

# Programming lists:

## **Class GwServerInterfaceImpl**

Implement the gateway as a master to connect with sensors and devices

## **Class GwServerInterfaceImplRep**

Implement the gateway replication as gateway's replica to connect with sensors and devices and keep consistency with GwServerInterfaceImpl

## **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 state by gateway and be queried

## **Class HeaterImpl**

Class HeaterImpl for door to regist, report state to gateway by gateway

## **Class motionSensorImpl**

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

## **Class PresenceImpl**

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

## **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.**