

TestCase description:

for Testcase sequence digrams, they are decribed in the “Lab2 Design-Report.pdf” file.

run-part1.sh & run-part2.sh : This Script files corresponds to the automation of the “*For manual Test cases entered as Input by user*” case discussed above. This script is executable and has all permissions. User Just need to run this script and Terminals Pop up and the user need to enter various values depending on the statements in the terminal and the Application can be tested. **User Input Needed. The first or second line output in terminal will convey the operation performed by that process. See Appendix: 1 and Appendix 2**

lab2-run-test-case.sh: This Script file corresponds to the automation of the “*For Test cases file as Input*” case discussed above. This script is executable and has all permissions. The script will execute in different Terminals and an output file “**event-log1.csv**”and/or “**event-log2.csv**” **database file** is created by the Gateway with the tuples containing time stamp values, deviceId, deviceType, currentState, event and inferredActivity from sensors and devices. **No Need of User Input. Please wait till all the execution completes in 3 terminals and the output from the programs stop (Doesn’t move).** See Appendix: 2

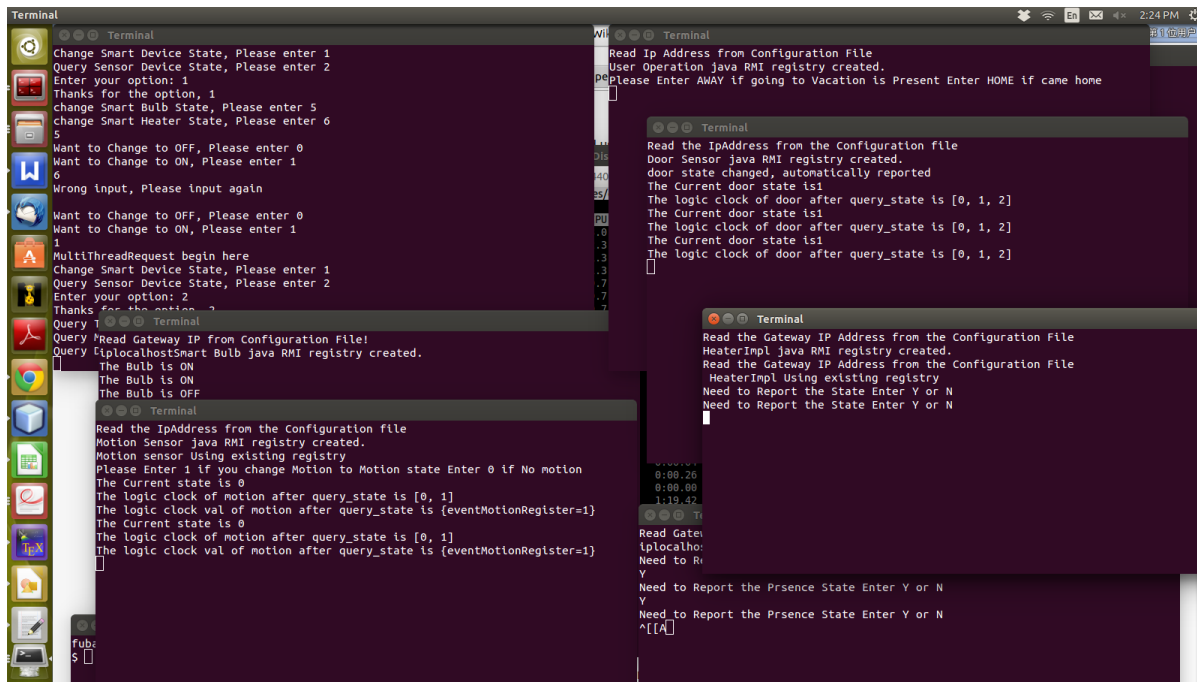
Appendix 1: part1 Ring Algorithm

```
Terminal
MultiThreadReactive java RMI registry created.
Do you want to perform Leader Election please enter 1
The logic clock of registering to Gateway Front-End is [0, 2]
The event value of Gateway Front-End is (eventBulbRegister=2)
The logic clock of registering to Gateway Front-End is [0, 2, 3]
The event value of Gateway Front-End is (eventDoorRegister=3, eventBulbRegister=2)
The logic clock of registering to Gateway Front-End is [0, 2, 3, 4]
The event value of Gateway Front-End is (eventDoorRegister=3, eventBulbRegister=2, eventHeaterRegister=4)
The logic clock of registering to Gateway Front-End is [0, 2, 3, 4, 5]
The event value of Gateway Front-End is (eventDoorRegister=3, eventBulbRegister=2, eventMotionRegister=5, eventHeaterRegister=4)
log dadad type 0 name TEMPERATURE
The logic clock of registering to Gateway Front-End is [0, 2, 3, 4, 5, 6]
The event value of Gateway Front-End is (eventDoorRegister=3, eventBulbRegister=2, eventMotionRegister=5, eventTemperatureRegister=6, eventHeaterRegister=4)
Y
The election is won by GATEWAY
The Leader and Time Server isGATEWAY
Broadcasting the Time to Slaves.....
Broadcasting Done and Time offset is adjusted in Slaves
FlagClockSynchronizationFinished changed
[]
Read the IpAddress from the Configuration file
Door Sensor java RMI registry created.
Do you want to perform Leader Election please enter Y or N
The election is won by GATEWAY
The Leader and Time Server isGATEWAY
[]
Backend Data Base java RMI registry created.
Ready to Log data from other devices and sensors
Do you want to perform Leader Election please enter Y or N
Y
The string is7deln7deln7deln3deln8deln1deln2deln5deln6
Gate way is the Leader
came into door
The election is won by GATEWAY
The Leader and Time Server isGATEWAY
came into flag
The offsetvalue for time is set by Using TimeStamp from Master to :36
[]

Terminal
Read Gateway IP Address from Configuration File!
Temp Sensor java RMI registry created.
Do you want to perform Leader Election please enter Y or N
The election is won by GATEWAY
The Leader and Time Server isGATEWAY
The offsetvalue for time is set by Using TimeStamp from Master to :24
[]
Using the s
[]
Read Ip Address from Configuration File
per Operation java RMI registry created.
Please Enter AWAY if going to Vacation is Present Enter HOME if came home
[]
[]
Read Gateway IP from Configuration File!
localhostSmart Bulb java RMI registry created.
Do you want to perform Leader Election please enter Y or N
The election is won by GATEWAY
The Leader and Time Server isGATEWAY
The offsetvalue for
[]

Terminal
Read Gateway IP from Configuration File!
localhost245 bulb enter here
Need to Report the Prsence State Enter Y or N
[]
[]
Read the Gateway IP Address from the Configuration File
HeaterImpl java RMI registry created.
Do you want to perform Leader Election please enter Y or N
The election is won by GATEWAY
The Leader and Time Server isGATEWAY
The offsetvalue for time is set by Using TimeStamp from Master to :33
[]
```

