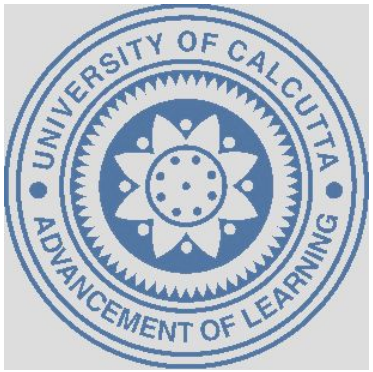
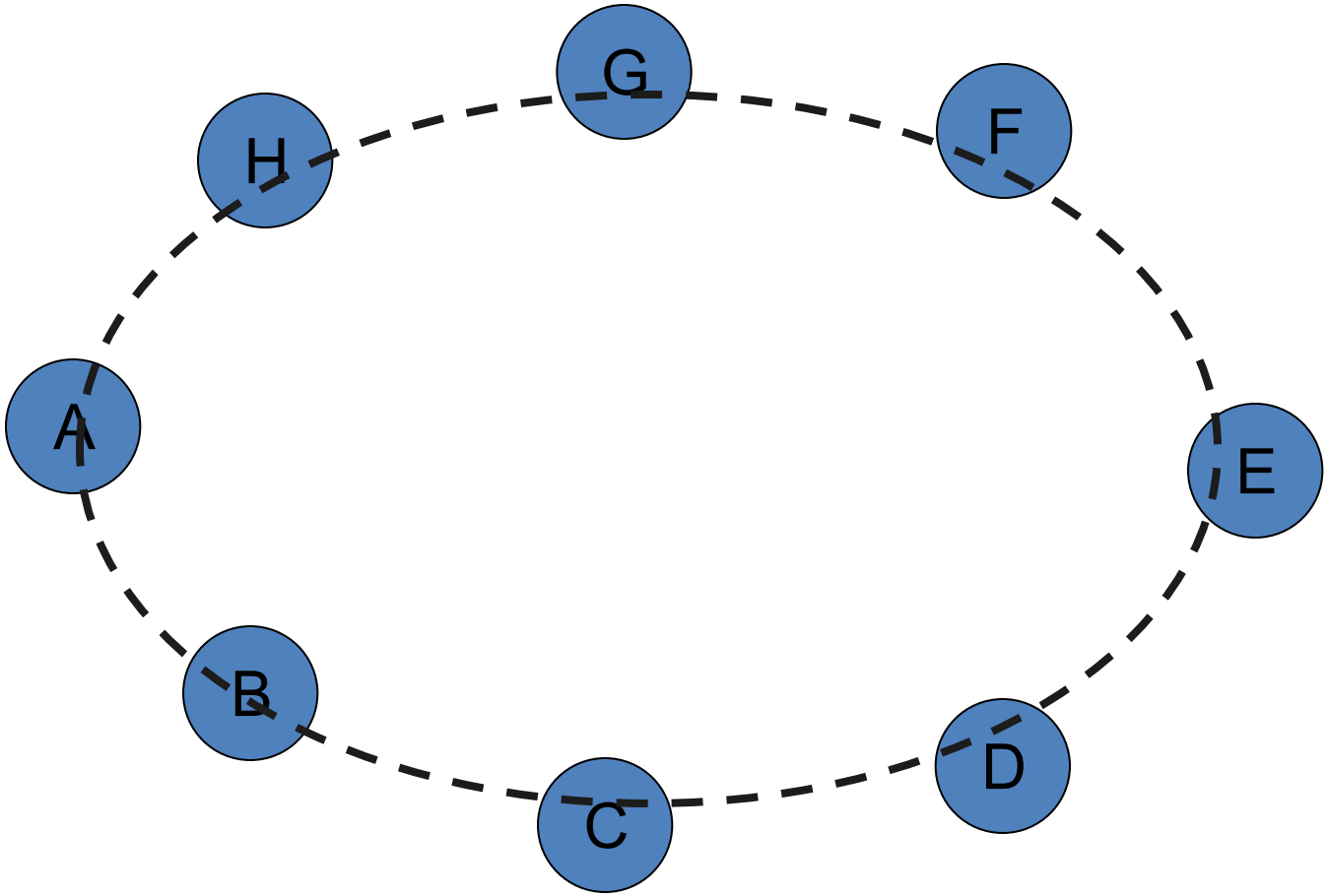
Token-Based Algorithm on Ring Topology

