

Code\_generator

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# Chapter 1

## Namespace Index

### 1.1 Packages

Here are the packages with brief descriptions (if available):

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## Chapter 2

# Class Index

### 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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## Chapter 3

# Namespace Documentation

### 3.1 Package common

#### Classes

- enum [ErrorCode](#)
- class [Features](#)

#### 3.1.1 Detailed Description

Common information that needs to be accessed across all the project

#### Author

Miguel Diaz

#### Version

0.1

### 3.2 Package microcontroller

#### Classes

- class [Microcontroller](#)
- class [Pin](#)

### 3.2.1 Detailed Description

[Microcontroller](#) related classes

Author

Miguel Diaz

Version

0.1

## 3.3 Package xmlParser

### Classes

- class [TestMain](#)
- class [XmlOpener](#)

### 3.3.1 Detailed Description

XML parser for microcontroller information and project settings

Author

Miguel Diaz

Version

0.1

## Chapter 4

# Class Documentation

### 4.1 common.ErrorCode Enum Reference

#### Public Attributes

- [NO\\_ERROR](#)

#### 4.1.1 Member Data Documentation

##### 4.1.1.1 NO\_ERROR

`common.ErrorCode.NO_ERROR`

No error message

The documentation for this enum was generated from the following file:

- `src/common/ErrorCode.java`

### 4.2 common.Features Class Reference

#### Static Public Attributes

- static final boolean [DEBUG](#) = false
- static final boolean [VERBOSE](#) = true
- static final String [VERBOSE\\_STR](#) = "# "
- static final String [DEBUG\\_STR](#) = "#\$ "

### 4.2.1 Detailed Description

Class that includes all project features

#### Author

Miguel Diaz

#### Version

0.1

### 4.2.2 Member Data Documentation

#### 4.2.2.1 DEBUG

```
final boolean common.Features.DEBUG = false [static]
```

Enables debug functions

#### 4.2.2.2 DEBUG\_STR

```
final String common.Features.DEBUG_STR = "$ " [static]
```

Debug messages indicator on system console

#### 4.2.2.3 VERBOSE

```
final boolean common.Features.VERBOSE = true [static]
```

Enables console messages

#### 4.2.2.4 VERBOSE\_STR

```
final String common.Features.VERBOSE_STR = "# " [static]
```

Verbose messages indicator on system console

The documentation for this class was generated from the following file:

- src/common/Features.java

## 4.3 microcontroller.Microcontroller Class Reference

### Public Member Functions

- [Microcontroller](#) (Document ucDoc)
- [ErrorCode processDocument](#) ()
- [Pin getPin](#) (int pinNum)
- String [getUc\\_model](#) ()
- String [getUc\\_manufacturer](#) ()
- int [getUc\\_pinNum](#) ()

### 4.3.1 Detailed Description

[Microcontroller](#) related methods

#### Author

Miguel Diaz

#### Version

0.1

### 4.3.2 Constructor & Destructor Documentation

#### 4.3.2.1 Microcontroller()

```
microcontroller.Microcontroller.Microcontroller (  
    Document ucDoc )
```

#### Constructor

##### Parameters

<i>ucDoc</i>	Document obtained from XML file
--------------	---------------------------------

### 4.3.3 Member Function Documentation

#### 4.3.3.1 getPin()

```
Pin microcontroller.Microcontroller.getPin (  
    int pinNum )
```

Get a pin's characteristics

**Parameters**

<i>pinNum</i>	Number of pin
---------------	---------------

**Returns**

[Pin's](#) characteristics

**4.3.3.2 getUc\_manufacturer()**

```
String microcontroller.Microcontroller.getUc_manufacturer ( )
```

Get the microcontroller's manufacturer

**Returns**

[Microcontroller's](#) manufacturer

**4.3.3.3 getUc\_model()**

```
String microcontroller.Microcontroller.getUc_model ( )
```

Get the microcontroller's model

**Returns**

[Microcontroller's](#) model

**4.3.3.4 getUc\_pinNum()**

```
int microcontroller.Microcontroller.getUc_pinNum ( )
```

Get the microcontroller's pins number

**Returns**

Number of pins



## 4.3.3.5 processDocument()

```
ErrorCode microcontroller.Microcontroller.processDocument ( )
```

Process the document obtained from XML file

## Returns

Error status

The documentation for this class was generated from the following file:

