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Definite Clause: Clause with only one positive literal
Eg- $(\neg L_{11} \vee B_{11} \vee \neg Breeze)$

Horn Clause: Clause with atmost one positive literal

Advantage of using definite clause (CNF can be converted to Implication)
$(\neg L_{11} \vee B_{11} \vee \neg Breeze)$
$\equiv (L_{11} \wedge Breez) \Rightarrow B_{11}$
$\{(\neg(L_{11} \wedge Breeze) \vee B_{11}) \; (\neg L_{11} \vee \neg Breeze \vee B_{11})\}$

$(\neg L_{11} \vee \neg Breeze \vee B_{11})$
body — head
$\equiv (\neg L_{11} \vee \neg Breeze \vee B_{11})$
$\equiv (L_{11} \wedge Breeze) \Rightarrow B_{11}$ - head
Body (Premise)

Inference with Horn clauses can be done using Forward chaining and backward chaining. RUN in linear time Only when KB is conjunction of Horn Clauses

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Inference Engine

1 Forward chaining (May do a lot of irrelevant work)
- Starts with known facts and asserts new facts

2 Backward chaining (Goal driven)
- Starts with goals and works backward to determine what facts must be asserted so that goals can be achieved.

American(x) ∧ Weapon(y) ∧ sell(x, y, z) ∧ enemy(z, America)
⇒ Criminal(x)

✓ Enemy(None, America)
✓ Owns(None, x)
✓ Missile(x)
✓ ∀x Missile(x) ∧ Owns(None, x) ⇒ Sell(Colonel, x, None)
✓ Missile(x) ⇒ Weapon(x)
✓ American(Colonel)