

A decorative graphic on the left side of the slide, consisting of white lines and circles on a blue gradient background, resembling a circuit board or a network diagram.

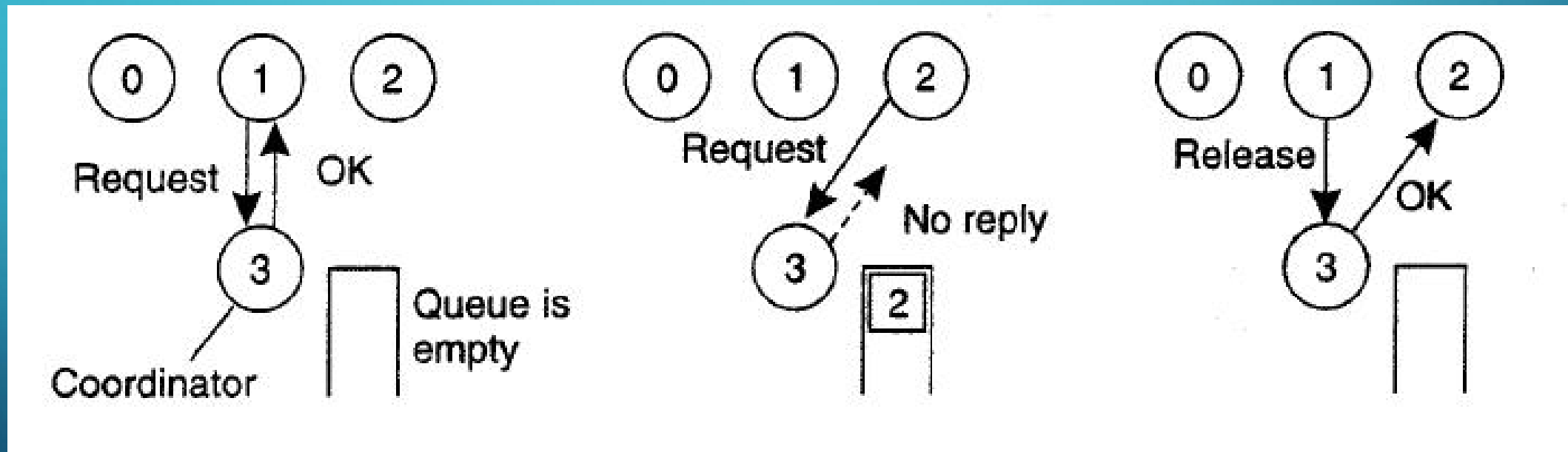
AGREEMENT IN DISTRIBUTED SYSTEM

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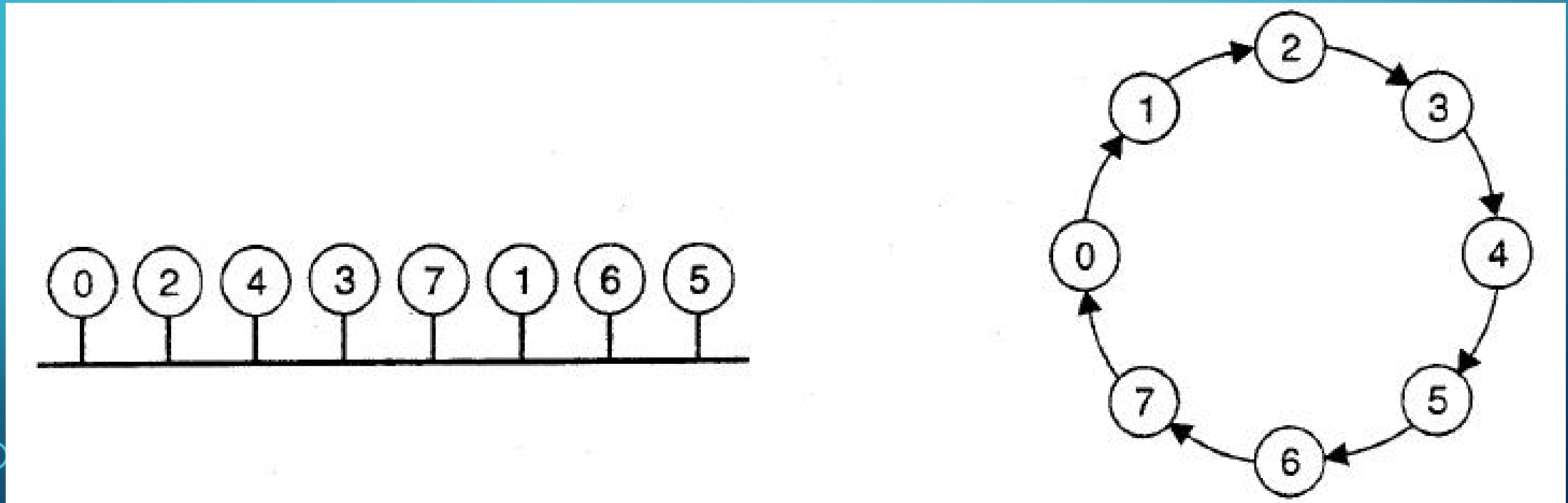
MUTUAL EXCLUSION

- Categories
 - Centralized
 - Decentralized
 - Token ring Algorithm
 - Ricart & Agrawala Algorithm

MUTUAL EXCLUSION: CENTRALIZED



MUTUAL EXCLUSION – TOKEN RING



RICART & AGRAWAL A ALGORITHM M

On initialization

state := RELEASED;

To enter the section

state := WANTED;

Multicast *request* to all processes;

T := request's timestamp;

Wait until (number of replies received = ($N - 1$));

state := HELD;

} *Request processing deferred here*

On receipt of a request $\langle T_i, p_i \rangle$ at p_j ($i \neq j$)

if (*state* = HELD or (*state* = WANTED and $(T, p_j) < (T_i, p_i)$))

then

 queue *request* from p_i without replying;

else

 reply immediately to p_i ;

end if

To exit the critical section

state := RELEASED;

reply to any queued requests;