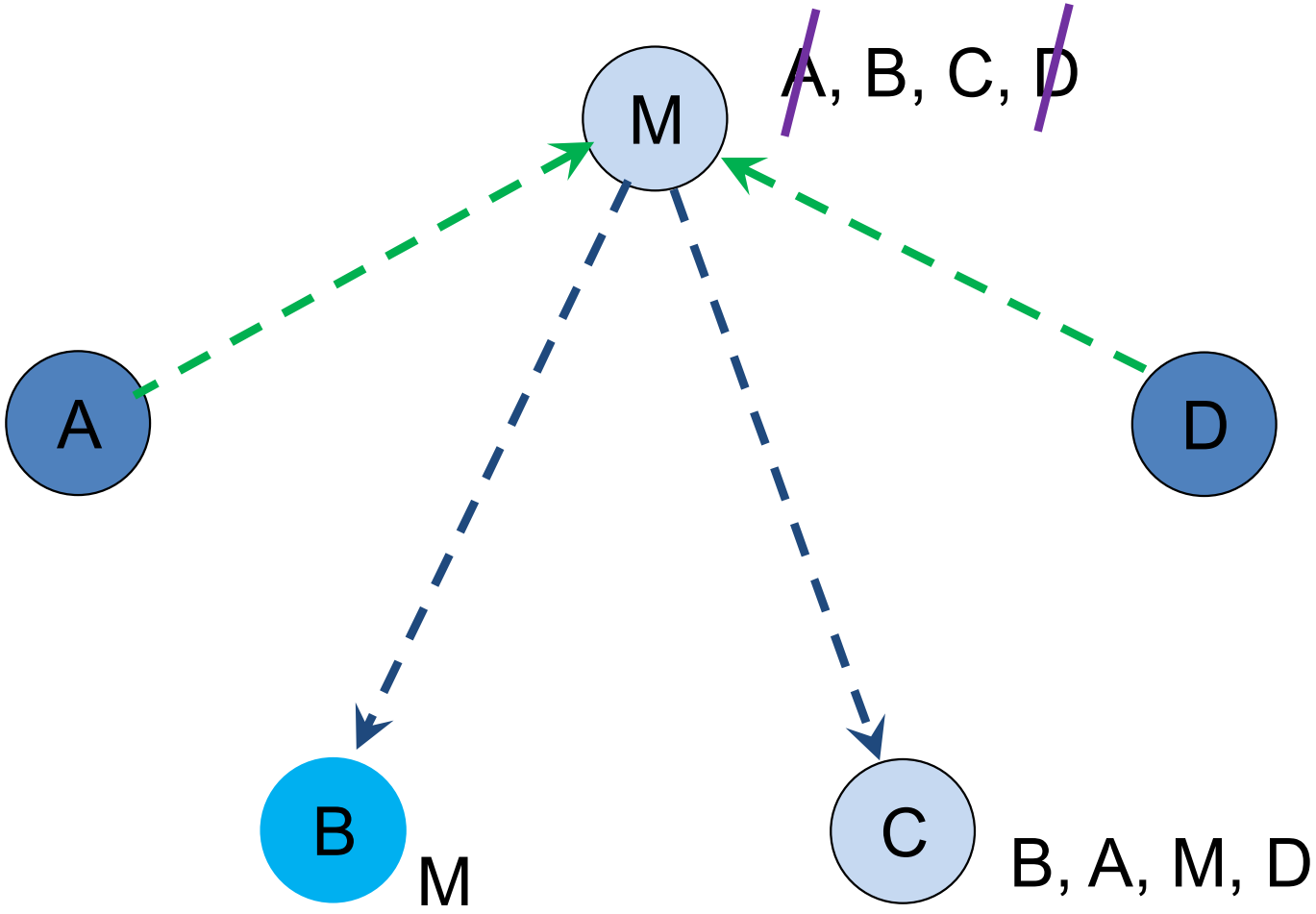
