

Algo :- ① Broadcast. (To MST-Edge).

② If leaf node receives a broadcast.

- ↳ a) Compute MWOE
- b) Start ConvergeCast.

③ Internal Node : Receiving \Rightarrow ConvergeCast

- a) Compute MWOE
- b) Return the result to its parent.

④ Leader on receiving convergecast msg, it computes MWOE and starts MERGE msg.

⑤ A node on receiving MERGE msg,

- a) returns EMPTY msg to source (acts as Ack).
- b) forwards MERGE msg to all MST-Edge and normal edge. (except minimum edge to merge)
- c) ~~node~~ If merge msg ~~was~~ is addressed to this node. (Node starts START-MERGE msg)

⑥ If a node receives START-MERGE,
a) checks if it is a special case **.
b) else, mark that edge as MST-Edge.

Edge Type

Normal_Edge

MST_Edge

Same-component.

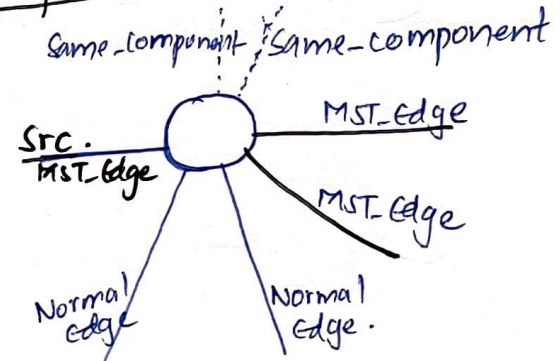
Node Type

Root

Leaf

Internal

compute MWOE



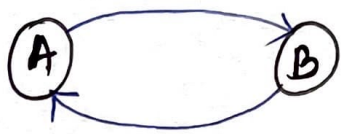
① Get leader of ~~the~~ all the nodes with normal edge.

↳ if leader matches :
 \Rightarrow in same-component!

Wait to get
② ~~get~~ MWOE on each MST-Edge.

Then, from Normal-Edge (wt) and MWOE from ~~child~~ MST-Edge computes MWOE and returns in convergecast result.

Special case**



(vii) Node with higher UID in special case/edge would elect itself as a new-leader.

(viii) New-leader does a leader Broadcast.

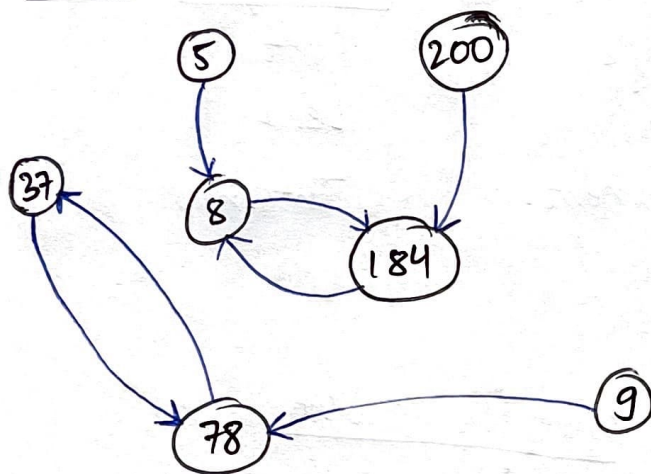
(ix) waits for some time. i.e. sleep for some time and again start from ①.

Termination Condition → leader if receives a null as a min edge in converge cast.
i.e. if a leader finds that MWOE on this component is NULL, then it starts a TERMINATION msg.

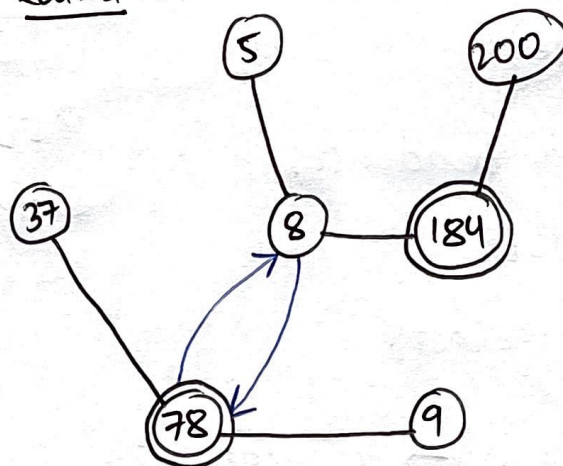
Node when receiving TERMINATION msg,

- Prints Node Informⁿ
- Prints MST edge.
- Forwards TERMINATION informⁿ to all ~~and~~ MST edges.

Round 0:



Round 1:



Round 2:

