CS3600 Wrapper 3

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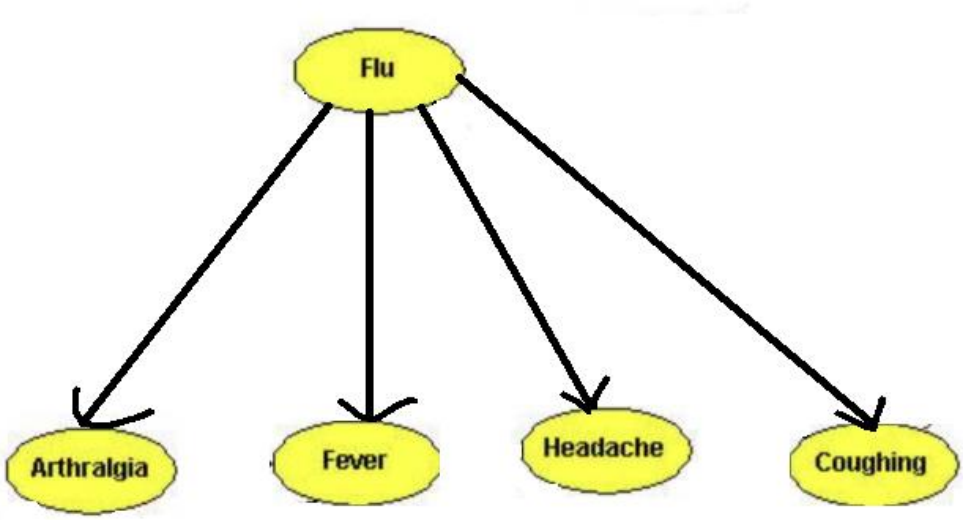
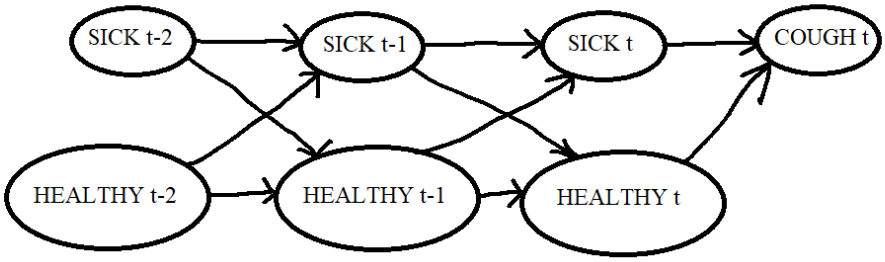
Question 1



The initial figure is more proper since there are different causes associated with different symptoms. Furthermore, a cold can never be diagnosed nor reached thus the assessment would be flawed as some of these symptoms derive from the cold rather than the flu.

Question 2



P(SICK | HEALTHY t-2) = .5
P(SICK | HEALTHY t-1) = .5
P(HEALTHY | HEALTHY t-2) = .5
P(HEALTHY | HEALTHY t-1) = .5

P(SICK | SICK t-2) = .8
P(SICK | SICK t-1) = .3
P(HEALTHY | SICK t-2) = .2
P(HEALTHY | SICK t-1) = .7

P(COUGH | SICK) = .99
P(COUGH | HEALTHY) = .01

Question 3

Medical protocols are updated and revised often to efficiently assess diagnoses and use proper treatment. If the Bayesian network is not updated consistently, it can provide an incorrect or outdated prediction thus leading to a wrong diagnosis. Furthermore, if there are any hardware issues that cause the network to receive incorrect inputs there would be an incorrect prediction made, thus the medical professional is another solid check to prevent any malpractice.

Question 4

There could potentially be negative outcomes as predictions are just that, predictions. This may cause for a higher concern and potentially elevate the anxiousness of hypochondriacs regarding their health, thus leading to unneeded stress that could potentially make their symptoms worse. It could also create a bigger trust in these systems warranting less need of a medical professional who would be able to assess the symptoms directly rather than anecdotally. Since the system take inputs anecdotally, the medical professional would have a stronger ability to diagnose the patient.