- src/microcontroller/Microcontroller.java

## 4.4 microcontroller.Pin Class Reference

### Public Member Functions

- [Pin](#) ()
- void [setFunc\\_vcc](#) (boolean funcState)
- boolean [getFunc\\_vcc](#) ()
- void [setFunc\\_gnd](#) (boolean funcState)
- boolean [getFunc\\_gnd](#) ()
- void [setFunc\\_gpio](#) (boolean funcState)
- boolean [getFunc\\_gpio](#) ()
- void [setFeat\\_int](#) (boolean featState)
- boolean [getFeat\\_int](#) ()
- void [setFeat\\_adc](#) (boolean featState)
- boolean [getFeat\\_adc](#) ()
- void [setFeat\\_uart](#) (boolean featState)
- boolean [getFeat\\_uart](#) ()
- void [setFeat\\_i2c](#) (boolean featState)
- boolean [getFeat\\_i2c](#) ()
- void [setFeat\\_spi](#) (boolean featState)
- boolean [getFeat\\_spi](#) ()
- void [setFeat\\_clock](#) (boolean featState)
- boolean [getFeat\\_clock](#) ()
- void [setFeat\\_timer](#) (boolean featState)
- boolean [getFeat\\_timer](#) ()
- void [setFeat\\_reset](#) (boolean featState)
- boolean [getFeat\\_reset](#) ()
- void [setInt](#) (String feature)
- String [getInt](#) ()
- void [setAdc](#) (String feature)
- String [getAdc](#) ()
- void [setUart](#) (String feature)
- String [getUart](#) ()
- void [setI2c](#) (String feature)

- String [getI2c](#) ()
- void [setSpi](#) (String feature)
- String [getSpi](#) ()
- void [setClock](#) (String feature)
- String [getClock](#) ()
- void [setReset](#) (String feature)
- String [getReset](#) ()
- void [setTimer](#) (String feature)
- String [getTimer](#) ()
- void [setName](#) (String pinName)
- String [getName](#) ()
- void [setNumber](#) (int pinNum)
- int [getNumber](#) ()
- void [setPort](#) (String pinPort)
- String [getPort](#) ()

### Static Public Attributes

- static final boolean [ENABLE](#) = true
- static final boolean [DISABLE](#) = false
- static final boolean [DEF\\_FUNCTION](#) = DEF\_BOOLEAN
- static final boolean [DEF\\_FEATURE\\_AV](#) = DEF\_BOOLEAN
- static final String [DEF\\_FEATURE](#) = DEF\_STRING
- static final String [DEF\\_NAME](#) = DEF\_STRING
- static final int [DEF\\_NUMBER](#) = DEF\_INT
- static final String [DEF\\_PORT](#) = DEF\_STRING

#### 4.4.1 Detailed Description

Basic pin object.

- [Pin](#) necessary characteristics:
  - Name
  - Number
- [Pin](#) optional characteristics:
  - Port
- [Pin](#) main functions:
  - VCC
  - GND
  - GPIO
- [Pin](#) features:
  - Interruption
  - ADC

