UE20CS351-CC ASSIGNMENT-4

NAME	SRN	CLASS & SECTION
VIJAY J	PES2UG20CS815	6 - J

1a: Screenshot of Zookeeper Server having started

```
                          /o/apache-zookeeper-3.8.0-bin

 yoyo@zaemon in /opt/apache-zookeeper-3.8.0-bin as 🧙 took 2ms
 λ bin/zkServer.sh start
/usr/bin/java
ZooKeeper JMX enabled by default
Using config: /opt/apache-zookeeper-3.8.0-bin/bin/../conf/zoo.cfg
Starting zookeeper ... STARTED

 yoyo@zaemon in /opt/apache-zookeeper-3.8.0-bin as 🧙 took 1s
 λ _
```

2a: Screenshot of Listing of the created ZNodes

```
WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] create -s /PES2UG20CS815_seq
Created /PES2UG20CS815_seq0000000000
[zk: localhost:2181(CONNECTED) 1] create -e /PES2UG20CS815_eph
Created /PES2UG20CS815_eph
[zk: localhost:2181(CONNECTED) 2] ls /
[PES2UG20CS815_eph, PES2UG20CS815_seq0000000000, zookeeper]
[zk: localhost:2181(CONNECTED) 3]
```

2b: Screenshot of Listing of the deleted ephemeral node

```
WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] ls /
[PES2UG20CS815_seq0000000000, zookeeper]
[zk: localhost:2181(CONNECTED) 1]
```

2c: Screenshot of Data and Metadata associated with the created sequential Znode

```
[zk: localhost:2181(CONNECTED) 2] get -s /PES2UG20CS815_seq0000000000
null
cZxid = 0x4
ctime = Tue Mar 28 06:04:43 IST 2023
mZxid = 0x4
mtime = Tue Mar 28 06:04:43 IST 2023
pZxid = 0x4
cversion = 0
dataVersion = 0
aclVersion = 0
ephemeralOwner = 0x0
dataLength = 0
numChildren = 0
[zk: localhost:2181(CONNECTED) 3]
```

2d: Screenshot of Listing of all the children nodes

```
WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] create /PES2UG20CS815
Created /PES2UG20CS815
[zk: localhost:2181(CONNECTED) 1] create /PES2UG20CS815/J
Created /PES2UG20CS815/J
[zk: localhost:2181(CONNECTED) 2] create /PES2UG20CS815/VIJAY
Created /PES2UG20CS815/VIJAY
[zk: localhost:2181(CONNECTED) 3] ls /PES2UG20CS815
[J, VIJAY]
[zk: localhost:2181(CONNECTED) 4]
```

3a: Screenshot of each of the clients listing all the znodes

```
                                    ./start_terminals.sh /o/apache-zookeeper-3.8.0-bin
0x6, and digest value as 6101373741
2023-03-28 06:16:07,658 [myid:] - INFO  [main:o.a.z.s.p.FileTxnSnapLog@372] - 11 txns loaded in 10 ms
2023-03-28 06:16:07,658 [myid:] - INFO  [main:o.a.z.s.ZKDatabase@289] - Snapshot loaded in 33 ms, highest zxid is 0x11, digest is 62917
20741
2023-03-28 06:16:07,660 [myid:] - INFO  [main:o.a.z.s.p.FileTxnSnapLog@479] - Snapshotting: 0x11 to /opt/apache-zookeeper-3.8.0-bin/dat
a/version-2/snapshot.11
2023-03-28 06:16:07,662 [myid:] - INFO  [main:o.a.z.s.ZooKeeperServer@547] - Snapshot taken in 2 ms
2023-03-28 06:16:07,683 [myid:] - INFO  [ProcessThread(sid:0 cport:2181)::o.a.z.s.PrepRequestProcessor@138] - PrepRequestProcessor (sid
:0) started, reconfigEnabled=false
2023-03-28 06:16:07,683 [myid:] - INFO  [main:o.a.z.s.RequestThrottler@75] - zookeeper.request_throttler.shutdownTimeout = 10000 ms
2023-03-28 06:16:07,722 [myid:] - INFO  [main:o.a.z.s.ContainerManager@84] - Using checkIntervalMs=60000 maxPerMinute=10000 maxNeverUse
dIntervalMs=0
2023-03-28 06:16:07,723 [myid:] - INFO  [main:o.a.z.a.ZKAuditProvider@42] - ZooKeeper audit is disabled.

2023-03-28 06:16:36,302 [myid:] - INFO  [SyncThread:0:o.a.z.s.p.FileTxnLog@285] - Creating new log file: log.12
```

```
                                   │WATCHER::                          │blishment complete on server localhost/[0:0:0
WATCHER::                          │                                   │:0:0:0:0:1]:2181, session id = 0x1000019c8210
                                   │WatchedEvent state:SyncConnected type:None│002, negotiated timeout = 30000
WatchedEvent state:SyncConnected type:None pa│path:null                │
th:null                            │[zk: localhost:2181(CONNECTED) 0] create -s │WATCHER::
[zk: localhost:2181(CONNECTED) 0] create /PES│-e /PES2UG20CS815/candidate │
2UG20CS815                         │org.apache.commons.cli.UnrecognizedOptionEx│WatchedEvent state:SyncConnected type:None pa
Created /PES2UG20CS815             │ception: Unrecognized option: -s-e │th:null
[zk: localhost:2181(CONNECTED) 1] create -s -│[zk: localhost:2181(CONNECTED) 1] create -s │[zk: localhost:2181(CONNECTED) 0] create -s -
e /PES2UG20CS815/candidate         │ -e /PES2UG20CS815/candidate │e /PES2UG20CS815/candidate
Created /PES2UG20CS815/candidate0000000000│Created /PES2UG20CS815/candidate0000000001│Created /PES2UG20CS815/candidate0000000002
[zk: localhost:2181(CONNECTED) 2] ls /PES2UG2│[zk: localhost:2181(CONNECTED) 2] ls /PES2U│[zk: localhost:2181(CONNECTED) 1] ls /PES2UG2
0CS815                             │G20CS815                           │0CS815
[candidate0000000000, candidate0000000001, ca│[candidate0000000000, candidate0000000001,│[candidate0000000000, candidate0000000001, ca
ndidate0000000002]                 │candidate0000000002]               │ndidate0000000002]
[zk: localhost:2181(CONNECTED) 3] │[zk: localhost:2181(CONNECTED) 3] │[zk: localhost:2181(CONNECTED) 2]
[0] 0:bash*                                                          "yoyo@zaemon:/opt/apac" 06:20 28-Mar-23
```

