

~~Can show~~

A ~~proof~~ in a KB consists a sequence of statements $\varphi_1, \dots, \varphi_n$. s.t. each φ_i is either a substitution instance of one of the above formulas, a member of KB or follows from φ_j and φ_k $j, k < i$ by Modus Ponens.

Ex } Suppose KB consists of statements
~~A~~ $A \Rightarrow B, B \Rightarrow C$

Then one can prove ~~EVD~~ **EVD** as

$A, A \Rightarrow B, B \stackrel{MP}{\Rightarrow} C, C \stackrel{MP}{\Rightarrow} CVD, CVD.$

Could try to write programs which find proof to try to do something more efficient than model checking

~~Can show~~

Write $KB \vdash F$ if ~~there~~ there is a proof of F from the knowledge base

Can show:

$KB \vdash F \Rightarrow KB \models F$

(soundness)

$KB \models F \Rightarrow KB \vdash F$

(completeness)