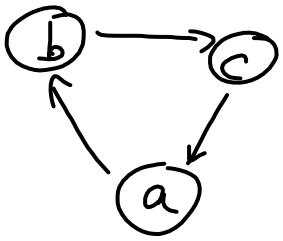


$I_0 = \emptyset$.

$I_1 = \{ \text{wsh}(a), \text{wsh}(b), \text{wsh}(c), \text{lose}(a), \text{lose}(b), \text{lose}(c) \}$

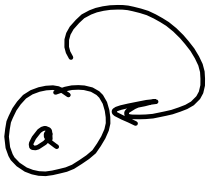
$I_2 = \emptyset$

$I_3 = I_1$

$V_P = (\emptyset, \emptyset)$ is the 3-stable model of P

→ no total stable model

Jul 10-14:09



$I_0 = \emptyset$

$I_1 = \{ \text{wsh}(a), \text{lose}(a) \}$

$I_2 = \emptyset$

$I_3 = I_1$ ... same as before

Jul 10-14:30

S. 630 Ex.1

P positive Prog.

$I_0 = \emptyset$

$P_0 = P$

$T_{P_0}^{\omega}(\emptyset) = T_P^{\omega}(\emptyset)$ = the minimal model of P

$=: I_1$ = first overestimate

$P_1 = P$

$T_{P_1}^{\omega}(\emptyset) = T_P^{\omega}(\emptyset) = \; || \; || \; = I_2$ = second underestimate

$I_1 = I_2$

is total → unique total well-founded model

= minimal model

Jul 10-14:38

630 Ex.2 :

a → b

P without $\neg$ is non-stratified

and total WFM:

$W_P = (\{\text{lose}(b), \neg\text{win}(a)\}, \{\text{win}(b), \neg\text{lose}(a)\})$

b) → next week

Jul 10-14:43

Example

$\text{wiki\_user\_same} \models \text{wiki}(g) \vee \text{wiki}(h)$?

assert $a \vee b$, but not which one

Jul 10-14:58

$\neg\text{female}(x) \leftarrow \text{male}(x), \text{person}(x).$

$\text{uncle}(x) \leftarrow \neg\text{female}(x), \text{person}(x).$

$\text{thing}(x) \leftarrow \text{uncle}(x) \vee \text{female}(x)$

$\text{person}(x) \models \text{thing}(x)$

Jul 10-15:00

Sl. 634:

I: p(a), p(b) undefined,
q(c) holds

$I = (\{q(c)\}, \{q(a), q(b), p(c)\})$

is I 3-stable?

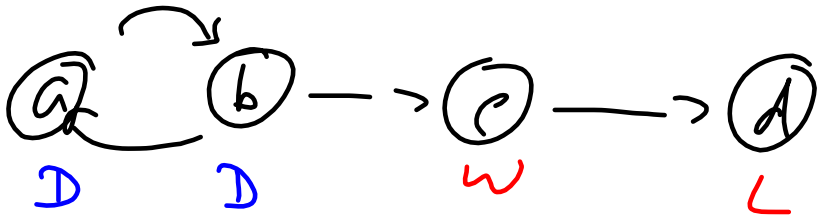
$P_I = \{$ p(a) :- undef
p(b) :- undef,
q(c) :- this(a), p(a).
q(c) :- this(b), p(b).
q(c) :- this(c), p(c). $\}$

$T_{P_I}(\emptyset)$: val(p(a)) = u
val(p(b)) = u
val(q(c)) = max(u, u, f) $= u$

$\Rightarrow$ I is not stable

because we left the "stable models" semantics by COMBINING all/several stable models.
Here "cautious reasoning":
p(c) is guaranteed in every model

Jul 10-15:12



Jul 10-15:30