Assignment 03



DME for Ring Topology



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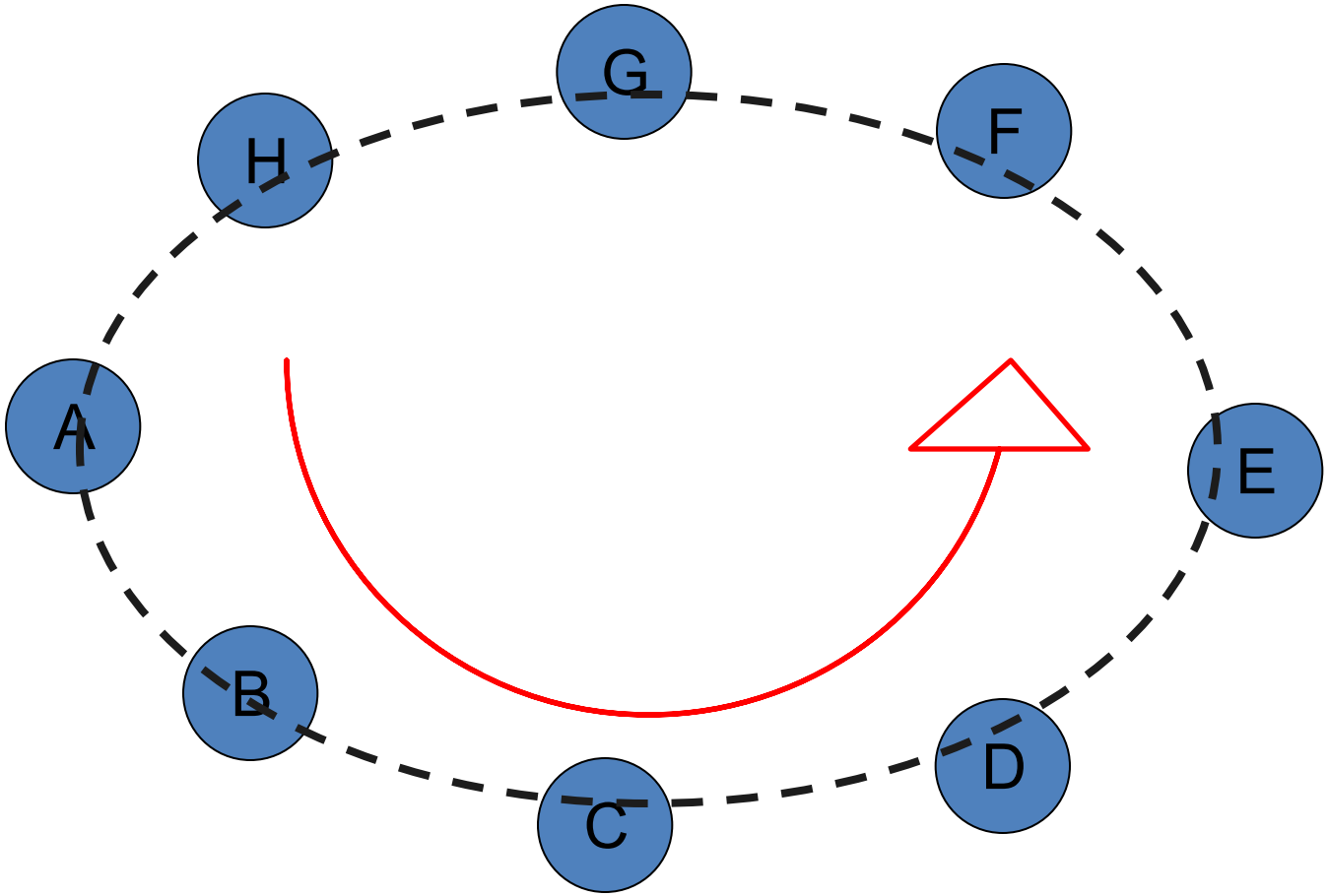

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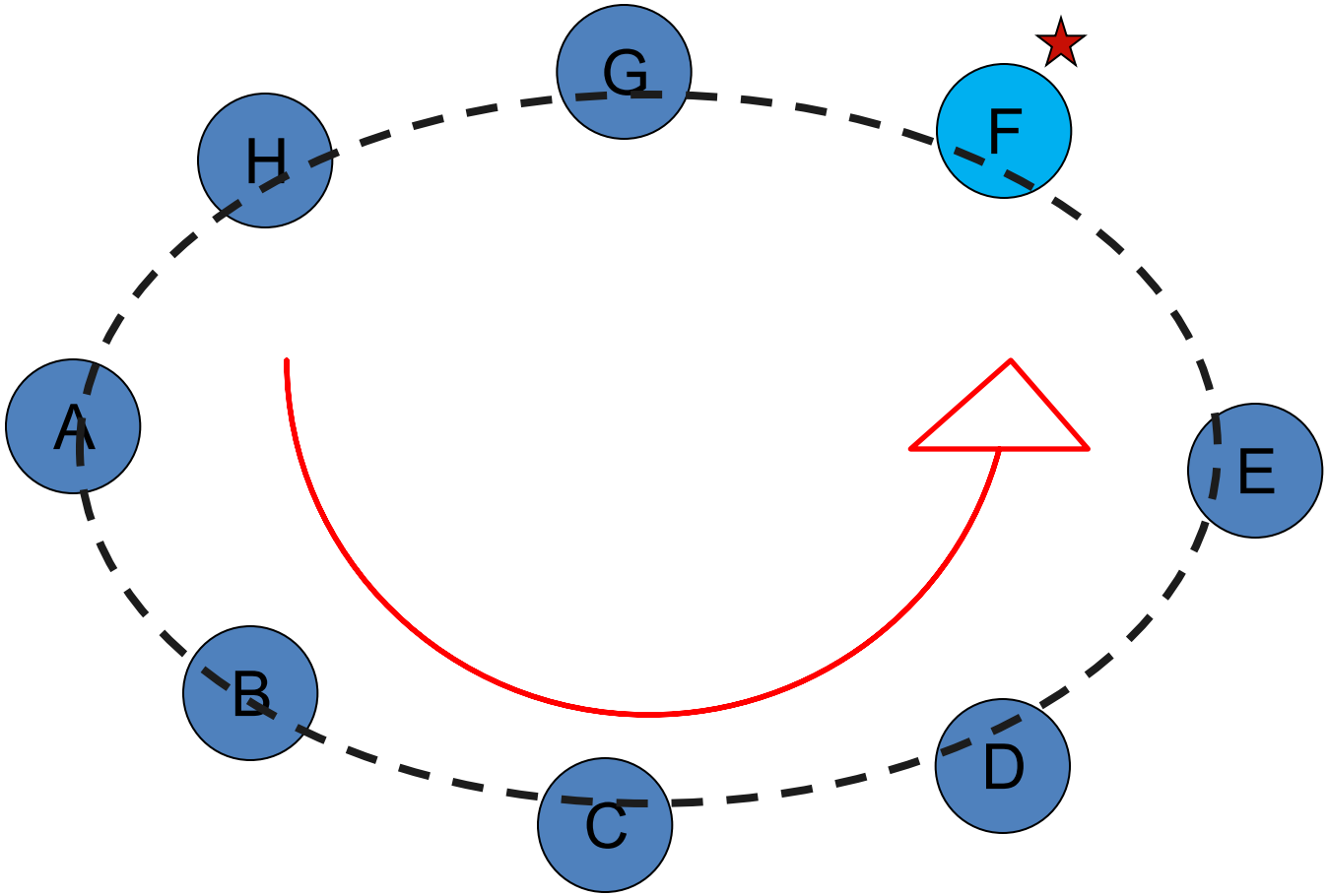

