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Comps B

OS Exp 7: Banker's algorithm

Learnings and observations: In this experiment, we learnt the Banker's algorithm for deadlock ~~avoidance~~ avoidance. ~~It is a algorithm~~ It is a greedy algorithm which helps us determine whether for a given set of process with already partially allocated resources and constraints on the availability of those resources, whether a deadlock would occur, and if ~~yes~~ no what should be the order in which to provide control to the process. In this experiment, we were given the resource requirements for some process and resources currently allotted to them, and found the order in which they should be executed.

We solved this problem greedily by checking which process' need could be satisfied, give it those resources, then free all resources. If no process' need could be satisfied, we declare that it is a deadlock. We maintained 3 matrices for this purpose, stored as a 3d array, containing the allocated resources, required resources and need, respectively.

Errors encountered: This experiment was pretty straightforward to implement as we only used basic programming concepts to solve this iteratively. So we didn't ~~encounter any~~ encounter any major errors.