BBM104 ASSIGNMENT 2 REPORT

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Programming Language : Java

1. Introduction:

The new home systems industry is growing to include smart home systems. As such, the frequency of systems that allow people to remotely control their homes is increasing. These systems, which make peoples's lives much easier, are attractive to many people. This code is a simple example of this systems

2. Description of the System:

The system includes three types of smart home accessories. Smart Lamps, Smart Plug and Smart Cameras. Smart lamps are lamps that can be controlled simply by remote spesific commands. Smart cameras can be simply remotely controlled home device that can record and calculate how much recordings. Smart plugs are home devices that can show what is plugged in and how much energy is consumed. This whole system allows these devices to be controlled with certain commands.

3. Controling Time:

The System is autonomus and understand given rules. It is a part that we can start by taking the time from the user and then control it with skipminutes and settime commands. Control of time allows us to calculate in camera and plugs.

4. Benefits of System and OOP:

As you can see in the UML diagram, I took care to use 4 basic oop rules, especially inteheritance. Object-Oriented programming allows us to actually create each home devices and assign tasks to them. A code with proper use of principles of OOP has shown how effective Java can be for smart home systems.

HomeDevices
- status : boolean
- setStatus(boolean) : void
- getStatus() : boolean
- getStatusinStringFormat() : String
- zreport(String) : void

Arrays
- zreport : List<String>
- combinedList : ArrayList<Object[]>
- SmartPlugs : List<SmartPlug>
- Alldevices : List<String>
- switchlist : List<String>
- SmartLamps : List<SmartLamp>
- SmartColorLamps : List<SmartColorLamp>
- oldlist : List<String>
- SmartCameras : List<SmartCamera>
- Addingelement(List<?>, ?) : void
- adding(String) : void
- remove(String) : void
- setInitialtime(String) : void
- sorterofcombinedlist() : void
- ChangeName(String) : void
- switchmethod(String) : void
- PlugedIn(String) : void
- PlugedOut(String) : void
- ZReport() : void
- stringtime(String) : String

Lamps
- brightness : int
- name : String
- kelvin : int
- getKelvinforWriting() : String
- ChangeWhite(String) : void
- ChangeColor(String) : void
- getName() : String
- getBrightness() : int
- setBrightness(int) : void
- ChangeBrightness(String) : void
- zreport(String) : void
- ChangeKelvin(String) : void
- setKelvin(int) : void
- getKelvin() : int
- ChangeColorcode(String) : void
- setName(String) : void

SmartCamera
- timeforclass : LocalDateTime
- megabytesPerMinute : double
- storageUsed : double
- name : String
- getName() : String
- updateStorageUsed(double) : void
- zreport(String) : void
- minutes(LocalDateTime) : int
- getMegabytesPerMinute() : double
- getStorageUsed() : double
- setName(String) : void

SmartPlug
- ampere : double
- voltage : double
- totalEnergyConsumption : double
- name : String
- plugstatus : boolean
- timeforclass : LocalDateTime
- setVoltage(double) : void
- setnewtime(LocalDateTime) : void
- zreport(String) : void
- setAmpere(double) : void
- updateTotalEnergyConsumption(double) : void
- setName(String) : void
- setPlugstatus(boolean) : void
- minutes(LocalDateTime) : double
- getEnergy() : double
- getName() : String

SmartColorLamp
- colorCode : String
- colorMode : boolean
- getColorCode() : String
- getColorMode() : Boolean
- checker(String) : boolean
- zreport(String) : void
- setColorCode(String) : void
- setBrightness(int) : void
- controller(String) : boolean
- setColorMode(boolean) : void

SmartLamp
- zreport(String) : void

TimeAdjuster
- localDateTime : LocalDateTime
- timeString : String
- formatter : DateTimeFormatter
- controllerandadder(String, LocalDateTime) : void
- SkipMinutes(String) : void
- nop() : void
- getLocalDateTime() : LocalDateTime
- setSwitchTime(String) : void
- setinitialtime(String) : void
- converttodate(String) : LocalDateTime
- timechanger(LocalDateTime, int) : void
- Settime(String) : void

ReaderAndWriter
- num : int
- writer : BufferedWriter
- reader : BufferedReader
- filewriter(String) : void
- fileclose() : void
- readFile() : void

Main
- main(String[]) : void