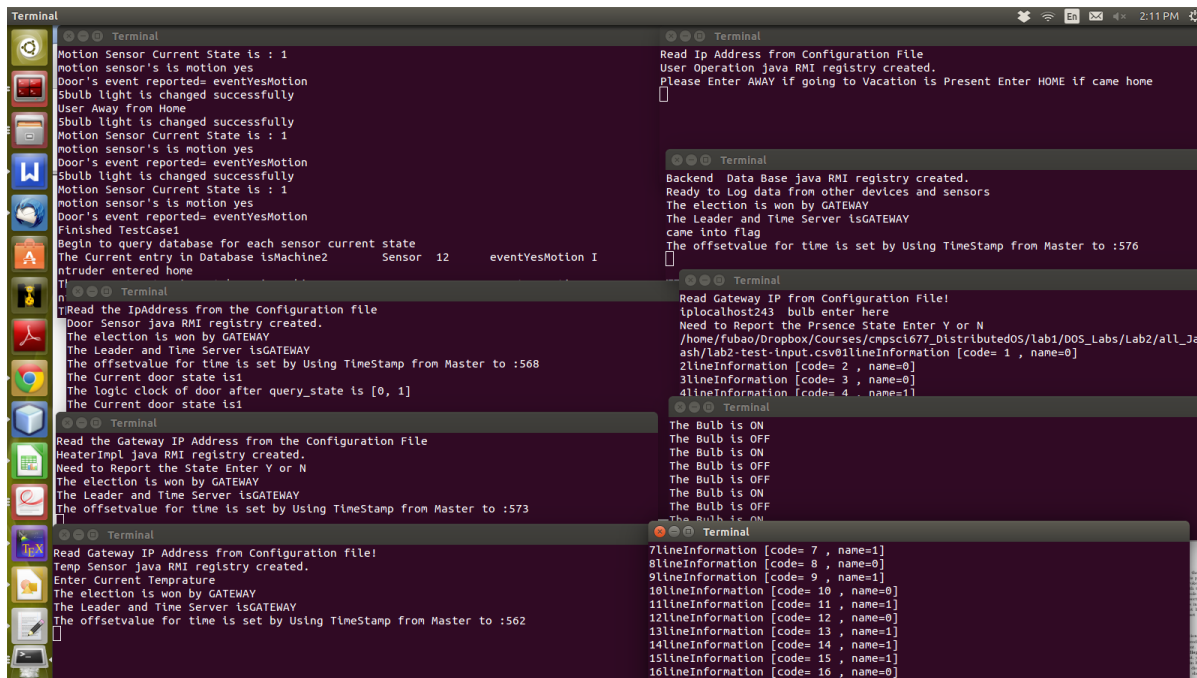
Appendix 2: part2 Logical clock



Appendix 3: test-cases , event ordering and automated part3

input file:lab2-test-input

output file: event-log1.csv and event-log2.csv



Note:

we run our test part1, part2 and part3 successfully in our ubuntu platform , without too much memory used, and we can get the right output result.

But when we run in the edlab, we have small problem sometimes, which is out of memor. Is it restricted by memory using in the edlab?