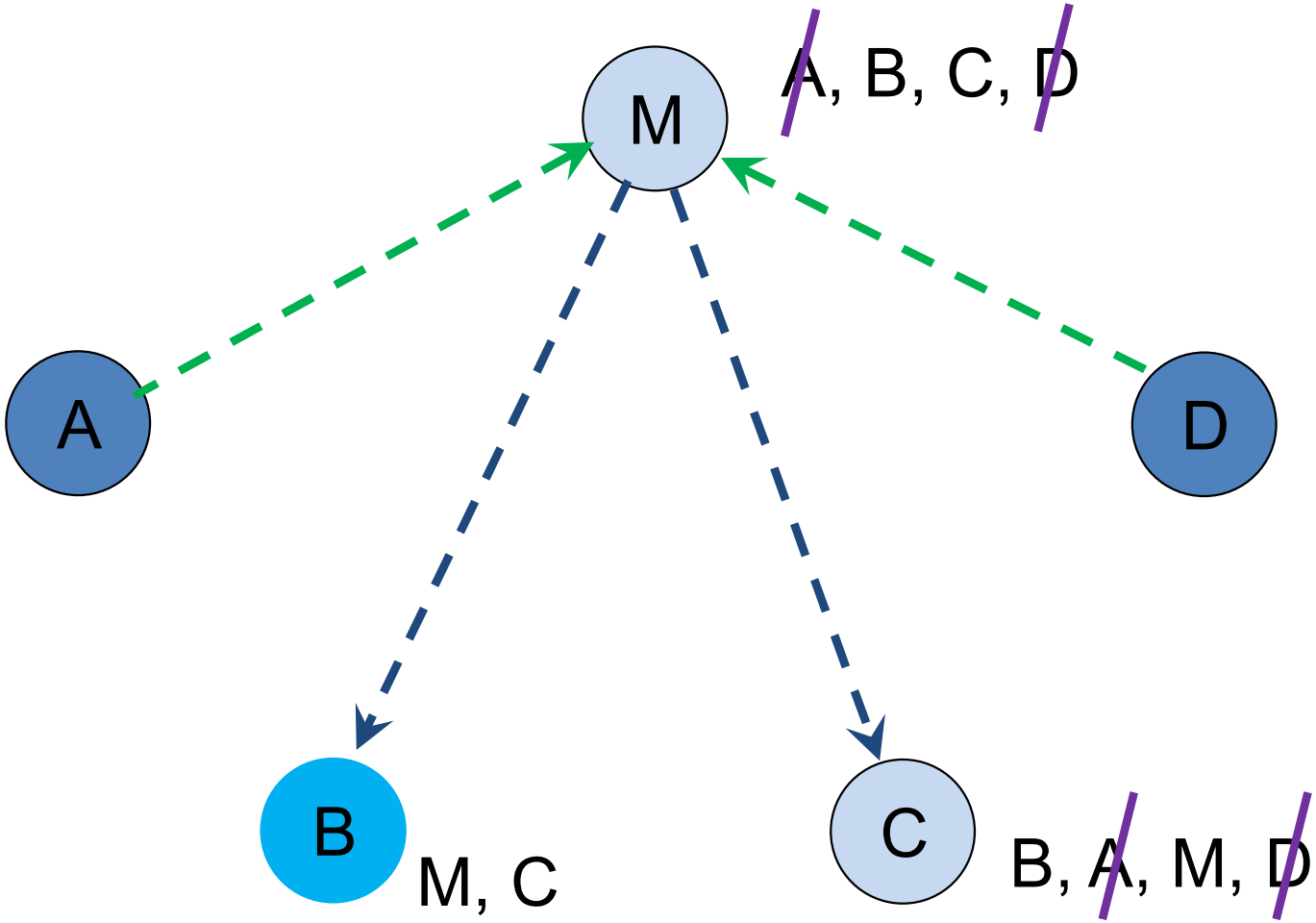


