

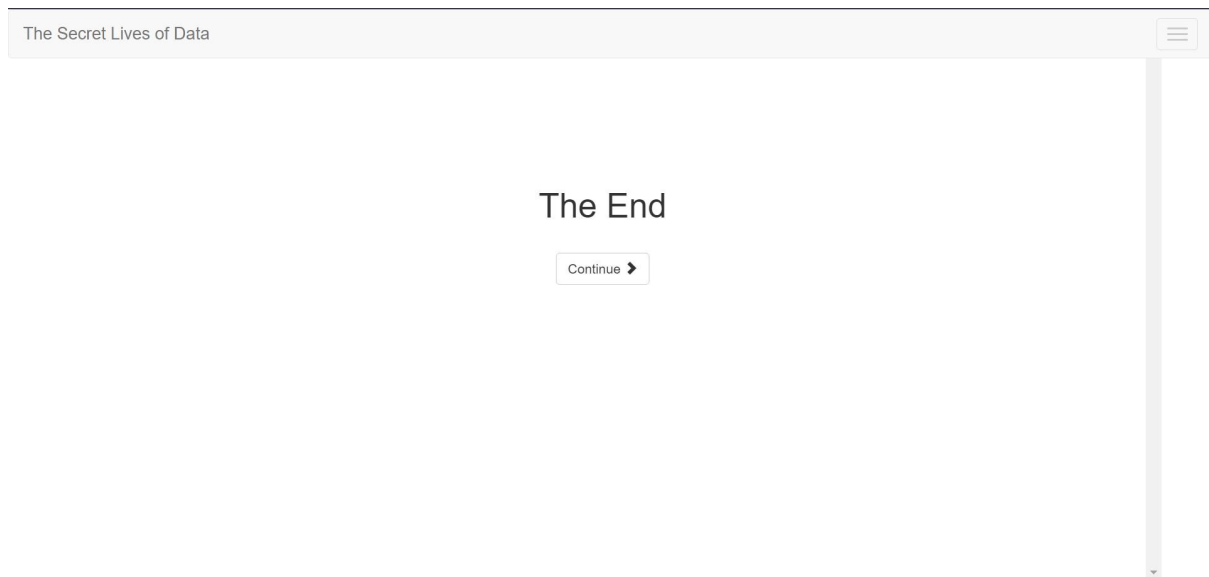
Cloud Computing Lab

Experiment - 4

Consensus Algorithms: Raft

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Semester : VI semester 'A' section

1_a.jpg



1_b.jpg

```
Using /opt/anaconda3/lib/python3.8/site-packages/msgpack_python-0.4.8-py3.8-macosx-10.9-x86_64.egg
Searching for cryptography==3.3
Best match: cryptography 3.3
Processing cryptography-3.3-py3.8-macosx-10.9-x86_64.egg
cryptography 3.3 is already the active version in easy-install.pth

Using /opt/anaconda3/lib/python3.8/site-packages/cryptography-3.3-py3.8-macosx-10.9-x86_64.egg
Searching for six==1.15.0
Best match: six 1.15.0
Adding six 1.15.0 to easy-install.pth file

Using /opt/anaconda3/lib/python3.8/site-packages
Searching for cffi==1.14.5
Best match: cffi 1.14.5
Adding cffi 1.14.5 to easy-install.pth file

Using /opt/anaconda3/lib/python3.8/site-packages
Searching for pycparser==2.20
Best match: pycparser 2.20
Adding pycparser 2.20 to easy-install.pth file

Using /opt/anaconda3/lib/python3.8/site-packages
Finished processing dependencies for raftos==0.2.6
(base) raftos %
```

2_a.jpg

```
(base) PES1UG19CS019 % tail -f task2_node2.txt
LEADER => 127.0.0.1:8001
LEADER IS NOW NODE 2
```

2_b.jpg

```
(base) PES1UG19CS019 % tail -f task2_node3.txt
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8002
LEADER IS NOW NODE 3
```

2_c.jpg

```
(base) PES1UG19CS019 % tail -f task2_node1.txt
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8001
LEADER => 127.0.0.1:8002
LEADER => 127.0.0.1:8002
LEADER => 127.0.0.1:8002
LEADER => 127.0.0.1:8002
LEADER => 127.0.0.1:8002
LEADER => 127.0.0.1:8002
LEADER => None
LEADER => None
LEADER => None
LEADER => None
LEADER => None
LEADER => None
LEADER => None
```

3_a.jpg

```
1  ==> 127.0.0.1_8000.log <==
2  {"term":30,"command":{"data_id":1}}
3
4  ==> 127.0.0.1_8001.log <==
5  {"term":30,"command":{"data_id":1}}
6  {"term":35,"command":{"data_id":2}}
7
8  ==> 127.0.0.1_8002.log <==
9  {"term":30,"command":{"data_id":1}}
10 {"term":35,"command":{"data_id":2}}
11
12
13 ==> 127.0.0.1_8000.state_machine <==
14 {"data_id":1}
15 ==> 127.0.0.1_8001.state_machine <==
16 {"data_id":2}
17 ==> 127.0.0.1_8002.state_machine <==
18 {"data_id":2}
19
20 ==> 127.0.0.1_8000.storage <==
21 {"term":30,"voted_for":"127.0.0.1:8000"}
22 ==> 127.0.0.1_8001.storage <==
23 {"term":35,"voted_for":"127.0.0.1:8001"}
24 ==> 127.0.0.1_8002.storage <==
25 {"term":38,"voted_for":null}
26
```

3_b.jpg

≡ task3_node1.txt U ✕

PES1UG19CS019 > ≡ task3_node1.txt

```
1    LEADER => 127.0.0.1:8000
2    LEADER -> 1
3    done writing data_id
4    done writing data
5
```

≡ task3_node2.txt U ✕

PES1UG19CS019 > ≡ task3_node2.txt

```
1    LEADER => 127.0.0.1:8000
2    LEADER => 127.0.0.1:8000
3    LEADER => None
4    LEADER => None
5    LEADER => 127.0.0.1:8001
6    LEADER -> 2
7    done writing data_id
8    done writing data
9
```

≡ task3_node3.txt U ✕

PES1UG19CS019 > ≡ task3_node3.txt

```
1    LEADER => 127.0.0.1:8000
2    LEADER => 127.0.0.1:8000
3    LEADER => None
4    LEADER => 127.0.0.1:8001
5    LEADER => 127.0.0.1:8001
6    LEADER => 127.0.0.1:8001
7    LEADER => None
8    LEADER => None
9    LEADER => None
10
```