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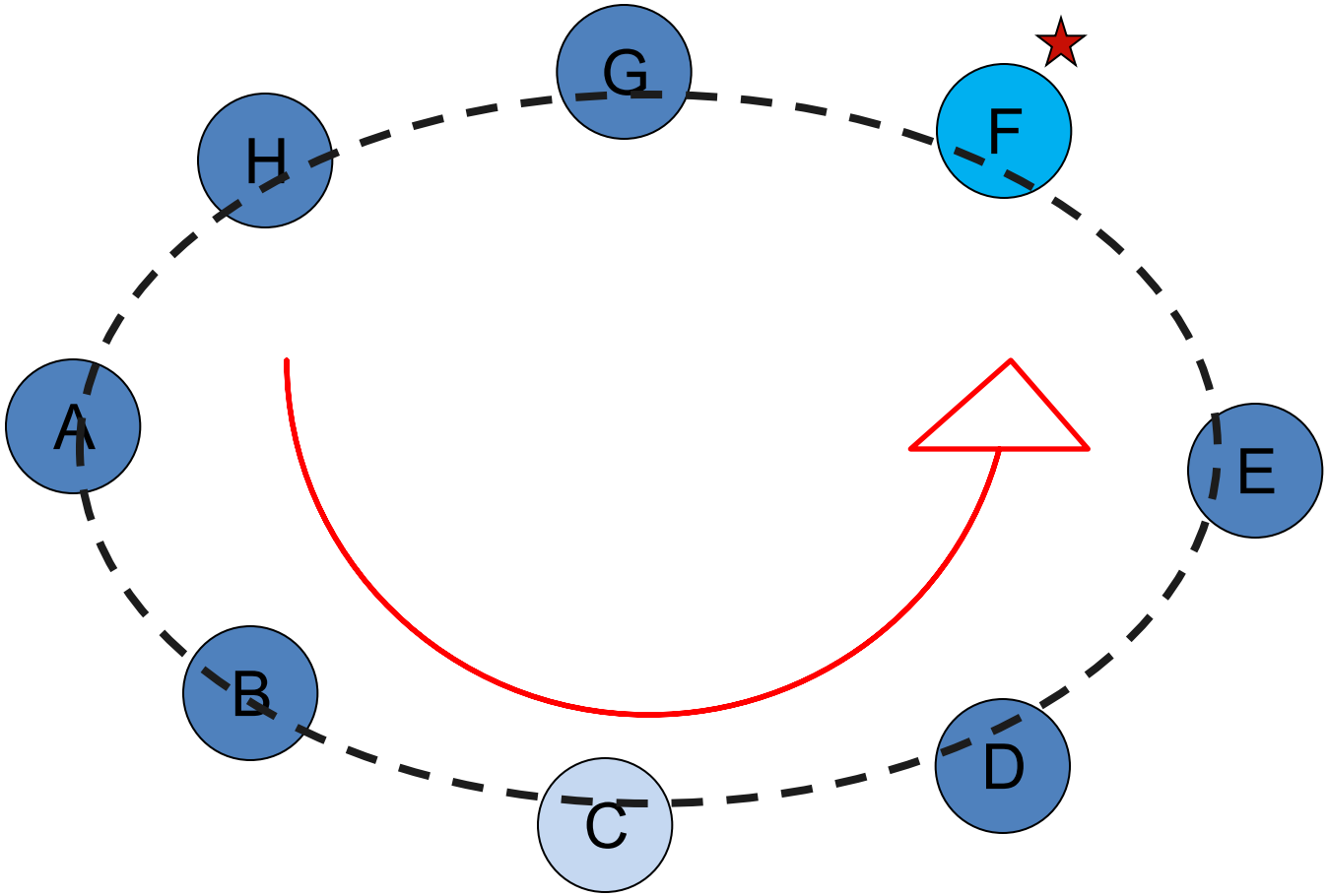