3b: Screenshot of the Watched Event and the Zookeeper Server logs


```
                                          ./start_terminals.sh /o/apache-zookeeper-3.8.0-bin        Q    :    _  ▫  ×
 0x6, and digest value as 6101373741
2023-03-28 06:16:07,658 [myid:] - INFO  [main:o.a.z.s.p.FileTxnSnapLog@372] - 11 txns loaded in 10 ms
2023-03-28 06:16:07,658 [myid:] - INFO  [main:o.a.z.s.ZKDatabase@289] - Snapshot loaded in 33 ms, highest zxid is 0x11, digest is 62917
20741
2023-03-28 06:16:07,660 [myid:] - INFO  [main:o.a.z.s.p.FileTxnSnapLog@479] - Snapshotting: 0x11 to /opt/apache-zookeeper-3.8.0-bin/dat
a/version-2/snapshot.11
2023-03-28 06:16:07,662 [myid:] - INFO  [main:o.a.z.s.ZooKeeperServer@547] - Snapshot taken in 2 ms
2023-03-28 06:16:07,683 [myid:] - INFO  [ProcessThread(sid:0 cport:2181)::o.a.z.s.PrepRequestProcessor@138] - PrepRequestProcessor (sid
:0) started, reconfigEnabled=false
2023-03-28 06:16:07,683 [myid:] - INFO  [main:o.a.z.s.RequestThrottler@75] - zookeeper.request_throttler.shutdownTimeout = 10000 ms
2023-03-28 06:16:07,722 [myid:] - INFO  [main:o.a.z.s.ContainerManager@84] - Using checkIntervalMs=60000 maxPerMinute=10000 maxNeverUse
dIntervalMs=0
2023-03-28 06:16:07,723 [myid:] - INFO  [main:o.a.z.a.ZKAuditProvider@42] - ZooKeeper audit is disabled.

2023-03-28 06:16:36,302 [myid:] - INFO  [SyncThread:0:o.a.z.s.p.FileTxnLog@285] - Creating new log file: log.12
```
```
[zk: localhost:2181(CONNECTED) 3] quit                            ctime = Tue Mar 28 06:19:08 IST 2023
                                  WATCHER::                       mZxid = 0x17
WATCHER::                                                         mtime = Tue Mar 28 06:19:08 IST 2023
                                  WatchedEvent state:Closed type:None path:nu  pZxid = 0x17
WatchedEvent state:Closed type:None path:null ll                 cversion = 0
2023-03-28 06:24:00,043 [myid:] - INFO  [main 2023-03-28 06:24:34,728 [myid:] - INFO  [ma  dataVersion = 0
-EventThread:o.a.z.ClientCnxn$EventThread@568 in:o.a.z.ZooKeeper@1232] - Session: 0x10000  aclVersion = 0
] - EventThread shut down for session: 0x1000 19c8210001 closed  ephemeralOwner = 0x1000019c8210001
019c8210000                       2023-03-28 06:24:34,728 [myid:] - INFO  [ma  dataLength = 0
2023-03-28 06:24:00,043 [myid:] - INFO  [main in-EventThread:o.a.z.ClientCnxn$EventThread  numChildren = 0
:o.a.z.ZooKeeper@1232] - Session: 0x1000019c8 @568] - EventThread shut down for session:  [zk: localhost:2181(CONNECTED) 3]
210000 closed                     0x1000019c8210001               WATCHER::
2023-03-28 06:24:00,045 [myid:] - ERROR [main 2023-03-28 06:24:34,732 [myid:] - ERROR [ma
:o.a.z.u.ServiceUtils@42] - Exiting JVM with  in:o.a.z.u.ServiceUtils@42] - Exiting JVM w  WatchedEvent state:SyncConnected type:NodeDel
code 0                            ith code 0                      eted path:/PES2UG20CS815/candidate0000000001
[yoyo@zaemon apache-zookeeper-3.8.0-bin]$      [yoyo@zaemon apache-zookeeper-3.8.0-bin]$ _
[0] 0:bash*                                                      "yoyo@zaemon:/opt/apac" 06:24 28-Mar-23
```

