# ArduinoConfiguration

Package in package 'Class Model'

ArduinoConfiguration

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

## ArduinoConfiguration diagram

Class diagram in package 'ArduinoConfiguration'

ArduinoConfiguration

Version 1.0

chanaka created on 6/2/2017. Last modified 6/2/2017



ArduinoConfiguration

## Analog

Class in package 'ArduinoConfiguration'

Analog

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private analog (Class) Analog |

| OPERATIONS |
| --- |
| analogRead (pin : int ) : int Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| analogWrite (pin : int , value : int ) : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Arduino

Class in package 'ArduinoConfiguration'

Arduino

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chanaka created on 6/2/2017. Last modified 6/2/2017

| ATTRIBUTES |
| --- |
| analog : Analog Private = new Analog()  [ Is static False. Containment is Not Specified. ] |
| ANALOG : byte Public = 2  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| con : Connection Private = new Connection()  [ Is static False. Containment is Not Specified. ] |
| digital : Digital Private = new Digital()  [ Is static False. Containment is Not Specified. ] |
| events : Event Private = new Event()  [ Is static False. Containment is Not Specified. ] |
| HIGH : byte Public = 1  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| I2C\_MODE\_READ\_CONTINUOUSLY : byte Public = 0x10  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| I2C\_MODE\_READ\_ONCE : byte Public = 0x08  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| I2C\_MODE\_STOP\_READING : byte Public = 0x18  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| I2C\_MODE\_WRITE : byte Public = 0x00  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| INPUT : byte Public = 0  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| led : LED Private = new LED()  [ Is static False. Containment is Not Specified. ] |
| LOW : byte Public = 0  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| NONE : int Public = -1  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| number : Numbers Private = new Numbers()  [ Is static False. Containment is Not Specified. ] |
| OUTPUT : byte Public = 1  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| pinMode : PinModeConfig Private = new PinModeConfig()  [ Is static False. Containment is Not Specified. ] |
| pinmode : PinModeConfig Private = new PinModeConfig()  [ Is static False. Containment is Not Specified. ] |
| port : GetPort Private = new GetPort()  [ Is static False. Containment is Not Specified. ] |
| PWM : byte Public = 3  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| servo : Servo Private = new Servo()  [ Is static False. Containment is Not Specified. ] |
| SERVO : byte Public = 4  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| setting : Settings Private = Settings.getSetting()  [ Is static False. Containment is Not Specified. ] |
| wire : Wire Private = new Wire()  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private digital (Class) Digital |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private wire (Class) Wire |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private led (Class) LED |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private events (Class) Event |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private pinMode (Class) PinModeConfig |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private con (Class) Connection |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private number (Class) Numbers |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private servo (Class) Servo |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private port (Class) GetPort |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private setting (Class) Settings |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private analog (Class) Analog |

| OPERATIONS |
| --- |
| Arduino (serialPortName : string , baudRate : Int32 , autoStart : bool , delay : int ) : Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| Arduino (serialPortName : string ) : Public  Properties:  initializer = this(serialPortName, 57600, true, 8000)  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| Arduino (serialPortName : string , baudRate : Int32 ) : Public  Properties:  initializer = this(serialPortName, baudRate, true, 8000)  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| Arduino () : Public  Properties:  initializer = this(GetPort.list().ElementAt(GetPort.list().Length - 1), 57600, true, 8000)  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getAnalog () : Analog Public  analog functions  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getDigital () : Digital Public  digital functions  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getEvents () : Event Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getLED () : LED Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getNumbers () : Numbers Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getServo () : Servo Public  servo functions  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getSettings () : Settings Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getWire () : Wire Public  wire functions  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| setPinMode () : PinModeConfig Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Connection

Class in package 'ArduinoConfiguration'

Connection

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chanaka created on 6/2/2017. Last modified 6/2/2017

| ATTRIBUTES |
| --- |
| analogPinUpdated : Event.AnalogPinUpdated Private  [ Is static False. Containment is Not Specified. ] |
| ard : Arduino Private = new Arduino()  [ Is static False. Containment is Not Specified. ] |
| didI2CDataReveive : Event.DidI2CDataReveive Private  [ Is static False. Containment is Not Specified. ] |
| digitalPinUpdated : Event.DigitalPinUpdated Private  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private con (Class) Connection |

| OPERATIONS |
| --- |
| Close () : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| Open () : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| processInput () : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Digital

Class in package 'ArduinoConfiguration'

Digital

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private digital (Class) Digital |

| OPERATIONS |
| --- |
| digitalRead (pin : int ) : int Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| digitalWrite (pin : int , value : byte ) : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Event

Class in package 'ArduinoConfiguration'

Event

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private events (Class) Event |

| OPERATIONS |
| --- |
| AnalogPinUpdated (pin : int , value : int ) : void Public  Properties:  delegate = true  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| DidI2CDataReveive (address : byte , register : byte , data : byte[] ) : void Public  Properties:  delegate = true  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| DigitalPinUpdated (pin : byte , state : byte ) : void Public  Properties:  delegate = true  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## GetPort

Class in package 'ArduinoConfiguration'