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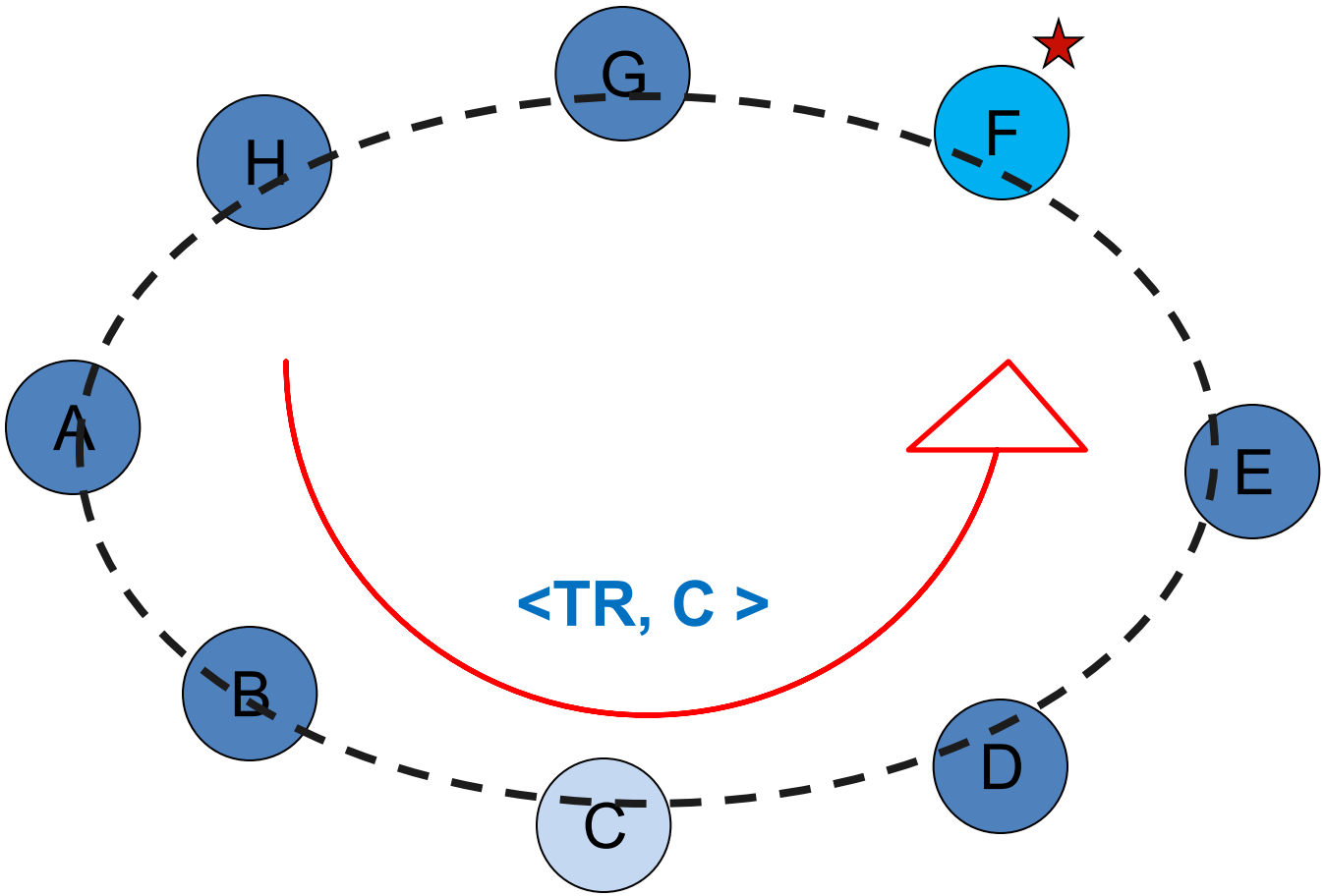

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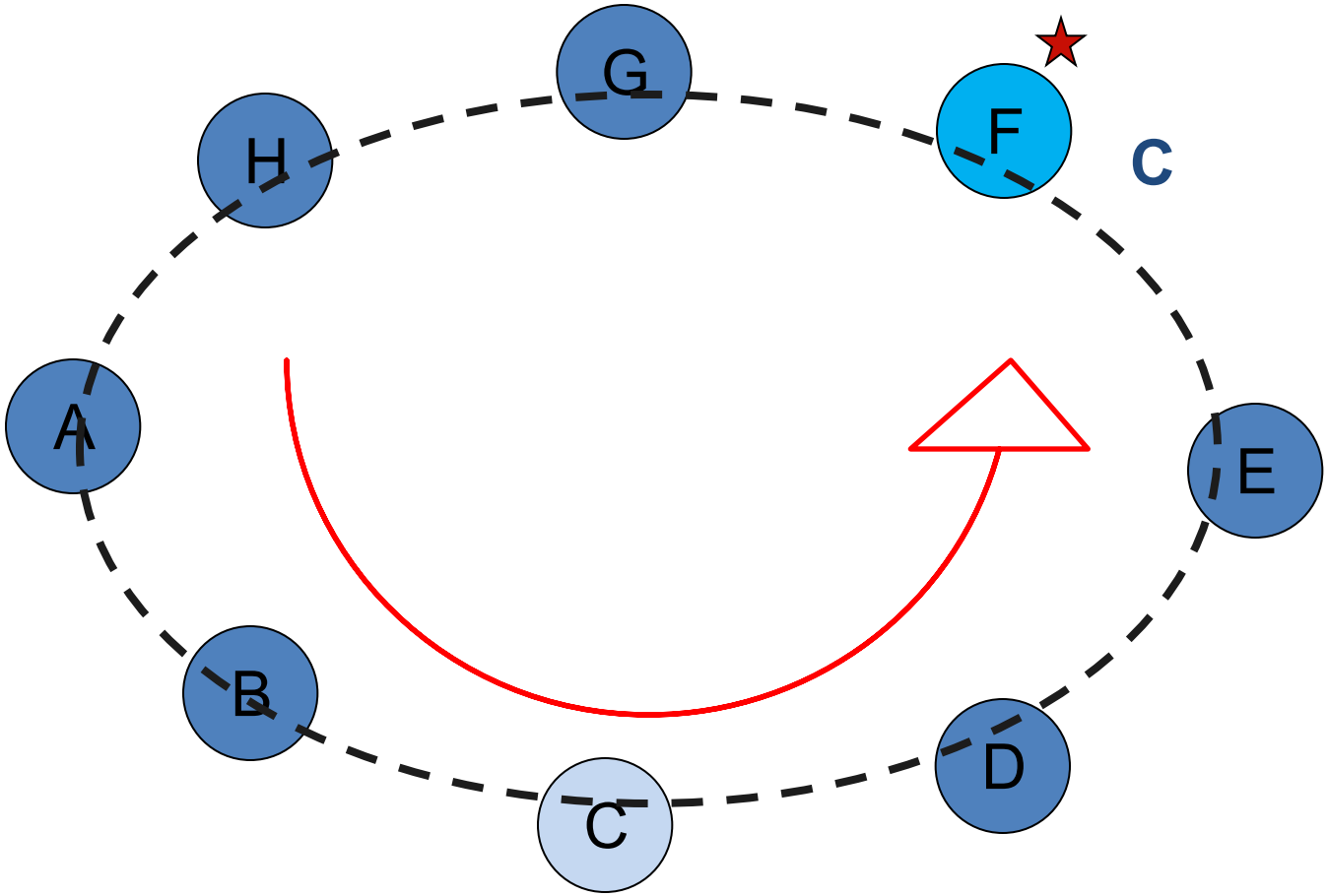

