

Code_generator

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Chapter 1

Namespace Index

1.1 Packages

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

common	5
configurator	5
framework	6
microcontroller	6
xmlParser	7

Chapter 2

Class Index

2.1 Class List

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

common.ErrorCode	9
common.Features	10
microcontroller.Microcontroller	11
configurator.GPIO.Mode	14
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configurator.GPIO.Speed	39
xmlParser.TestMain	40
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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 configurator

Classes

- class [PinConf](#)

3.2.1 Detailed Description

Configuration classes

Author

Miguel Diaz

Version

0.1

3.3 Package framework

3.3.1 Detailed Description

Framework information

Author

H112943

Version

0.1

3.4 Package microcontroller

Classes

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

3.4.1 Detailed Description

[Microcontroller](#) related classes

Author

Miguel Diaz

Version

0.1

3.5 Package xmlParser

Classes

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

3.5.1 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 Detailed Description

Error codes enum

Author

Miguel Diaz

Version

0.1

4.1.2 Member Data Documentation

4.1.2.1 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 Member Functions

- static void `verbosePrint` (String verboseMessage)
- static void `debugPrint` (String debugMessage)

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 Function Documentation

4.2.2.1 `debugPrint()`

```
static void common.Features.debugPrint (  
    String debugMessage ) [static]
```

Print Debug message to console

Parameters

<code>debugMessage</code>	Message to display
---------------------------	--------------------

4.2.2.2 `verbosePrint()`

```
static void common.Features.verbosePrint (  
    String verboseMessage ) [static]
```

Print Verbose message to console

Parameters

<i>verboseMessage</i>	Message to display
-----------------------	--------------------

4.2.3 Member Data Documentation

4.2.3.1 DEBUG

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

Enables debug functions

4.2.3.2 DEBUG_STR

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

Debug messages indicator on system console

4.2.3.3 VERBOSE

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

Enables console messages

4.2.3.4 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](#) ()
- [int getUc_gpioNum](#) ()

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_gpioNum()

```
int microcontroller.Microcontroller.getUc_gpioNum ( )
```

Get the number of GPIOs in the microcontroller

Returns

Number of GPIOs

4.3.3.3 getUc_manufacturer()

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

Get the microcontroller's manufacturer

Returns

[Microcontroller](#)'s manufacturer

4.3.3.4 getUc_model()

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

Get the microcontroller's model

Returns

[Microcontroller](#)'s model

4.3.3.5 getUc_pinNum()

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

Get the microcontroller's pins number

Returns

Number of pins

4.3.3.6 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 configurator.GPIO.Mode Enum Reference

Public Attributes

- **MODE_INPUT**
- **MODE_OUTPUT**
- **MODE_ALTERNATE_FUNCTION**
- **MODE_ANALOG**

4.4.1 Detailed Description

GPIO modes

Author

Miguel Diaz

Version

0.1

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

- src/configurator/GPIO/Mode.java

4.5 configurator.GPIO.OutType Enum Reference

Public Attributes

- **OTYPE_PUSH_PULL**
- **OTYPE_OPEN_DRAIN**
- **OTYPE_NOT_AVAILABLE**

4.5.1 Detailed Description

Pin's output type

Author

Miguel Diaz

Version

0.1

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

- src/configurator/GPIO/OutType.java

4.6 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](#) ()
- boolean [isValid](#) ()

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

4.6.1 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

4.6.2 Constructor & Destructor Documentation

4.6.2.1 [Pin\(\)](#)

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

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

4.6.3 Member Function Documentation

4.6.3.1 [getAdc\(\)](#)

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

Get the pin's ADC name

Returns

[Pin's](#) ADC

4.6.3.2 [getClock\(\)](#)

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

Get the pin's clock name

Returns

[Pin's](#) clock

4.6.3.3 getFeat_adc()

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

See if the pin has an ADC

Returns

Feature availability

4.6.3.4 getFeat_clock()

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

See if the pin supports a clock

Returns

Feature availability

4.6.3.5 getFeat_i2c()

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

See if the pin has I2C

Returns

Feature availability

4.6.3.6 getFeat_int()

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

See if the pin has an interruption

Returns

Feature availability

4.6.3.7 getFeat_reset()

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

See if the pin has a reset feature

Returns

Feature availability

4.6.3.8 getFeat_spi()

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

See if the pin has SPI

Returns

Feature availability

4.6.3.9 getFeat_timer()

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

See if the pin supports a timer

Returns

Feature availability

4.6.3.10 getFeat_uart()