- UART
- I2C
- SPI
- Clock
- Reset

**Author**

Miguel Diaz

**Version**

0.1

## 4.4.2 Constructor & Destructor Documentation

### 4.4.2.1 Pin()

```
microcontroller.Pin.Pin ( )
```

Initialize all pin's characteristics and features to their default values

## 4.4.3 Member Function Documentation

### 4.4.3.1 getAdc()

```
String microcontroller.Pin.getAdc ( )
```

Get the pin's ADC name

**Returns**

Pin's ADC

### 4.4.3.2 getClock()

```
String microcontroller.Pin.getClock ( )
```

Get the pin's clock name

**Returns**

Pin's clock

#### 4.4.3.3 getFeat\_adc()

```
boolean microcontroller.Pin.getFeat_adc ( )
```

See if the pin has an ADC

##### Returns

Feature availability

#### 4.4.3.4 getFeat\_clock()

```
boolean microcontroller.Pin.getFeat_clock ( )
```

See if the pin supports a clock

##### Returns

Feature availability

#### 4.4.3.5 getFeat\_i2c()

```
boolean microcontroller.Pin.getFeat_i2c ( )
```

See if the pin has I2C

##### Returns

Feature availability

#### 4.4.3.6 getFeat\_int()

```
boolean microcontroller.Pin.getFeat_int ( )
```

See if the pin has an interruption

##### Returns

Feature availability

#### 4.4.3.7 getFeat\_reset()

```
boolean microcontroller.Pin.getFeat_reset ( )
```

See if the pin has a reset feature

##### Returns

Feature availability

#### 4.4.3.8 getFeat\_spi()

```
boolean microcontroller.Pin.getFeat_spi ( )
```

See if the pin has SPI

##### Returns

Feature availability

#### 4.4.3.9 getFeat\_timer()

```
boolean microcontroller.Pin.getFeat_timer ( )
```

See if the pin supports a timer

##### Returns

Feature availability

#### 4.4.3.10 getFeat\_uart()

```
boolean microcontroller.Pin.getFeat_uart ( )
```

See if the pin has a UART

##### Returns

Feature availability

#### 4.4.3.11 `getFunc_gnd()`

```
boolean microcontroller.Pin.getFunc_gnd ( )
```

See if the pin is GND

##### Returns

Function availability

#### 4.4.3.12 `getFunc_gpio()`

```
boolean microcontroller.Pin.getFunc_gpio ( )
```

See if the pin is GPIO

##### Returns

Function availability

#### 4.4.3.13 `getFunc_vcc()`

```
boolean microcontroller.Pin.getFunc_vcc ( )
```

See if the pin is Vcc

##### Returns

Function availability

#### 4.4.3.14 `getI2c()`

```
String microcontroller.Pin.getI2c ( )
```

Get the pin's I2C name

##### Returns

Pin's I2C

#### 4.4.3.15 getInt()

```
String microcontroller.Pin.getInt ( )
```

Get the pin's interruption name

##### Returns

Pin's interruption

#### 4.4.3.16 getName()

```
String microcontroller.Pin.getName ( )
```

Get the pin's name

##### Returns

Pin's name

#### 4.4.3.17 getNumber()

```
int microcontroller.Pin.getNumber ( )
```

Get the pin's number

##### Returns

Pin's number

#### 4.4.3.18 getPort()

```
String microcontroller.Pin.getPort ( )
```

Get the pin's port

##### Returns

Pin's port

#### 4.4.3.19 `getReset()`

```
String microcontroller.Pin.getReset ( )
```

Get the pin's reset name

Returns

[Pin's reset](#)

#### 4.4.3.20 `getSpi()`

```
String microcontroller.Pin.getSpi ( )
```

Get the pin's SPI name

Returns

[Pin's SPI](#)

#### 4.4.3.21 `getTimer()`

```
String microcontroller.Pin.getTimer ( )
```

Get the pin's timer name

Returns

[Pin's timer](#)

#### 4.4.3.22 `getUart()`

```
String microcontroller.Pin.getUart ( )
```

Get the pin's UART name

Returns

[Pin's UART](#)

#### 4.4.3.23 `setAdc()`

```
void microcontroller.Pin.setAdc (
    String feature )
```

Set the pin's ADC



## Parameters

<i>feature</i>	Pin's ADC
----------------	-----------

## 4.4.3.24 setClock()

```
void microcontroller.Pin.setClock (
    String feature )
```

Set the pin's clock

## Parameters

<i>feature</i>	Pin's clock
----------------	-------------

## 4.4.3.25 setFeat\_adc()

```
void microcontroller.Pin.setFeat_adc (
    boolean featState )
```

Set the pin's ADC feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.26 setFeat\_clock()

```
void microcontroller.Pin.setFeat_clock (
    boolean featState )
```

Set the pin's Clock feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.27 setFeat\_i2c()

```
void microcontroller.Pin.setFeat_i2c (
    boolean featState )
```

Set the pin's I2C feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.28 setFeat\_int()

```
void microcontroller.Pin.setFeat_int (
    boolean featState )
```

Set the pin's interruption feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.29 setFeat\_reset()

```
void microcontroller.Pin.setFeat_reset (
    boolean featState )
```

Set the pin's reset feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.30 setFeat\_spi()

```
void microcontroller.Pin.setFeat_spi (
    boolean featState )
```

Set the pin's SPI feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.31 setFeat\_timer()

```
void microcontroller.Pin.setFeat_timer (
    boolean featState )
```

Set the pin's timer feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.32 setFeat\_uart()

```
void microcontroller.Pin.setFeat_uart (
    boolean featState )
```

Set the pin's UART feature

## Parameters

<i>featState</i>	Feature availability
------------------	----------------------

## 4.4.3.33 setFunc\_gnd()

```
void microcontroller.Pin.setFunc_gnd (
    boolean funcState )
```

Set the pin to GND status

## Parameters

<i>funcState</i>	Function availability
------------------	-----------------------

## 4.4.3.34 setFunc\_gpio()

```
void microcontroller.Pin.setFunc_gpio (
    boolean funcState )
```

Set the pin to GPIO status

## Parameters

<i>funcState</i>	Function availability
------------------	-----------------------

## 4.4.3.35 setFunc\_vcc()

```
void microcontroller.Pin.setFunc_vcc (
    boolean funcState )
```

Set the pin to Vcc status

## Parameters

<i>funcState</i>	Function availability
------------------	-----------------------

## 4.4.3.36 setI2c()

```
void microcontroller.Pin.setI2c (
    String feature )
```

Set the pin's I2C

## Parameters

<i>feature</i>	<a href="#">Pin's I2C</a>
----------------	---------------------------