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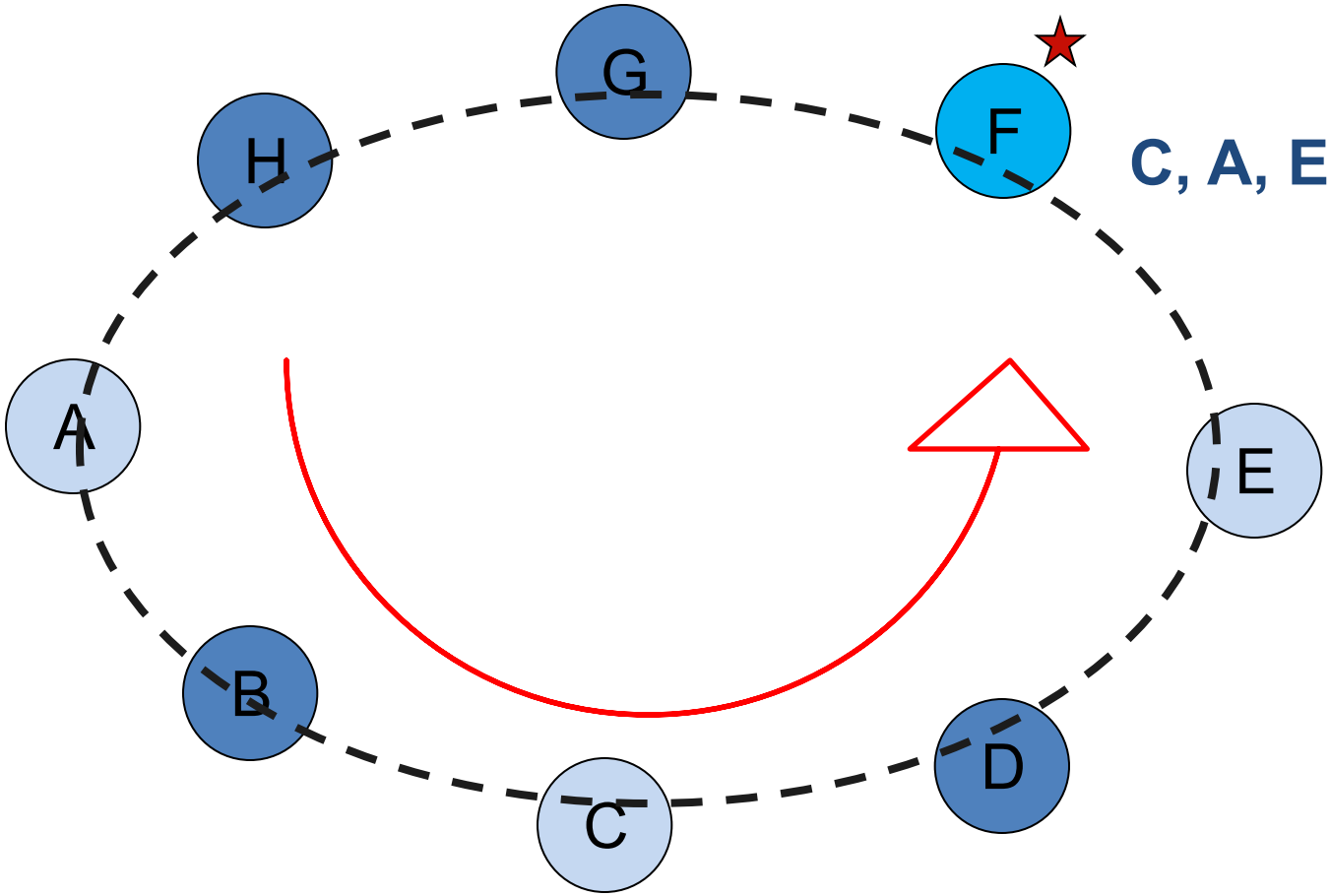