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

See if the pin has a UART

Returns

Feature availability

4.6.3.11 `getFunc_gnd()`

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

See if the pin is GND

Returns

Function availability

4.6.3.12 `getFunc_gpio()`

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

See if the pin is GPIO

Returns

Function availability

4.6.3.13 `getFunc_vcc()`

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

See if the pin is Vcc

Returns

Function availability

4.6.3.14 `getI2c()`

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

Get the pin's I2C name

Returns

Pin's I2C

4.6.3.15 getInt()

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

Get the pin's interruption name

Returns

Pin's interruption

4.6.3.16 getName()

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

Get the pin's name

Returns

Pin's name

4.6.3.17 getNumber()

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

Get the pin's number

Returns

Pin's number

4.6.3.18 getPort()

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

Get the pin's port

Returns

Pin's port

4.6.3.19 getReset()

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

Get the pin's reset name

Returns

Pin's reset

4.6.3.20 getSpi()

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

Get the pin's SPI name

Returns

Pin's SPI

4.6.3.21 getTimer()

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

Get the pin's timer name

Returns

Pin's timer

4.6.3.22 getUart()

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

Get the pin's UART name

Returns

Pin's UART

4.6.3.23 isValid()

```
boolean microcontroller.Pin.isValid ( )
```

Check if the pin is correctly initialized

Returns

True if the pin is correctly initialized

4.6.3.24 setAdc()

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

Set the pin's ADC

Parameters

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

4.6.3.25 setClock()

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

Set the pin's clock

Parameters

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

4.6.3.26 setFeat_adc()

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

Set the pin's ADC feature

Parameters

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

4.6.3.27 setFeat_clock()

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

Set the pin's Clock feature

Parameters

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

4.6.3.28 setFeat_i2c()

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

Set the pin's I2C feature

Parameters

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

4.6.3.29 setFeat_int()

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

Set the pin's interruption feature

Parameters

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

4.6.3.30 setFeat_reset()

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

Set the pin's reset feature

Parameters

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

4.6.3.31 setFeat_spi()

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

Set the pin's SPI feature

Parameters

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

4.6.3.32 setFeat_timer()

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

Set the pin's timer feature

Parameters

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

4.6.3.33 setFeat_uart()

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

Set the pin's UART feature

Parameters

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

4.6.3.34 setFunc_gnd()

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

Set the pin to GND status

Parameters

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

4.6.3.35 setFunc_gpio()

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

Set the pin to GPIO status

Parameters

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

4.6.3.36 setFunc_vcc()

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

Set the pin to Vcc status

Parameters

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

4.6.3.37 setI2c()

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

Set the pin's I2C

Parameters

<i>feature</i>	Pin's I2C
----------------	-----------

4.6.3.38 setInt()

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

Set the pin's interruption

Parameters

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

4.6.3.39 setName()

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

Set the pin's name

Parameters

<i>pinName</i>	Pin's name
----------------	------------

4.6.3.40 setNumber()

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

Set the pin's number

Parameters

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

4.6.3.41 setPort()

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

Set the pin's port

Parameters

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

4.6.3.42 setReset()

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

Set the pin's reset

Parameters

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

4.6.3.43 setSpi()

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

Set the pin's SPI

Parameters

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

4.6.3.44 setTimer()

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

Set the pin's timer

Parameters

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

4.6.3.45 setUart()

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

Set the pin's UART

Parameters

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

4.6.4 Member Data Documentation

4.6.4.1 DEF_FEATURE

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

Default value for pin's feature as not available

4.6.4.2 DEF_FEATURE_AV

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

Default value for pin's feature availability as not available

4.6.4.3 DEF_FUNCTION

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

Default value for pin's function as not enabled

4.6.4.4 DEF_NAME

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

Default value for pin's name

4.6.4.5 DEF_NUMBER

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

Default value for pin's number

4.6.4.6 DEF_PORT

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

Default value for pin's port

4.6.4.7 DISABLE

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

Disable value for features and functions

4.6.4.8 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

4.7 configurator.PinConf Class Reference

Public Member Functions

- [PinConf](#) ([Pin](#) gpioPin)
- boolean [isValid](#) ()
- String [getPort](#) ()
- String [getPin](#) ()
- [Mode](#) [getMode](#) ()
- void [setMode](#) ([Mode](#) mode)
- [OutType](#) [getOutType](#) ()
- void [setOutType](#) ([OutType](#) outType)
- [Speed](#) [getSpeed](#) ()
- void [setSpeed](#) ([Speed](#) speed)
- [Pull](#) [getPull](#) ()
- void [setPull](#) ([Pull](#) pull)

