

## UE20CS351-CC LAB-4

| NAME    | SRN           | CLASS & SECTION |
|---------|---------------|-----------------|
| VIJAY J | PES2UG20CS815 | 6 - J           |

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

```
pes2ug20cs815@pop-os: ~/CC_E4_PES2UG20CS815
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815$ ls -a
.  .. raftos
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815$ python3 -V
Python 3.10.6
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815$ pyenv versions
* system (set by /home/pes2ug20cs815/.pyenv/version)
  3.6.8
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815$ pyenv local 3.6.8
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815$ python3 -V
Python 3.6.8
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815$ la -a
.  .. .python-version raftos
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815$
```

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

```
pes2ug20cs815@pop-os: ~/CC_E4_PES2UG20CS815/raftos
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos$ python node.py - node 1
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos$ tail -f node1_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000
Done writing VARIABLE
Check the .log and .state_machine files!

pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos$ python node.py - node 2
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos$ tail -f node2_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000

pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos$ python node.py - node 3
pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos$ tail -f node3_CUSTOMLOG.log
Leader is now: 127.0.0.1:8000

```

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

|   |  |
|---|--|
| <pre>yncio/base_events.py", line 438, in run_forever     self._run_once()     File "/home/pes2ug20cs815/.pyenv/versions/3.6.8/lib/python3.6/as yncio/base_events.py", line 1415, in _run_once     event_list = self._selector.select(timeout)     File "/home/pes2ug20cs815/.pyenv/versions/3.6.8/lib/python3.6/se lectors.py", line 445, in select     fd_event_list = self._epoll.poll(timeout, max_ev) KeyboardInterrupt pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$</pre> | <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ tail -f node1_CU STOMLOG.log Leader is now: 127.0.0.1:8000 Done writing VARIABLE Check the .log and .state_machine files!</pre>   |
| <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ python node.py --node 2</pre>  | <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ tail -f node2_CU STOMLOG.log Leader is now: 127.0.0.1:8000 Leader is now: None Leader is now: 127.0.0.1:8001 Done writing VARIABLE Check the .log and .state_machine files!</pre> |
| <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ python node.py --node 3</pre>  | <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ tail -f node3_CU STOMLOG.log Leader is now: 127.0.0.1:8000 Leader is now: None Leader is now: 127.0.0.1:8001</pre>  |

[5] 0: bash\* "pop-os" 08:43 22-Mar-23

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

|  |  |
|--|--|
| <pre>File "/home/pes2ug20cs815/.pyenv/versions/3.6.8/lib/python3.6/asyn cio/base_events.py", line 1415, in _run_once     event_list = self._selector.select(timeout)     File "/home/pes2ug20cs815/.pyenv/versions/3.6.8/lib/python3.6/se lectors.py", line 445, in select     fd_event_list = self._epoll.poll(timeout, max_ev) KeyboardInterrupt pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ python node.py - -node 1 ^[[1;5c^[[1;5D</pre> | <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ tail -f node1_C USTOMLOG.log Leader is now: 127.0.0.1:8000 Done writing VARIABLE Check the .log and .state_machine files!tail: node1_CUSTOMLOG.log : file truncated Leader is now: 127.0.0.1:8001</pre> |
| <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ python node.py - -node 2</pre>  | <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ tail -f node2_C USTOMLOG.log Leader is now: 127.0.0.1:8000 Leader is now: None Leader is now: 127.0.0.1:8001 Done writing VARIABLE Check the .log and .state_machine files!</pre>                       |
| <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ python node.py - -node 3</pre>  | <pre>pes2ug20cs815@pop-os:~/CC_E4_PES2UG20CS815/raftos\$ tail -f node3_C USTOMLOG.log Leader is now: 127.0.0.1:8000 Leader is now: None Leader is now: 127.0.0.1:8001</pre>  |

[5] 0: python\* "pop-os" 08:44 22-Mar-23