

Cloud Computing Experiment 4

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Output Screen shots:

1a: Pyenv installed and local Python version changed to 3.6.8

```
# To deactivate an active environment, use
#
# $ conda deactivate

Retrieving notices: ...working... done
pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455$ S
```

a. 2a: Initial leader election has occurred, and first value has replicated.

```
pes2ug20cs455@pes2ug20cs455: ~/CC_E4_PES2UG20CS455/raftos
(base) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node1_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Done writing BEST_HACKATHON
Check the .log and .state_machine files!

(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node2_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000

(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node3_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
```

b. 2b: Leader crashed, new leader elected, and second value replicated.

```
pes2ug20cs455@pes2ug20cs455: ~/CC_E4_PES2UG20CS455/raftos
(base) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ python node.py --node 1
^CTraceback (most recent call last):
  File "node.py", line 88, in <module>
    loop.run_forever()
  File "/home/pes2ug20cs455/anaconda3/envs/py3.8.11/lib/python3.8/asyncio/base_events.py", line 570,
in run_forever
    self._run_once()
  File "/home/pes2ug20cs455/anaconda3/envs/py3.8.11/lib/python3.8/asyncio/base_events.py", line 1823,
in _run_once
    event_list = self._selector.select(timeout)
  File "/home/pes2ug20cs455/anaconda3/envs/py3.8.11/lib/python3.8/selectors.py", line 468, in select
    fd_event_list = self._selector.poll(timeout, max_ev)
KeyboardInterrupt
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$
```

```
pes2ug20cs455@pes2ug20cs455: ~/CC_E4_PES2UG20CS455/raftos
(base) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node1_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Done writing BEST_HACKATHON
Check the .log and .state_machine files!

(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node2_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Leader is now: None
Leader is now: 127.0.0.1:8001
Done writing BEST_HACKATHON
Check the .log and .state_machine files!

(base) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node3_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Leader is now: None
Leader is now: 127.0.0.1:8001
```

- c. 2c: Old leader comes back online, but becomes a follower instead and updates its old state to its new state.

```
(base) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node1_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Done writing BEST_HACKATHON
Check the .log and .state_machine files!tail: node1_CUSTOMLOG.log: file truncated
Leader is now: 127.0.0.1:8001
```

```
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node2_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Leader is now: None
Leader is now: 127.0.0.1:8001
Done writing BEST_HACKATHON
Check the .log and .state_machine files!
```

```
(base) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ conda activate py3.8.11
(py3.8.11) pes2ug20cs455@pes2ug20cs455:~/CC_E4_PES2UG20CS455/raftos$ tail -f node3_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Leader is now: None
Leader is now: 127.0.0.1:8001
```

d.