Ricart-Agrawala DME algorithm



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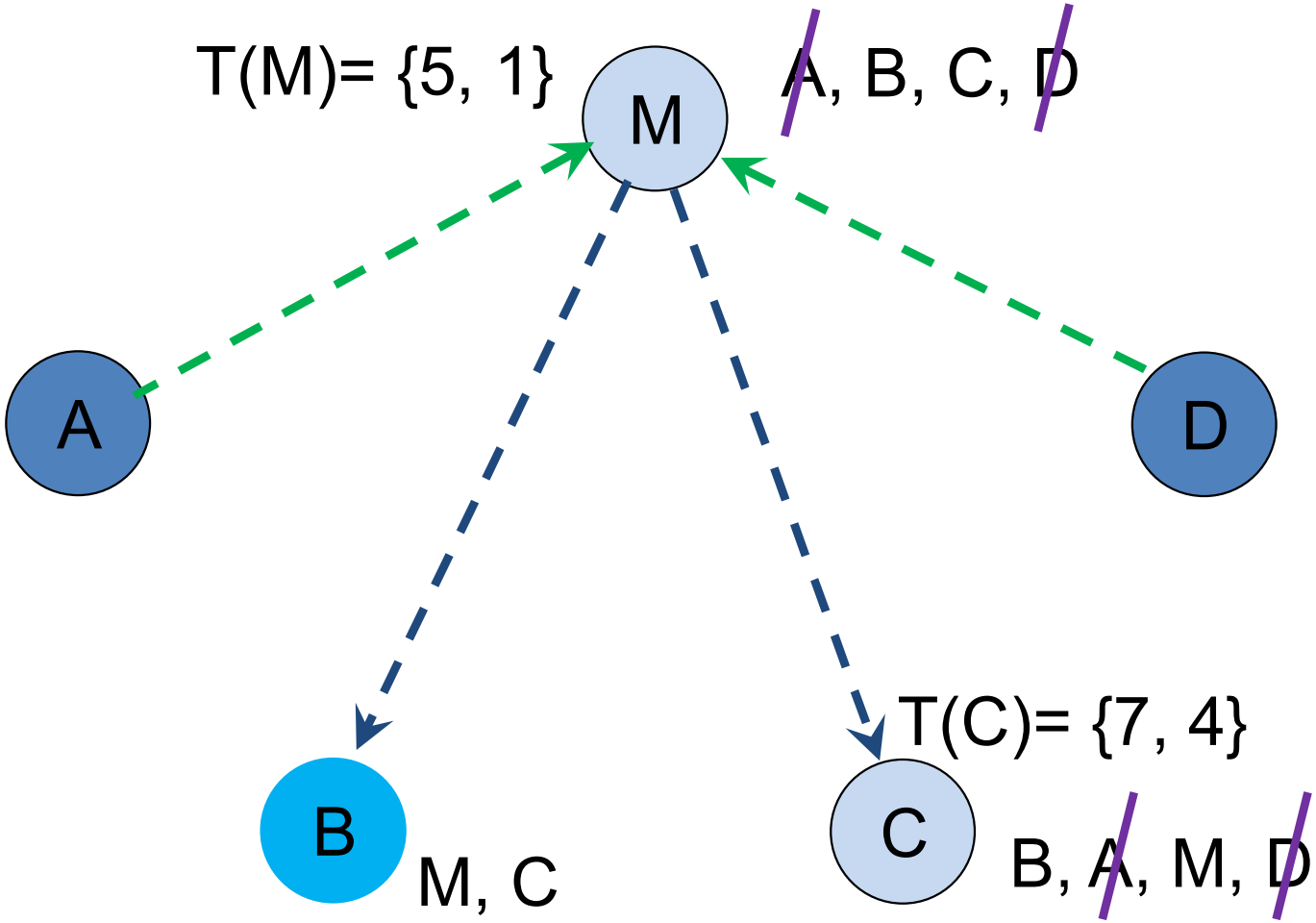
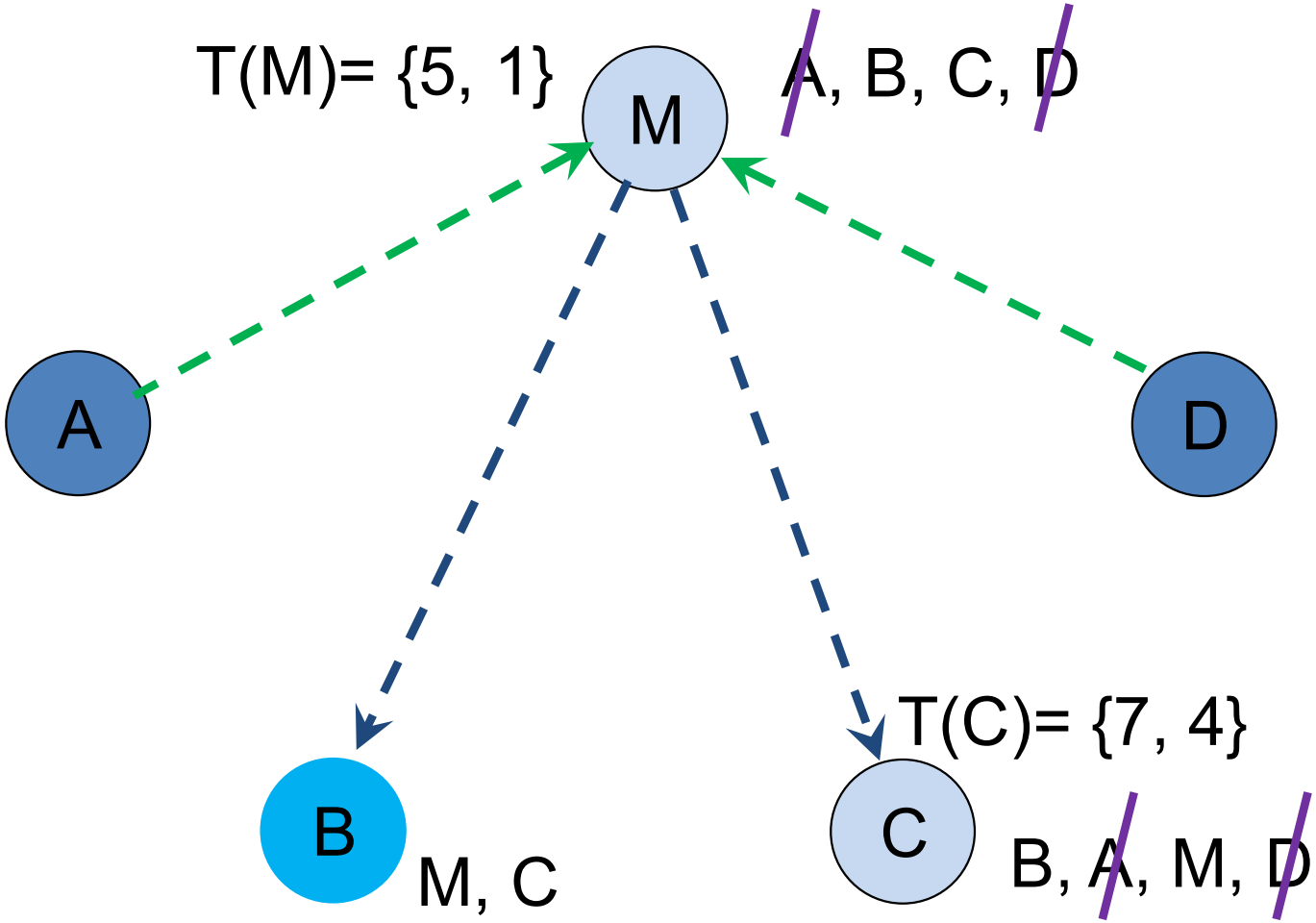


