# **Programming lists:**

# **Class BackendDatabaseimpl**

Design the backendDatabase process for store data, update, and query by front-end gateway

### Class BroadcastResult

Broadcast to all the processes the message class used by any proceses

#### Class BroadcastTimeToSlaves

New Thread of BroadcastResult

# Class requestTimeBerkleyAlgo

Use BerkleyAlgorithm to get information about time from other process

#### Class bulbSmart

Bulb class for bulb smart device to regist, report state to gateway and be changed state by gateway

### **Class doorSensorImpl**

doorSensorImpl class for door to regist, report state to gateway and be queried state by gateway

# **Class HeaterImpl**

Class HeaterImpl for door to regist, report state to gateway and be queried state by gateway

# **Class motionSensorImpl**

Class motionSensorImpl for door to regist, report state to gateway and be queried state by gateway

### **Class PresenceImpl**

Class PresenceImpl for door to regist, report state to gateway to differentiate between user and intruder

# **Class UserOperation**

Class UserOperation for User to regist, SET "HOME" or "AWAY" to gateway

### Interface RMIBackendDataBaseInterfaces

Common RMI remote interface for database to do election leader, timeStamp providing and token ring algorithms

#### Interface RMIDevicesInterfaces

Common RMI remote interface for sensors and gateway to query state and do leader election and token ring algorithm interface

### **Interface SmartCtrlInterfaces**

Common RMI remote interface for device to be changed state and do leader election and token ring algorithm interface

# **Interface GatewayAllInterfaces**

Common RMI remote For sensors and devices to register, and report state to gateway

# Interface UserOperationInterface

Common RMI remote For user to receive text message from gateway when there is a intruder

# **Opencsv library:**

Class CSVParser

Class CSVReader

Class CSVWriter

Designed for convenient to write and open file as database

In-line documentation is recorded in the source code in-line with comments

Also, we have java documentation which is included in the folders.