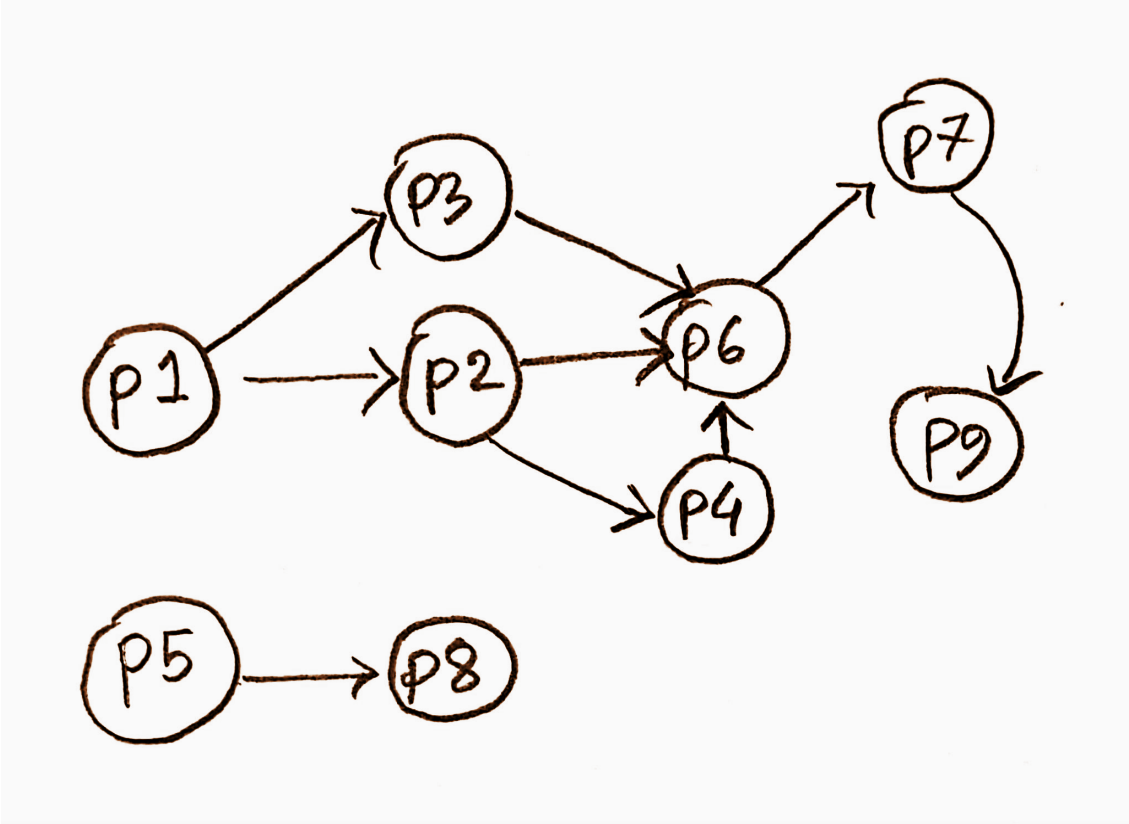
CSE 221 Quiz 02 C

Time:40 minutes (including submission)

Suppose you are a system architecture designer working for a company hoping to make a super-computer. With total of 9 processors allocated to you. But the data flow of your scheduling tells you that many processors are dependant on other processors work to be finished in order to begin its own processing. [for example, edge u⇒v means U must be finished first in order for v to start its processing].



a. Name the algorithm tailored for this situation. [1]

b. Manage a sequence of workflows that can be done without breaking any constraints resulting in a successful data transmission which utilizes every processors given to you. You must show proper simulation with step by step decisions you are making and maintaining the data structure you are implementing to achieve your goal [6]

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c. One day, you see that your intern has accidentally connected the processor 9 directly to the processor 4 (p9→p4) with an additional wire. Briefly explain what will be the consequences of this with logic.

[3]

[BONUS] d. If a graph has less amount of adjacent nodes for each node [sparse graph], you are given a source point and a destination point. If the destination is very close from the source. meaning a very small number of hops away from source, which traversal algorithm will work poorly? [1 line answer] [1]

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