3c: Screenshot of the old leader coming back and having a new sequence number


```
                                          ./start_terminals.sh /o/apache-zookeeper-3.8.0-bin        Q    :    _  ▫  ×
 0x6, and digest value as 6101373741
2023-03-28 06:16:07,658 [myid:] - INFO  [main:o.a.z.s.p.FileTxnSnapLog@372] - 11 txns loaded in 10 ms
2023-03-28 06:16:07,658 [myid:] - INFO  [main:o.a.z.s.ZKDatabase@289] - Snapshot loaded in 33 ms, highest zxid is 0x11, digest is 62917
20741
2023-03-28 06:16:07,660 [myid:] - INFO  [main:o.a.z.s.p.FileTxnSnapLog@479] - Snapshotting: 0x11 to /opt/apache-zookeeper-3.8.0-bin/dat
a/version-2/snapshot.11
2023-03-28 06:16:07,662 [myid:] - INFO  [main:o.a.z.s.ZooKeeperServer@547] - Snapshot taken in 2 ms
2023-03-28 06:16:07,683 [myid:] - INFO  [ProcessThread(sid:0 cport:2181)::o.a.z.s.PrepRequestProcessor@138] - PrepRequestProcessor (sid
:0) started, reconfigEnabled=false
2023-03-28 06:16:07,683 [myid:] - INFO  [main:o.a.z.s.RequestThrottler@75] - zookeeper.request_throttler.shutdownTimeout = 10000 ms
2023-03-28 06:16:07,722 [myid:] - INFO  [main:o.a.z.s.ContainerManager@84] - Using checkIntervalMs=60000 maxPerMinute=10000 maxNeverUse
dIntervalMs=0
2023-03-28 06:16:07,723 [myid:] - INFO  [main:o.a.z.a.ZKAuditProvider@42] - ZooKeeper audit is disabled.

2023-03-28 06:16:36,302 [myid:] - INFO  [SyncThread:0:o.a.z.s.p.FileTxnLog@285] - Creating new log file: log.12
```
```
JLine support is enabled                                          ctime = Tue Mar 28 06:19:08 IST 2023
2023-03-28 06:25:18,496 [myid:localhost:2181] WATCHER::          mZxid = 0x17
- INFO  [main-SendThread(localhost:2181):o.a                     mtime = Tue Mar 28 06:19:08 IST 2023
.z.ClientCnxn$SendThread@1444] - Session esta WatchedEvent state:Closed type:None path:nu  pZxid = 0x17
blishment complete on server localhost/[0:0:0 ll                 cversion = 0
:0:0:0:0:1]:2181, session id = 0x1000019c8210 2023-03-28 06:24:34,728 [myid:] - INFO  [ma  dataVersion = 0
003, negotiated timeout = 30000   in:o.a.z.ZooKeeper@1232] - Session: 0x10000  aclVersion = 0
                                  19c8210001 closed               ephemeralOwner = 0x1000019c8210001
WATCHER::                         2023-03-28 06:24:34,728 [myid:] - INFO  [ma  dataLength = 0
                                  in-EventThread:o.a.z.ClientCnxn$EventThread  numChildren = 0
WatchedEvent state:SyncConnected type:None pa @568] - EventThread shut down for session:  [zk: localhost:2181(CONNECTED) 3]
th:null                           0x1000019c8210001               WATCHER::
[zk: localhost:2181(CONNECTED) 0] create -s - 2023-03-28 06:24:34,732 [myid:] - ERROR [ma
e /PES2UG20CS815/candidate        in:o.a.z.u.ServiceUtils@42] - Exiting JVM w  WatchedEvent state:SyncConnected type:NodeDel
Created /PES2UG20CS815/candidate0000000003    ith code 0                      eted path:/PES2UG20CS815/candidate0000000001
[zk: localhost:2181(CONNECTED) 1] _           [yoyo@zaemon apache-zookeeper-3.8.0-bin]$
[0] 0:bash*                                                      "yoyo@zaemon:/opt/apac" 06:26 28-Mar-23
```