Static Public Attributes

- static final [Mode DF_MODE](#) = Mode.MODE_INPUT
- static final [Speed DF_SPEED](#) = Speed.SPEED_FAST
- static final [OutType DF_OUTTYPE](#) = OutType.OTYPE_PUSH_PULL
- static final [Pull DF_PULL](#) = Pull.PULL_NOT_AVAILABLE

4.7.1 Detailed Description

GPIO pin configuration

Author

Miguel Diaz

Version

0.1

4.7.2 Constructor & Destructor Documentation

4.7.2.1 PinConf()

```
configurator.PinConf.PinConf (  
    Pin gpioPin )
```

Constructor

Parameters

<i>gpioPin</i>	Pin information
----------------	-----------------

4.7.3 Member Function Documentation

4.7.3.1 getMode()

```
Mode configurator.PinConf.getMode ( )
```

Get the pin's mode configuration

Returns

Mode

4.7.3.2 getOutType()

```
OutType configurator.PinConf.getOutType ( )
```

Get the pin's output configuration

Returns

Output configuration

4.7.3.3 getPin()

```
String configurator.PinConf.getPin ( )
```

Get the pin's number

Returns

Pin's number

4.7.3.4 getPort()

```
String configurator.PinConf.getPort ( )
```

Get the pin's port

Returns

Port

4.7.3.5 getPull()

```
Pull configurator.PinConf.getPull ( )
```

Get the pin's pull resistor configuration

Returns

Pull Resistor configuration

4.7.3.6 getSpeed()

```
Speed configurator.PinConf.getSpeed ( )
```

Get the pin's speed

Returns

Speed

4.7.3.7 isValid()

```
boolean configurator.PinConf.isValid ( )
```

Check if the GPIO pin is valid

Returns

True if valid

4.7.3.8 setMode()

```
void configurator.PinConf.setMode (
    Mode mode )
```

Set the pin's mode configuration

Parameters

<i>mode</i>	Mode
-------------	------

4.7.3.9 setOutType()

```
void configurator.PinConf.setOutType (
    OutType outType )
```

Set the pin's output configuration

Parameters

<i>outType</i>	Output configuration
----------------	----------------------

4.7.3.10 setPull()

```
void configurator.PinConf.setPull (
    Pull pull )
```

Set the pull resistor configuration

Parameters

<i>pull</i>	Resistor configuration
-------------	------------------------

4.7.3.11 setSpeed()

```
void configurator.PinConf.setSpeed (
    Speed speed )
```

Set the pin's speed

Parameters

<i>speed</i>	Speed
--------------	-------

4.7.4 Member Data Documentation

4.7.4.1 DF_MODE

```
final Mode configurator.PinConf.DF_MODE = Mode.MODE_INPUT [static]
```

Default Pin mode

4.7.4.2 DF_OUTTYPE

```
final OutType configurator.PinConf.DF_OUTTYPE = OutType.OTYPE_PUSH_PULL [static]
```

Default pin's output type

4.7.4.3 DF_PULL

```
final Pull configurator.PinConf.DF_PULL = Pull.PULL_NOT_AVAILABLE [static]
```

Default pin's pull resistor

4.7.4.4 DF_SPEED

```
final Speed configurator.PinConf.DF_SPEED = Speed.SPEED_FAST [static]
```

Default pin's speed

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

- src/configurator/PinConf.java

4.8 configurator.GPIO.Pull Enum Reference

Public Attributes

- **PULL_UP**
- **PULL_DOWN**
- **PULL_NOT_AVAILABLE**

4.8.1 Detailed Description

Pin's pull resistor

Author

Miguel Diaz

Version

0.1

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

- src/configurator/GPIO/Pull.java

4.9 configurator.GPIO.Speed Enum Reference

Public Attributes

- **SPEED_FAST**
- **SPEED_MEDIUM**
- **SPEED_HIGH**
- **SPEED_NOT_AVAILABLE**

4.9.1 Detailed Description

Pin's speed

Author

Miguel Diaz

Version

0.1

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

- `src/configurator/GPIO/Speed.java`

4.10 xmlParser.TestMain Class Reference

Static Public Member Functions

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

4.10.1 Detailed Description

Dummy main class for testing the other classes

Author

Miguel Diaz

4.10.2 Member Function Documentation

4.10.2.1 `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`

4.11 xmlParser.XmlOpener Class Reference

Public Member Functions

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

4.11.1 Detailed Description

Open and process XML files

Author

H112943

Version

0.1

4.11.2 Constructor & Destructor Documentation

4.11.2.1 XmlOpener()

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

Constructor

4.11.3 Member Function Documentation

4.11.3.1 getParsedDoc()

```
Document xmlParser.XmlOpener.getParsedDoc ( )
```

Get the parsed document AFTER opening the file

Returns

Parsed document

4.11.3.2 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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