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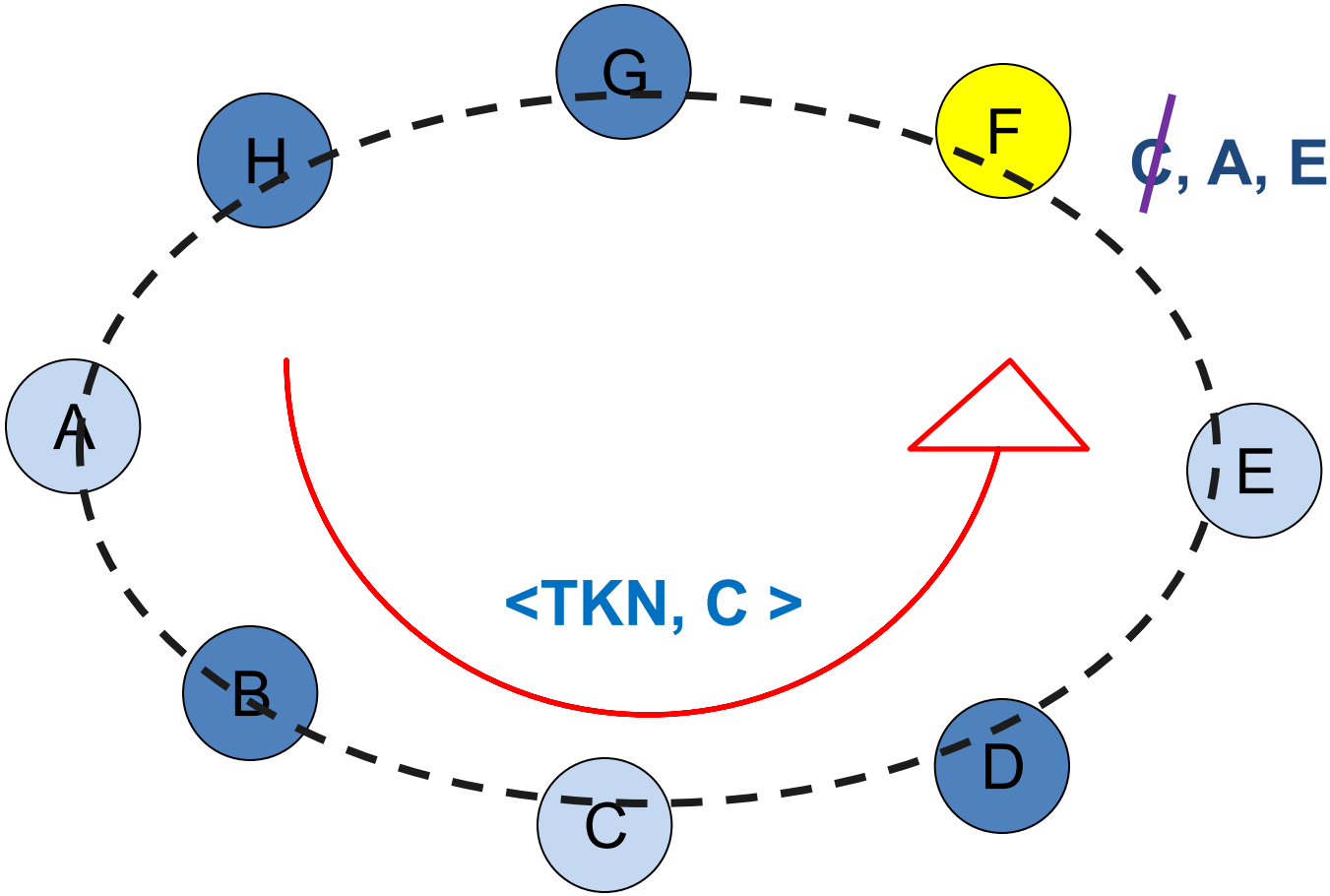

