



main.py



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Output

```
1 import re
2 def unify(x, y, theta={}):
3     if theta is None:
4         return None
5     elif x == y:
6         return theta
7     elif isinstance(x, str) and x.islower():
8         return unify_var(x, y, theta)
9     elif isinstance(y, str) and y.islower():
10        return unify_var(y, x, theta)
11    elif isinstance(x, list) and isinstance(y, list) and len(x) == len(y):
12        return unify(x[1:], y[1:], unify(x[0], y[0], theta))
13    else:
14        return None
15 def unify_var(var, x, theta):
16     if var in theta:
17         return unify(theta[var], x, theta)
18     elif x in theta:
19         return unify(var, theta[x], theta)
20     else:
21         theta[var] = x
22         return theta
23 def resolution(kb, query):
24     for clause in kb:
25         theta = unify(clause[0], query, {})
26         if theta is not None:
27             new_kb = clause[1:]
28             if not new_kb:
29                 return True
30             else:
31                 return resolution(kb, new_kb[0])
32     return False
33 knowledge_base = [
34     [{"Human", "John"}, {"Mortal", "John"}],
35 ]
36 fact = ["Human", "John"]
37 query = ["Mortal", "John"]
38 if resolution(knowledge_base, query):
39     print("Query is resolved: John is Mortal")
40 else:
41     print("Query could not be resolved")
```

Query could not be resolved

=== Code Execution Successful ===