#### LOCK CLASS

The Lock class contains the functions and variables for handling the lock interface and its associated hardware controls

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| Properties | | |
| iLock | ILock \* | iLock is a pointer to a ILock type interface which is implemented in the HardwareControl class. The iLock will essentially point to a HardwareControl object which it can use to interact with the hardware IO. |
| lock | Boolean | The lock is a Boolean property that describes the status of the lock switch on the board and needs to be otherwise true in order to run a washing program. |
| Operations | | |
| Lock(): *default constructor of the class* | | |
| Lock(ILock \*) : *constructor of the class which takes an ILock pointer and assigns it to iLock* | | |
| lockMachine() : void  *This is the polling function to check what the lock switch status is and will turn on or turn off the lock.* | | |
| checkLock(): Boolean  *Returns status of lock switch on the board.* | | |
| setLock(Boolean ): void  *Is the setter function for lock property.* | | |
| setInterface(ILock \*) : void  *Assigns the pointer to ILock object(actually HardwareControl object) in its argument to the iLock property.* | | |
| Remarks:  All functions are implemented. The classes are yet to be tested. | | |

#### SOAP CLASS

The Lock class contains the functions and variables for handling the lock interface and its associated hardware controls

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| Properties | | |
| iSoap | ISoap \* | iSoap is a pointer to an ISoap type interface which is implemented in the HardwareControl class. The iSoap will essentially point to a HardwareControl object which it can use to interact with the hardware IO. |
| soapCpt1 | Boolean | The soapCpt1 is a Boolean property that describes the status of the soap compartment 1 switch on the board and needs to be otherwise true in order to run a washing program. |
| soapCpt2 |  | The soapCpt2 is a Boolean property that describes the status of the soap compartment 2 switch on the board and needs to be otherwise true in order to run a washing program. |
| Operations | | |
| Soap(): *default constructor of the class* | | |
| Soap(ISoap \*) : *constructor of the class which takes an ISoap pointer and assigns it to iSoap* | | |
| checkCpt1() : boolean  *This is the polling function that will check if soap switch 1 is turned on and will turn on soap 1 LED accordingly.* | | |
| checkCpt2() : boolean  *This is the polling function that will check if soap switch 2 is turned on and will turn on soap 2 LED accordingly.* | | |
| lockCpt1(Boolean ): void  *Is the setter function for soapCpt1 property, and will turn the soap 1 LED on or off according to the Boolean argument provided.* | | |
| lockCpt2(Boolean ): void  *Is the setter function for soapCpt2 property, and will turn the soap 2 LED on or off according to the Boolean argument provided.* | | |
| setInterface(ISoap \*) : void  *Assigns the pointer to ISoap object(actually HardwareControl object) in its argument to the iSoap property.* | | |
| Remarks:  All functions are implemented. The classes are yet to be tested. | | |

#### PROGRAMEXECUTOR CLASS

The Program Executor class contains the functions and variables for handling the intermediate classes that interact with various hardware control interfaces.

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| Properties | | |
| mProgramSettings | ProgramSettings \* | mProgramSettings is a pointer to an ProgramSettings type object which contains information on the various programs available and their associated costs. |
| mCoinWallet | CoinWallet \* | mCoinWallet is a pointer to an CoinWallet type object which contains functions and variables related to the amount of money the user puts in the laundry machine. |
| mWater | Water | mWater is an object of type Water which contains various variables and functions related to controlling the water-related hardware of the machine. |
| mTemperature | Temperature | mTemperature is an object of type Temparature which contains various variables and functions related to controlling the heater and temperature related hardware of the machine. |
| mSoap | Soap | mSoap is an object of type Soap which contains various variables and functions related to controlling the two soap compartments and their related hardware on the machine. |
| mLock | Lock | mLock is an object of type Lock which contains various variables and functions related to controlling the lock of the machine and its related hardware. |
| mMotor | Motor | mMotor is an object of type Motor which contains various variables and functions related to controlling the motor and its related hardware of the machine. |
| mBuzzer | Buzzer | mBuzzer is an object of type Buzzer which contains various variables and function related to controlling the buzzer and its related hardware of the machine. |
| Operations |  |  |
| Soap(): *default constructor of the class* | | |
| ProgramExecutor(IBuzzer\* b, IMotor\* m, ILock\* l, ISoap\* s, ITemperature\* t, IWater\* w) : *constructor of the class which takes an ISoap, ILock, IMotor, IBuzzer, Itemperature and IWater pointer and assigns it to the respective Lock, Buzzer, Motor, Soap, Temperature and Water objects* | | |
| Start(ProgramSettings \*) : boolean  *This is the polling function that will check if soap switch 1 is turned on and will turn on soap 1 LED accordingly.* | | |
| StepSwitches() : boolean  *This is the polling function that will check if soap switch 2 is turned on and will turn on soap 2 LED accordingly.* | | |
| StepCoinWallet() : boolean  *Is the setter function for soapCpt1 property, and will turn the soap 1 LED on or off according to the Boolean argument provided.* | | |
| IsReady(char prog) : boolean  *Is the setter function for soapCpt2 property, and will turn the soap 2 LED on or off according to the Boolean argument provided.* | | |
| setCoinWallet(CoinWallet\* c): void  *Assigns the pointer to ISoap object(actually HardwareControl object) in its argument to the iSoap property.* | | |
| Remarks:  All functions are implemented. The classes are yet to be tested. | | |
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