

Given the following knowledge base:

$g(a, b).$

$g(b, a).$

$g(b, c).$

$h(x, z) \text{ :- } g(x, y), g(y, z).$

1. List every fact and rule as predicates in predicate calculus form.
2. Show the resolution of the following query: $h(x, y)?$.
3. Show the proof search tree of the query in item 2.