

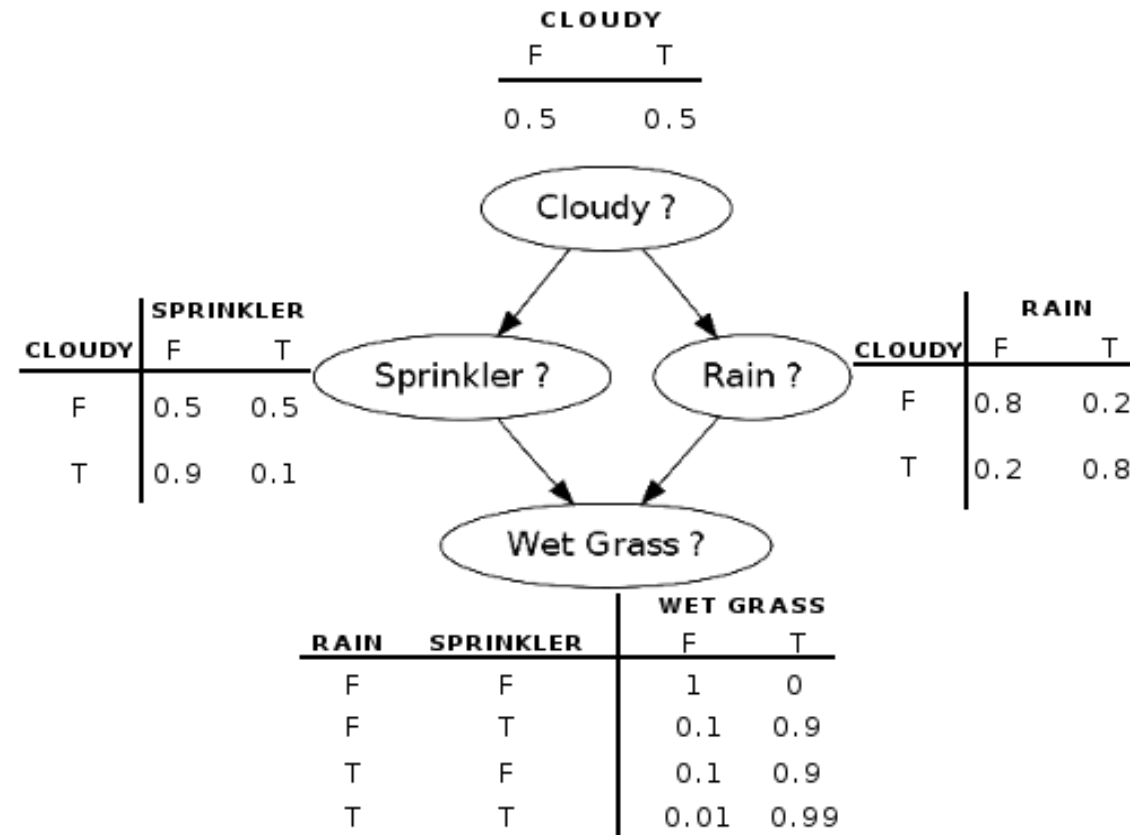
Bayesian Networks

Lab 8

Exercise 1

→ Familiarize yourself with the code in `bn.py`, `Runner.py` and `Variable.py`

→ Complete `bn.py` and `Variables.py` to calculate the probabilities for the Bayesian network below.



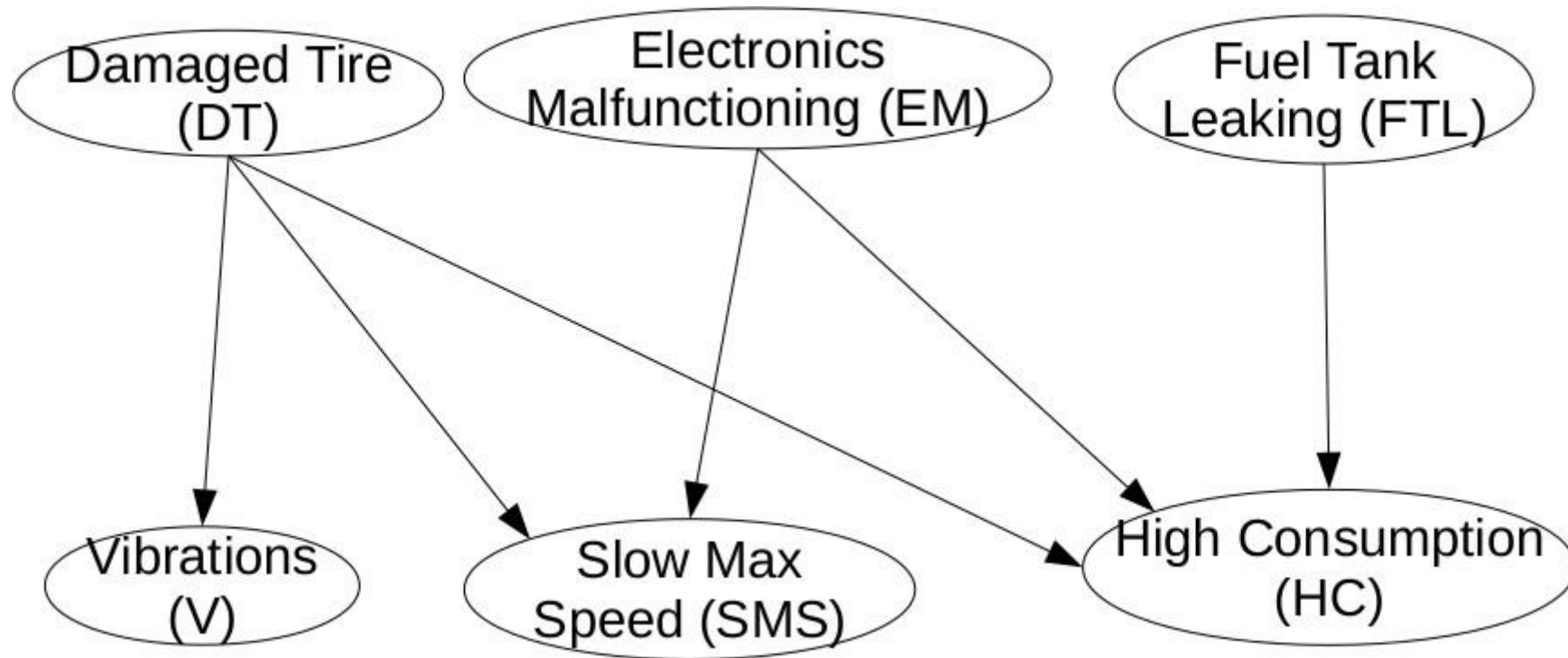
Exercise 2

Modify the Bayesian network program to calculate the probabilities for the network on the following slide.

You are interested in finding out the cause of a malfunction of your car.

You suspect a fault in your car, but you do not know in which component. You have noticed that there are vibrations while driving and it is difficult to reach the top speed. Your car does not consume more than usual.

Exercise 2



Exercise 2

DT	P(DT)
T	0.3
F	0.7

FTL	P(FTL)
T	0.2
F	0.8

EM	P(EM)
T	0.3
F	0.7

DT	EM	P(SMS=T DT,EM)
T	T	0.05
T	F	0.6
F	T	0.3
F	F	0.7

DT	FTL	EM	P(HC=T DT,FTL,EM)
T	T	T	0.9
T	T	F	0.8
T	F	T	0.3
T	F	F	0.2
F	T	T	0.6
F	T	F	0.5
F	F	T	0.1
F	F	F	0.01

DT	P(V DT)
T	0.7
F	0.1