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IMPLEMENTION OF FORWARD CHAINING

python.py - C:/Users/admin/Downloads/python.py (3.10.8)

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```
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.")
```

IDLE Shell 3.10.8

File Edit Shell Debug Options Window Help

```
Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/admin/Downloads/python.py ==========
The patient is diagnosed with flu.
>>>
```