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Experiment 8: Implementation of Forward Chaining

Program:

```
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()  
  
# Check if flu or cold is inferred  
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.
```

```
** Process exited - Return Code: 0 **
```

```
Press Enter to exit terminal
```

```
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```