1. Infinite loops can occur in backward chaining regardless of whether or not all your clauses are horn clauses.
2. This statement is false.
3. Producing no new knowledge in an iteration of forward chaining proves an inconsistency.
4. Any propositional logic formula can be written as an equivalent CNF statement.
5. We can always reduce a first-order logic sentence to a propositional logic sentence.
6. If we get stuck during forward chaining, we have shown that we have an inconsistency.
7. We can always convert a propositional logic sentence to CNF form.
8. \( \exists x \forall y \text{student}(x) \land \text{fails}(y) \) is equivalent to \( \forall y \exists x \text{student}(x) \land \text{fails}(y) \)
9. Any FOL can be reduced to PL.
10. Quantifiers are used in propositional logic.
11. Backward chaining is complete, while forward chaining is not.
12. Prolog is complete whereas Datalog is not.
13. The order in which you evaluate conditions of the goal state matters when using backward planning.
14. Backward chaining is a special case of resolution.
15. Backward Chaining is preferred to Forward Chaining because Backward chaining provides a means to avoid drawing irrelevant conclusions.
16. Backward chaining is preferred to Forward Chaining because Forward Chaining rechecks every rule on every iteration to see whether its premises are satisfied, even if very few additions are made to KB on every iteration.
17. Existential Instantiation adds a new sentence to KB. This new KB is logically equivalent to the original KB.