Ricart-Agrawala DME algorithm



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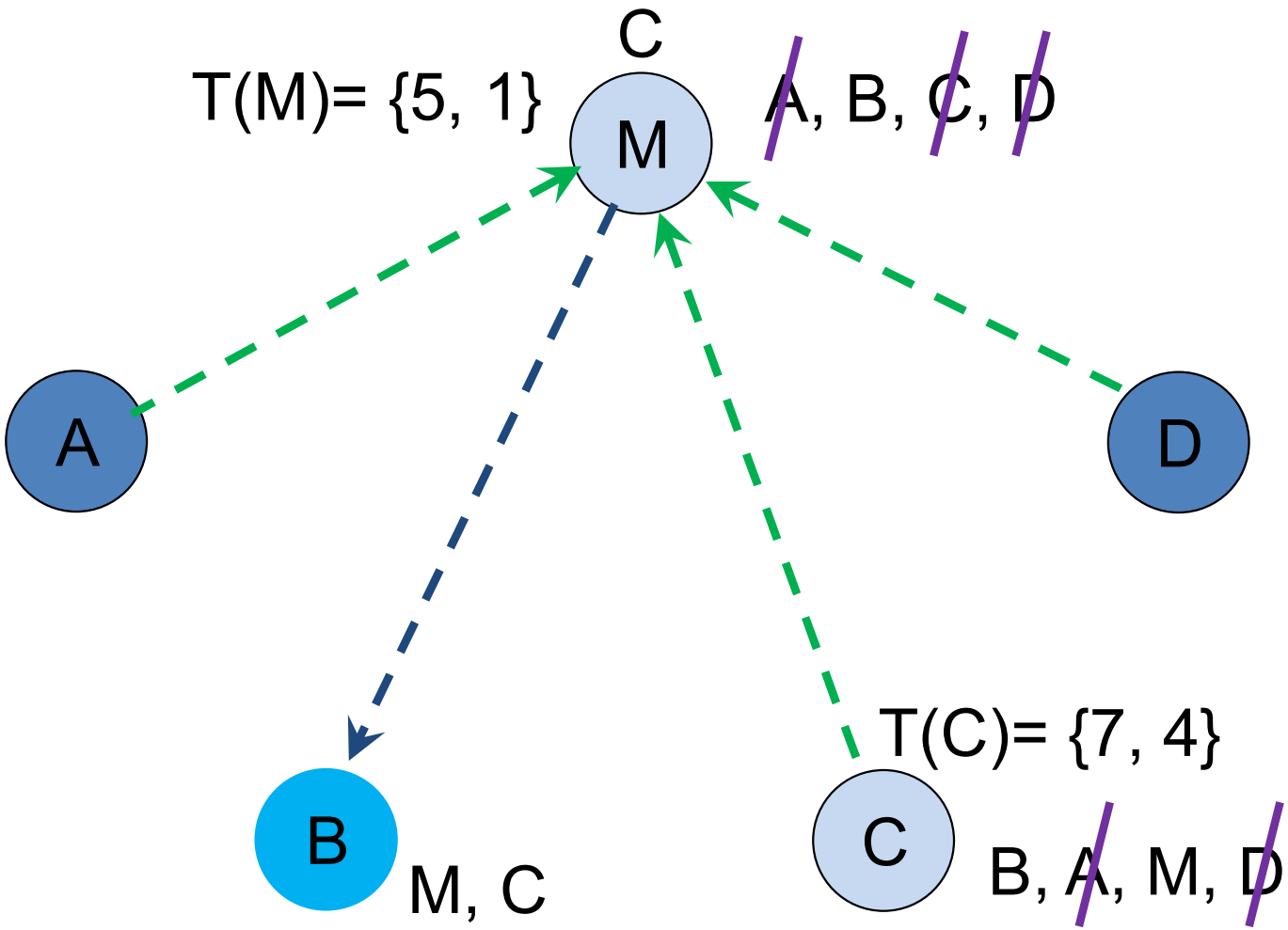