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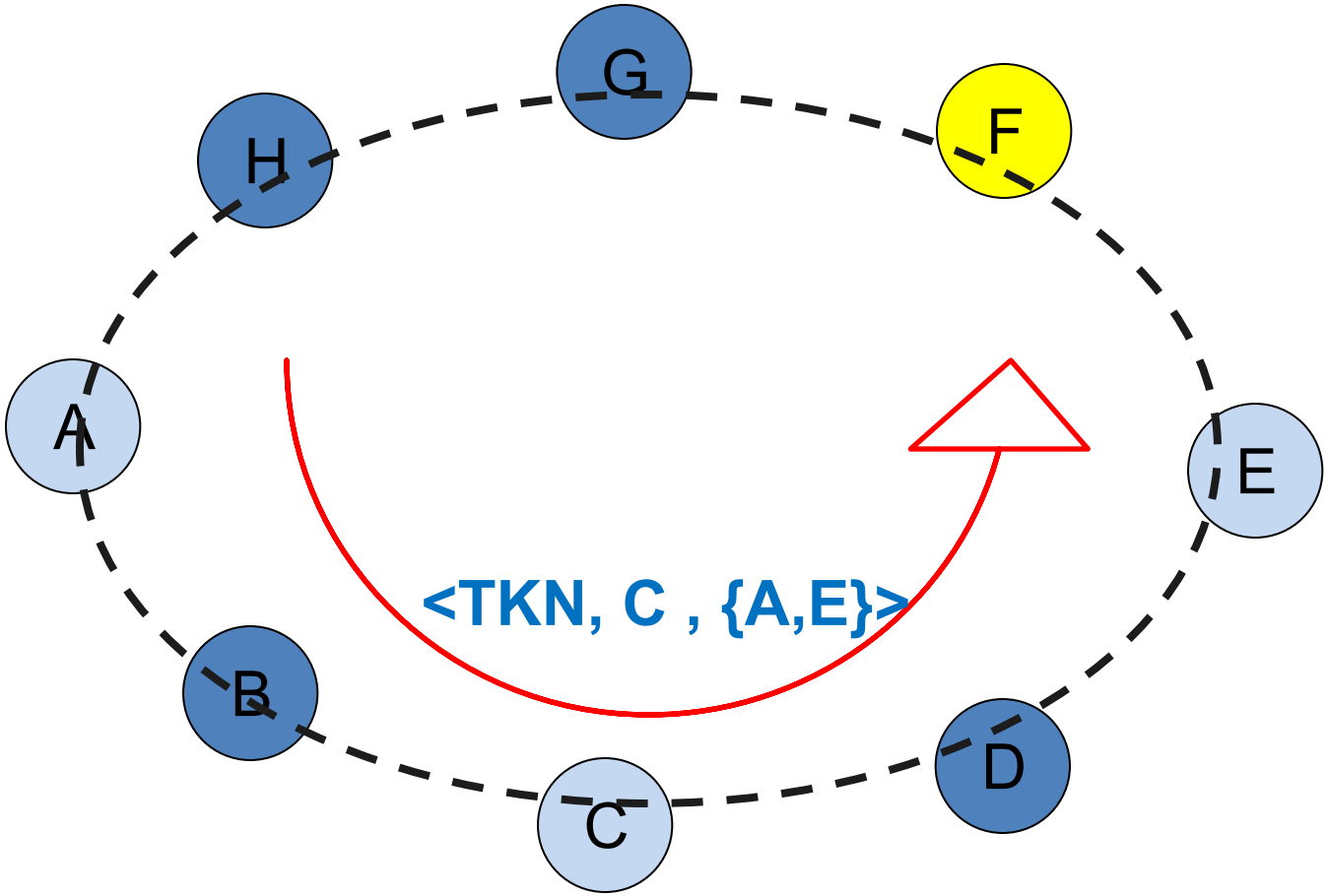

