

main.py



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Run

```
1 knowledge_base = [  
2     (["cough", "fever"], "flu"),  
3     (["sore_throat", "runny_nose"], "cold"),  
4     (["sore_throat"], "fever")  
5 ]  
6  
7 facts = {"cough", "sore_throat"}  
8  
9 def forward_chaining():  
10     inferred = True  
11     while inferred:  
12         inferred = False  
13         for conditions, conclusion in knowledge_base:  
14             if all(condition in facts for condition in conditions)  
15                 and conclusion not in facts:  
16                 facts.add(conclusion)  
17                 inferred = True  
18 forward_chaining()  
19  
20 if "flu" in facts:  
21     print("The patient is diagnosed with flu.")  
22 elif "cold" in facts:  
23     print("The patient is diagnosed with cold.")  
24 else:  
25     print("No conclusive diagnosis could be made.")
```

Output

Clear

The patient is diagnosed with flu.

=== Code Execution Successful ===