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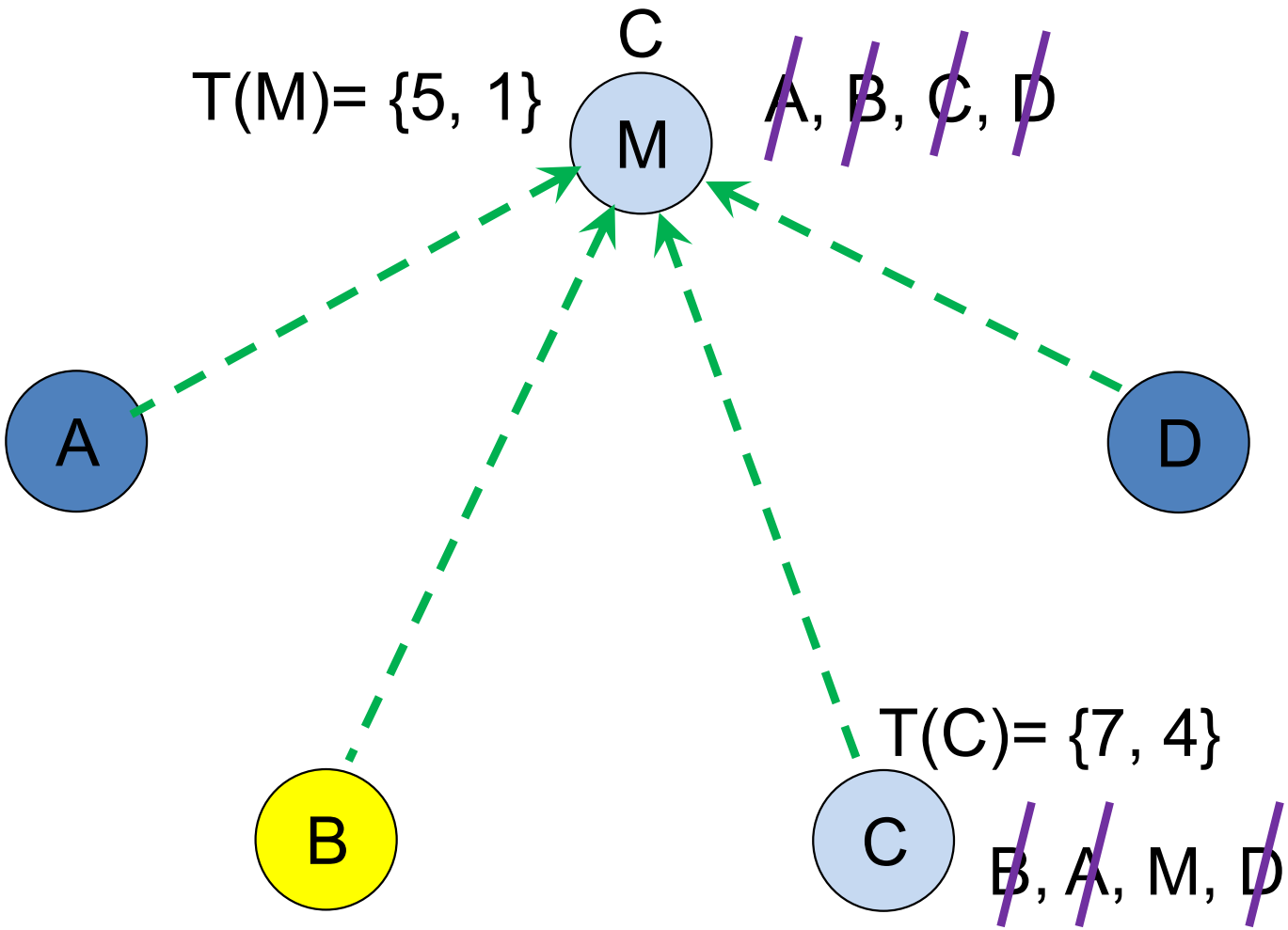

Task 2

- Write a program that ensures mutual exclusion using Ricart-Agrawala algorithm for multiple CS requests in a distributed system with at least 4 to 6 different processes in as many sites.

Hints

- To start with, consider a network with N nodes and say, M requests. Assign time stamp for each request
- Each requesting node, say C, stores a list for other N-1 nodes
- Initially, this list will have status 0 for each entry as none of the requested nodes have sent Go-Ahead response

Hints

- Change the status against a node A in the list of C from 0 to 1, when Go-Ahead comes from node A to node C.
- Node C enters CS when all N-1 entries in its list have status 1 - SUCCESS
- Two candidate nodes C1 and C2 compare request time stamps - one of them only sends Go-Ahead

Hints

- A node that cannot send Go-Ahead immediately saves id of requesting node in a second local list
- Run till all M requests get SUCCESS
- Print status of lists after every time after a node is allowed to enter its CS (SUCCESS)