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EXP NAME: IMPLEMENTATION OF FORWARD CHAINING

EXP NO:8

PROGRAM:

```python
knowledge_base = [
    (["cough", "fever"], "flu"),
    (["sore_throat", "runny_nose"], "cold"),
    (["sore_throat"], "fever")
]

facts = {"cough", "sore_throat"}

def forward_chaining():
    inferred = True
    while inferred:
        inferred = False
        for conditions, conclusion in knowledge_base:
            if all(condition in facts for condition in conditions) and conclusion not in facts:
                facts.add(conclusion)
                inferred = True

forward_chaining()

if "flu" in facts:
    print("The patient is diagnosed with flu.")
elif "cold" in facts:
    print("The patient is diagnosed with cold.")
else:
    print("No conclusive diagnosis could be made.")
```

OUTPUT:

The patient is diagnosed with flu.