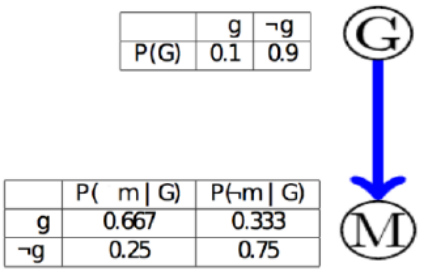
(G)reen party is running for joining the parliament in the next election. It is believed that (M)arijuana is more likely to be legalized if (G) make to the parliament, but it can of course happen even if they are not elected. Let us model the situation as a simple Bayes network:



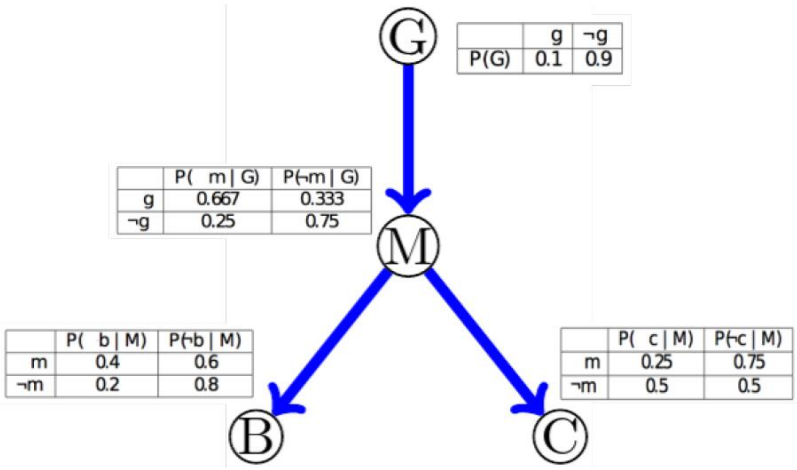
1) Fill in the joint probabilities over G and M

G	M	P(G,M)
g	m	
g	¬m	
¬g	m	
¬g	¬m	

2) What is the probability P(M) that marijuana is legalized?

3) We get to know that marijuana was legalized, but the election result is unknown to us. What is the probability, that G was elected?

We can make better inference using more evidence. Assume the legalization of marijuana influences whether the budget is balanced and also class attendance of students.



4) Fill in the joint probabilities over G, M, B, and C

5) Determine the following probabilities:

a) P(b|m, g)
b) P(b)
c) P(c|b)