Assignment 4 743212 43212 Problem Statement: to develop any distributed algorithm for leader elections and and Objectives By the end of this assignment, the should be able to explain and implement concept of leader election algorithms. Theory : Distributed algorithmi-· Distributed algorithm is a algorithm that runs on a distributed system. each processor has its own memory and they communicate via communication · Many algorithms used in distributed systems require a co-ordinator proces that performs function needed by other processes in the system. · Election algorithm are designed to choose a co-ordinator

· flection algorithm:

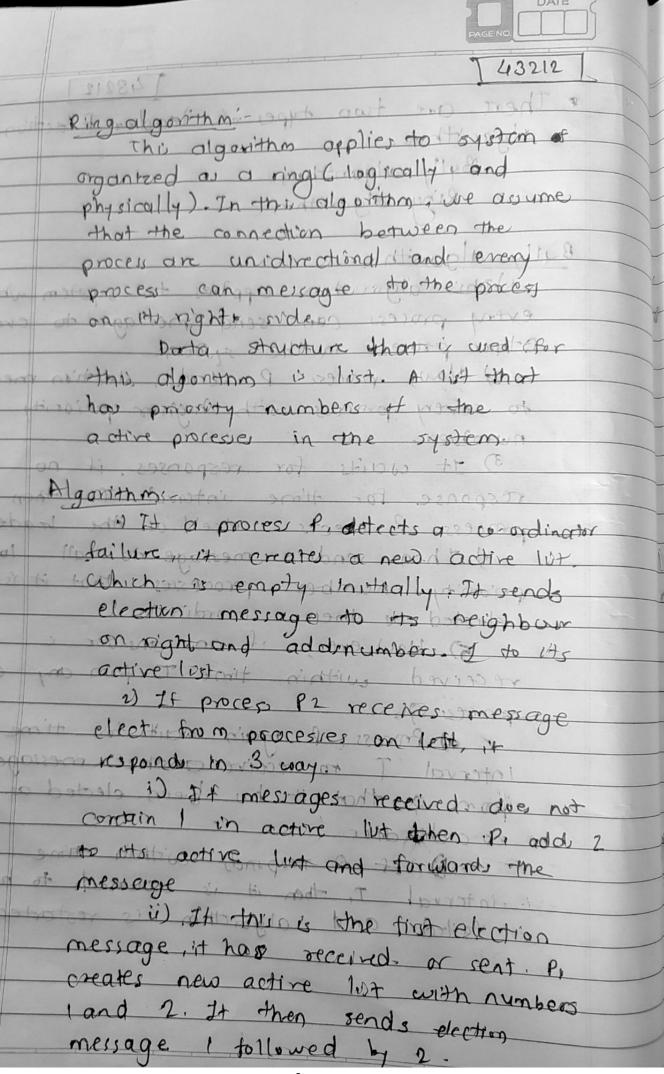
Assumption:

Each process has a unique thumber
to distinguish them. processes knows
each others process numbers



7 43212 143212 * There are two types of leader Election algorithm silgo adtivopto id to Bylly of gonthm, ou barrage enus Ringmangerithmate at Collowing Byllgaralgomithman who no no no no This algorithm applies to system where every process can send message to every other process muther system. () Have proces posends election message to every processmowith higher priority number. and ni worden some 3) It coaits for responses, if no response for time interval to then process Prefects most self all the haden 12) Then sends a message to all lower processes that it is addelected as other porconordinations 9 5). How every it and answer o received within time To from any other of the process for mere, pressoration a) Process lagain waits for time Interval T to receive another mesiage from go that pit has been elected as who ico-ordication who as I sittled and brob off a respond within time interval T, then it is assumed to have failed and algorithm is restorted. message it has received or sent. Pe

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+If process Processes its own election message then active list for Pr, now contain number of all the active processes in the system. Now Process P. elects highest priority numbers from list and elects it as the new co-ordinator

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Thus, in the assignment, I have learned about electron algorithms in distributed system and I implemented Bully and Ring election algorithm