

Introduction to AI

Assignment Project Exam Help

-Tutorial NAF for NMR-

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SLDNF

Apply SLDNF to compute all possible answers for $p(X)$ given S :

$p(X) \leftarrow q(X), \text{ not } r(X), \text{ not } s(X)$

$q(1) \leftarrow$

$q(2) \leftarrow$

$q(3) \leftarrow$

$r(2) \leftarrow$

$r(X) \leftarrow \text{not } t(X)$

$s(X) \leftarrow u(X)$

$t(1) \leftarrow$

$t(3) \leftarrow t(3)$

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SLDNF and safe selection of sub-goals

Given $S = \{p(X) \leftarrow q(X,Y), \text{not } r(Y), q(2,3) \leftarrow, r(4) \leftarrow\}$ and $P = p(X)$

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1. Apply SLDNF with a safe selection of sub-goals to compute an answer for P , giving the answer explicitly
2. Explain why a non-safe selection of sub-goals might give an incorrect answer to P

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NAF semantics

$S = \{ p(X) \leftarrow q(X), \text{not } r(X), \text{not } s(X), q(1) \leftarrow, q(2) \leftarrow, q(3) \leftarrow, r(2) \leftarrow, r(X) \leftarrow \text{not } t(X), s(X) \leftarrow u(X), t(1), t(3) \leftarrow t(3) \}$

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1) What is the completion of S ? <https://tutorcs.com>

2) Determine whether [WeChat: cstutorcs](#)

$\text{Comp}(S) \models p(1), \text{Comp}(S) \models \neg p(1)$

$\text{Comp}(S) \models p(2), \text{Comp}(S) \models \neg p(2)$

$\text{Comp}(S) \models p(3), \text{Comp}(S) \models \neg p(3)$

3) Determine all stable models of S