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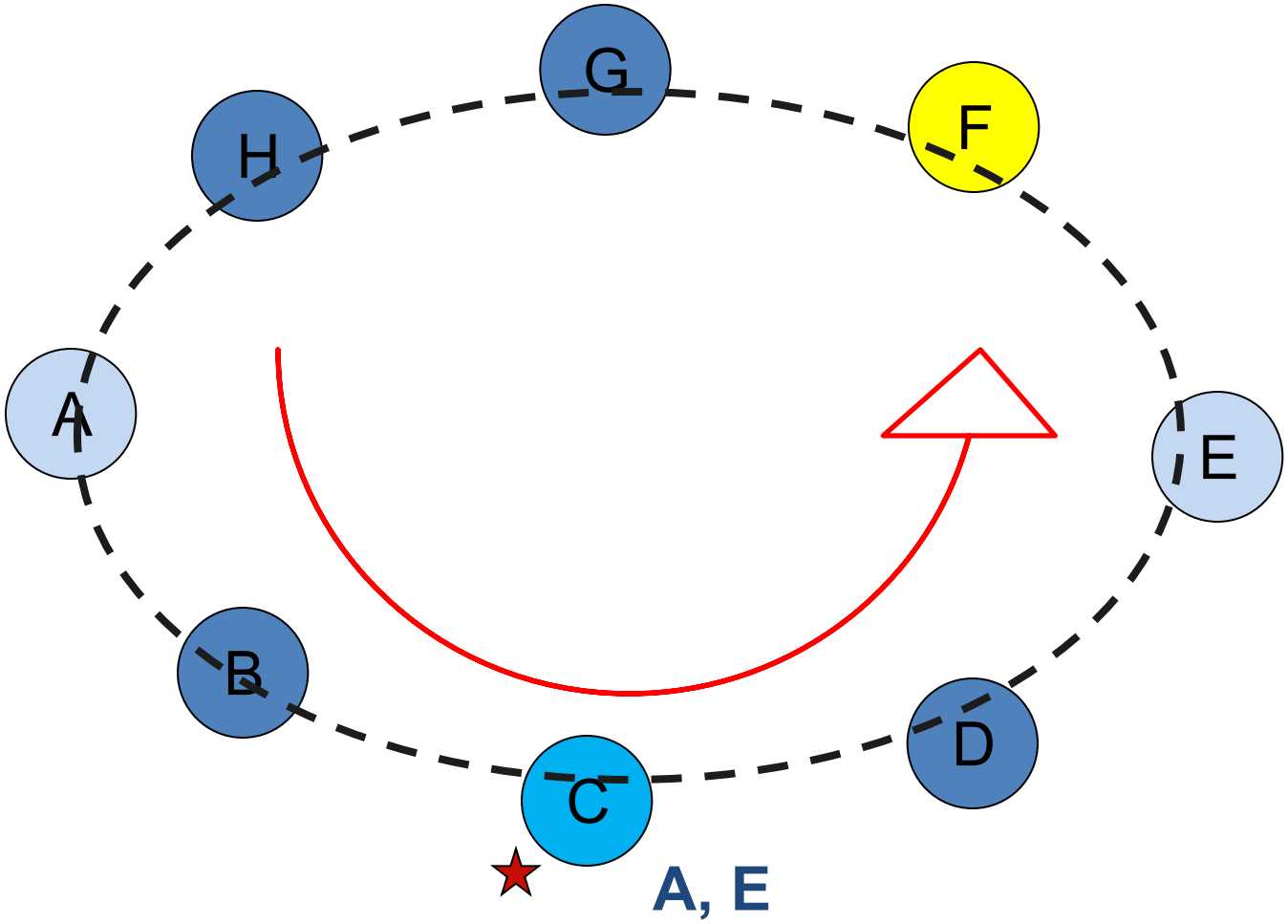
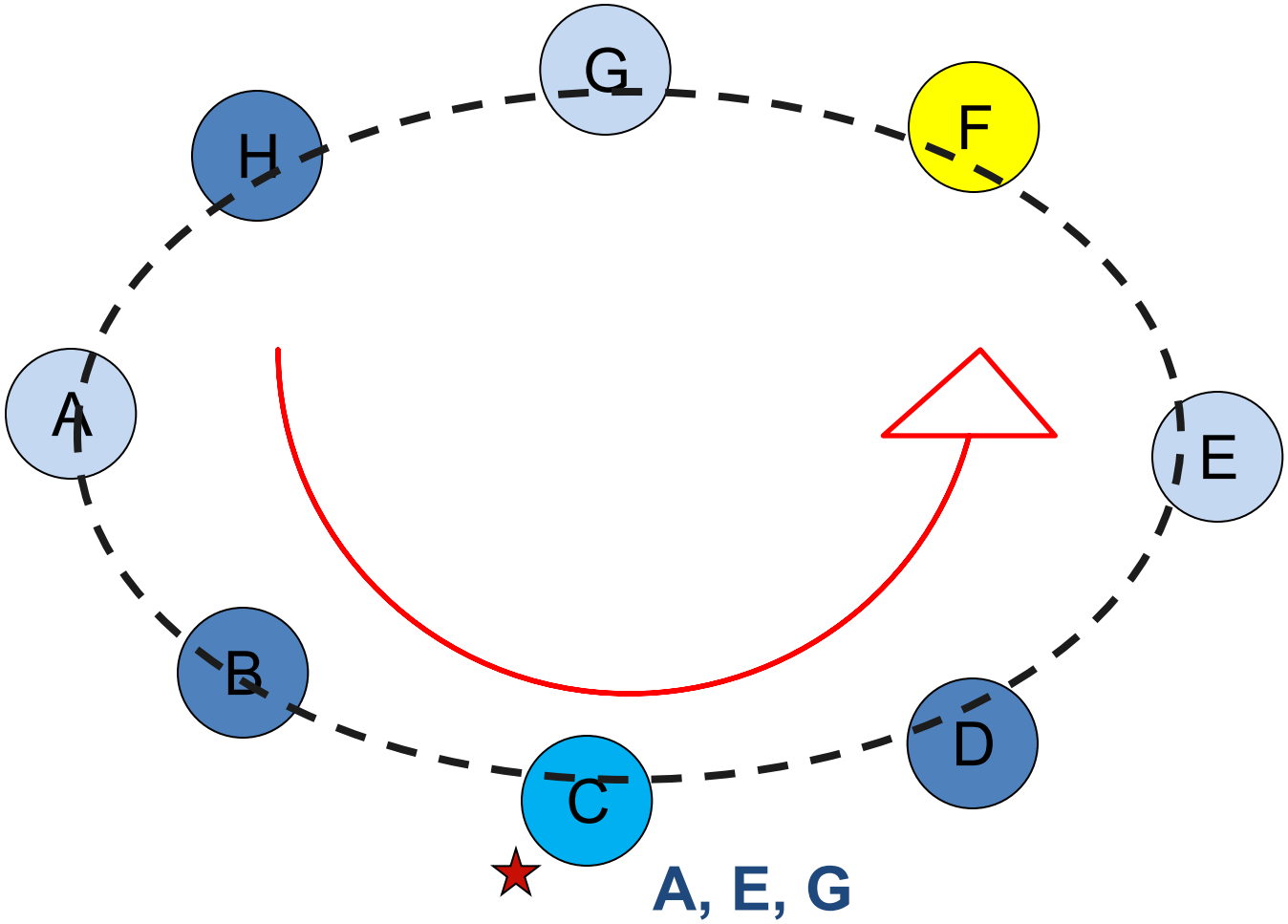
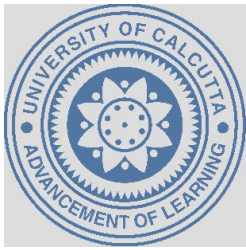


DME for Ring Topology



Hints

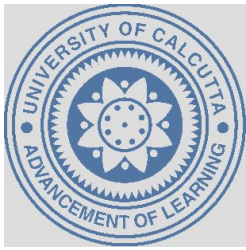


- To start with, consider a network with N nodes and say, M requests.
- Each node in the ring must store address of its 1-hop neighbor
- Each candidate node, say C, sends a token request <TR, C> to it's 1-hop neighbor in the ring

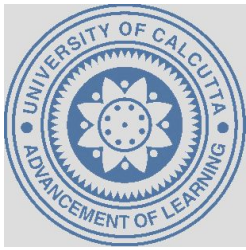
Hints

- Nodes other than P_{hold} forward TRs
- P_{hold} enters the ID of the requesting node C in a local queue Q, for every <TR, C> received
- When P_{hold} comes out of CS, it deletes the next element, say E, from Q and passes the Token <TKN, E, Q> to E along with the rest of the Q

Hints



- Nodes other than E forward TKN
- Node becomes the new P_{hold} when the control message <TKN, E, Q> reaches it - SUCCESS
- Run till all M requests get SUCCESS
- Print status of queue every time after another node gets the token



Thanks for your attention

All the best…