## 4.4.3.37 setInt()

```
void microcontroller.Pin.setInt (
    String feature )
```

Set the pin's interruption

## Parameters

<i>feature</i>	<a href="#">Pin's interruption</a>
----------------	------------------------------------

## 4.4.3.38 setName()

```
void microcontroller.Pin.setName (
    String pinName )
```

Set the pin's name

## Parameters

<i>pinName</i>	<a href="#">Pin's name</a>
----------------	----------------------------

## 4.4.3.39 setNumber()

```
void microcontroller.Pin.setNumber (
    int pinNum )
```

Set the pin's number



## Parameters

<i>pinNum</i>	Pin's number
---------------	--------------

## 4.4.3.40 setPort()

```
void microcontroller.Pin.setPort (
    String pinPort )
```

Set the pin's port

## Parameters

<i>pinPort</i>	Pin's port
----------------	------------

## 4.4.3.41 setReset()

```
void microcontroller.Pin.setReset (
    String feature )
```

Set the pin's reset

## Parameters

<i>feature</i>	Pin's reset
----------------	-------------

## 4.4.3.42 setSpi()

```
void microcontroller.Pin.setSpi (
    String feature )
```

Set the pin's SPI

## Parameters

<i>feature</i>	Pin's SPI
----------------	-----------

## 4.4.3.43 setTimer()

```
void microcontroller.Pin.setTimer (
    String feature )
```

Set the pin's timer

## Parameters

<i>feature</i>	Pin's timer
----------------	-------------

## 4.4.3.44 setUart()

```
void microcontroller.Pin.setUart (
    String feature )
```

Set the pin's UART

## Parameters

<i>feature</i>	Pin's UART
----------------	------------

## 4.4.4 Member Data Documentation

## 4.4.4.1 DEF\_FEATURE

```
final String microcontroller.Pin.DEF_FEATURE = DEF_STRING [static]
```

Default value for pin's feature as not available

## 4.4.4.2 DEF\_FEATURE\_AV

```
final boolean microcontroller.Pin.DEF_FEATURE_AV = DEF_BOOLEAN [static]
```

Default value for pin's feature availability as not available

## 4.4.4.3 DEF\_FUNCTION

```
final boolean microcontroller.Pin.DEF_FUNCTION = DEF_BOOLEAN [static]
```

Default value for pin's function as not enabled

## 4.4.4.4 DEF\_NAME

```
final String microcontroller.Pin.DEF_NAME = DEF_STRING [static]
```

Default value for pin's name

#### 4.4.4.5 DEF\_NUMBER

```
final int microcontroller.Pin.DEF_NUMBER = DEF_INT [static]
```

Default value for pin's number

#### 4.4.4.6 DEF\_PORT

```
final String microcontroller.Pin.DEF_PORT = DEF_STRING [static]
```

Default value for pin's port

#### 4.4.4.7 DISABLE

```
final boolean microcontroller.Pin.DISABLE = false [static]
```

Disable value for features and functions

#### 4.4.4.8 ENABLE

```
final boolean microcontroller.Pin.ENABLE = true [static]
```

Enable value for features and functions

The documentation for this class was generated from the following file:

- src/microcontroller/Pin.java

## 4.5 xmlParser.TestMain Class Reference

### Static Public Member Functions

- static void [main](#) (String[] openOption)

#### 4.5.1 Detailed Description

Dummy main class for testing the other classes

Author

Miguel Diaz

#### 4.5.2 Member Function Documentation

##### 4.5.2.1 main()

```
static void xmlParser.TestMain.main (  
    String [] openOption ) [static]
```

Main without GUI

## Parameters

<i>openOption</i>	Options include:
-------------------	---------------------

The documentation for this class was generated from the following file:

- src/xmlParser/TestMain.java

## 4.6 xmlParser.XmlOpener Class Reference

### Public Member Functions

- [XmlOpener](#) ()
- [ErrorCode OpenFile](#) (String fileName)
- Document [getParsedDoc](#) ()

### 4.6.1 Detailed Description

Open and process XML files

#### Author

H112943

#### Version

0.1

### 4.6.2 Constructor & Destructor Documentation

#### 4.6.2.1 XmlOpener()

```
xmlParser.XmlOpener.XmlOpener ( )
```

Constructor

### 4.6.3 Member Function Documentation

#### 4.6.3.1 OpenFile()

```
ErrorCode xmlParser.XmlOpener.OpenFile (
    String fileName )
```

Open the XML file

**Parameters**

<i>fileName</i>	Complete path and name of XML file
-----------------	------------------------------------

**Returns**

Error code

The documentation for this class was generated from the following file:

- src/xmlParser/XmlOpener.java

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