GetPort

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private port (Class) GetPort |

| OPERATIONS |
| --- |
| list () : string Public    Properties:  array = []  [ Is static True. Is abstract False. Is return array True. Is query False. Is synchronized False. ] |

## LED

Class in package 'ArduinoConfiguration'

LED

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ATTRIBUTES |
| --- |
| ard : Arduino Private = new Arduino()  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private led (Class) LED |

| OPERATIONS |
| --- |
| blinkLED (targetPin : int , numBlinks : int , blinkRate : int ) : void Public  Blinking an LED This function blinks an LED light as many times as requested, at the requested blinking rate.  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Numbers

Class in package 'ArduinoConfiguration'

Numbers

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ATTRIBUTES |
| --- |
| ard : Arduino Private = new Arduino()  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private number (Class) Numbers |

| OPERATIONS |
| --- |
| blinkNumber (numString : String ) : void Private  Blinking a Number Back in the dawn age of computing sometimes things went wrong enough that the only way to communicate an error to the user was to blink a light. When dealing with micro-controllers this can sometimes come in handy. The following function blinks a sequence to indicate a number visually.  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## PinModeConfig

Class in package 'ArduinoConfiguration'

PinModeConfig

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private pinMode (Class) PinModeConfig |

| OPERATIONS |
| --- |
| pinMode (pin : int , mode : byte , \_serialPort : SerialPort ) : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Servo

Class in package 'ArduinoConfiguration'

Servo

Version 1.0 Phase 1.0 Proposed

chanaka created on 6/2/2017. Last modified 6/2/2017

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private servo (Class) Servo |

| OPERATIONS |
| --- |
| servoWrite (pin : int , angle : int ) : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Settings

Class in package 'ArduinoConfiguration'

Settings

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| ATTRIBUTES |
| --- |
| \_analogInputData : int Public = new int[64]  [ Is static False. Containment is Not Specified. ] |
| \_delay : int Public  [ Is static False. Containment is Not Specified. ] |
| \_digitalInputData : int Public = new int[64]  [ Is static False. Containment is Not Specified. ] |
| \_digitalOutputData : int Public = new int[64]  [ Is static False. Containment is Not Specified. ] |
| \_executeMultiByteCommand : int Public  [ Is static False. Containment is Not Specified. ] |
| \_locker : object Public  [ Is static False. Containment is Not Specified. ] |
| \_majorVersion : int Public  [ Is static False. Containment is Not Specified. ] |
| \_minorVersion : int Public  [ Is static False. Containment is Not Specified. ] |
| \_multiByteChannel : int Public  [ Is static False. Containment is Not Specified. ] |
| \_parsingSysex : bool Public  [ Is static False. Containment is Not Specified. ] |
| \_readThread : Thread Public  [ Is static False. Containment is Not Specified. ] |
| \_serialPort : SerialPort Public  [ Is static False. Containment is Not Specified. ] |
| \_storedInputData : int Public  [ Is static False. Containment is Not Specified. ] |
| \_sysexBytesRead : int Public  [ Is static False. Containment is Not Specified. ] |
| \_waitForData : int Public  [ Is static False. Containment is Not Specified. ] |
| ANALOG\_MESSAGE : int Public = 0xE0  send data for an analog pin (or PWM)  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| DIGITAL\_MESSAGE : int Public = 0x90  send data for a digital port  Properties:  const = true  [ Is static False. Containment is Not Specified. ] |
| obj : Settings Private = new Settings()  Early, instance will be created at load time  [ Is static True. Containment is Not Specified. ] |
| REPORT\_VERSION : int Public = 0xF9  report firmware version    Properties:  const = true  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private setting (Class) Settings |

| OPERATIONS |
| --- |
| END\_SYSEX () : int Public  start a MIDI SysEx message  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| getSetting () : Settings Public  return Singleton object  [ Is static True. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| I2C\_CONFIG () : int Public  I2C reply messages from an I/O board to a host  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| I2C\_REPLY () : int Public  I2C request messages from a host to an I/O board  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| I2C\_REQUEST () : int Public  end a MIDI SysEx message  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| MAX\_DATA\_BYTES () : int Public  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| REPORT\_ANALOG () : int Public  set a pin to INPUT/OUTPUT/PWM/etc  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| REPORT\_DIGITAL () : int Public  set max angle, minPulse, maxPulse, freq  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| SERVO\_CONFIG () : int Public  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| SET\_PIN\_MODE () : int Public  enable digital input by port  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| Settings () : Public  Constructor  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| START\_SYSEX () : int Public  reset from MIDI  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| SYSTEM\_RESET () : int Public  enable analog input by pin #  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| TOTAL\_PORTS () : int Public  [ Stereotype is «property». Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## Wire

Class in package 'ArduinoConfiguration'

Wire

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| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) | |
| Source: Public (Class) Arduino | Target: Private wire (Class) Wire |

| OPERATIONS |
| --- |
| wireBegin (delay : Int16 ) : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| wireRequest (slaveAddress : byte , slaveRegister : Int16 , data : Int16[] , mode : byte , \_serialPort : SerialPort ) : void Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |