Distributed Ticket Booking System - Demo Playbook

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1. STARTUP

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1) Open 3 terminals for the nodes:

Node1 (Leader):

cd ~/Desktop/distributed_booking

source venv/bin/activate

PYTHONPATH=. python3 nodes/node.py node1 127.0.0.1:60051
"node1=127.0.0.1:60051,node2=127.0.0.1:60052,node3=127.0.0.1:60053"

Node2:

PYTHONPATH=. python3 nodes/node.py node2 127.0.0.1:60052
"node1=127.0.0.1:60051,node2=127.0.0.1:60052,node3=127.0.0.1:60053"

Node3:

PYTHONPATH=. python3 nodes/node.py node3 127.0.0.1:60053
"node1=127.0.0.1:60051,node2=127.0.0.1:60052,node3=127.0.0.1:60053"

2) Open 1 terminal for the LLM Server:

python3 llm/llm_server.py

3) Open 1 terminal for the client:

PYTHONPATH=. python3 client/client.py 127.0.0.1:60051

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2. CLIENT COMMANDS

> login <username>

> get

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> reserve <S#>

> ask <question>

> quit
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3. TESTING

Basic:

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> login vaibhav

> get

> reserve S5
```

Verify:

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python3 - <<'PY'
import json
for f in ("node_node1.json","node_node2.json","node_node3.json"):
    d=json.load(open(f))
    print(f, "=>", d.get("seats",{}).get("S5"))
PY
```

Failover:

Stop node1 -> Try reserve -> FAIL

Restart nodes with node2 first -> node2 becomes leader.

Concurrency:

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python3 scripts/concurrent_reserve.py
```

LLM Demo:

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> ask why did my booking fail?
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Reset cluster:

pkill -f node.py

rm node_node1.json node_node2.json node_node3.json