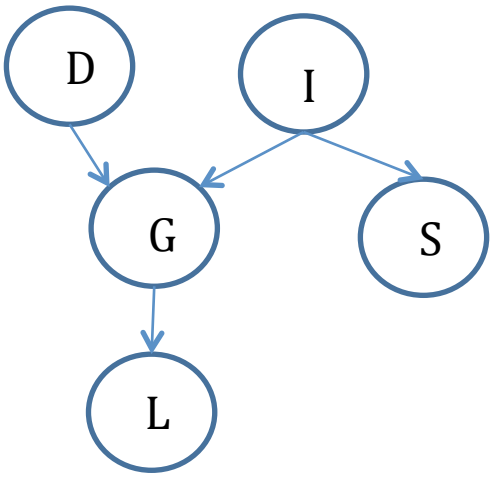
EE732 Hw5
Due 01.12.2014

Write a computer program, which

- considers the graph given below (both the structure and the CPD's),
- performs inference for a query by the following approaches
  - exact inference,
  - approximate inference by forward sampling or likelihood weighting,
  - approximate inference by Gibbs sampling,
- compares the results of the three inferences by varying the internal parameters of the approaches if there is any.

The input query can be marginal (for example P(G=0,S=1,L=1)) or conditional (for example P(G=0|S=1,L=1)).
The output will be the three inference results and the used parameter set.



P(D)	d=0	d=1
	0.6	0.4

P(I)	i=0	i=1
	0.7	0.3

P(S|I)	s=0	s=1
i=0	0.95	0.05
i=1	0.2	0.8

P(G|I,D)	g=1	g=2	g=3
i=0 d=0	0.3	0.4	0.3
i=0 d=1	0.05	0.25	0.7
i=1 d=0	0.9	0.08	0.02
i=1 d=1	0.5	0.3	0.2

P(L|G)	l=0	l=1
g=1	0.1	0.9
g=2	0.4	0.6
g=3	0.99	0.01