

Package ‘rsdmx’

July 14, 2015

Version 0.4-7

Date 2015-07-14

Title Tools for Reading SDMX Data and Metadata

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Depends R (>= 2.15)

Imports methods, XML (>= 3.96-1.1), RCurl, plyr, utils

Suggests testthat

Description Set of classes and methods to read data and metadata documents exchanged through the Statistical Data and Metadata Exchange (SDMX) framework, currently focusing on the SDMX XML standard format (SDMX-ML).

License GPL (>= 2)

URL <https://github.com/opensdmx/rsdmx>, <http://www.sdmx.org>

BugReports <https://github.com/opensdmx/rsdmx/issues>

LazyLoad yes

Collate Class-SDMXSchema.R Class-SDMXType.R Class-SDMXStructureType.R
Class-SDMXHeader.R Class-SDMXFooterMessage.R Class-SDMXFooter.R
Class-SDMX.R Class-SDMXGenericData.R Class-SDMXCompactData.R
Class-SDMXUtilityData.R Class-SDMXStructureSpecificData.R
Class-SDMXMessageGroup.R Class-SDMXConcept.R
Class-SDMXConceptScheme.R Class-SDMXConcepts.R Class-SDMXCode.R
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NeedsCompilation no

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Repository CRAN

Date/Publication 2015-07-14 20:40:58

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as.XML-methods

as.XML

Description

a convenience method to get SDMX as XML object

Usage

as.XML(obj)

Arguments

obj An object deriving from class "SDMX"

Value

a object of class "XMLInternalDocument"

Methods

obj = "SDMX" An object deriving from class "SDMX"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

attributes.SDMXComponents

attributes.SDMXComponents

Description

function used to parse the list of 'attribute' components of a SDMX-ML documents

Usage

attributes.SDMXComponents(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

attributes.SDMXComponents is a function used internally to parse the list of attributes during instantiation of "SDMXComponents" objects (used in DataStructures / KeyFamilies)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXComponents-class](#) [SDMXDataStructure-class](#)

class.SDMXMessageGroup

class.SDMXMessageGroup

Description

function used to determine the wrapped object class of a SDMX-ML MessageGroup object

Usage

class.SDMXMessageGroup(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Value

an object of class "character"

Warning

class.SDMXMessageGroup is a function used internally to determine appropriate methods to be used for SDMXMessageGroup objects. At now, the function has been tested to distinguish between embedded dataset objects, either SDMXGenericData or SDMXCompactData, and used to call appropriate as.data.frame method

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXMessageGroup-class](#)

codelists.SDMXCodelists

codelists.SDMXCodelists

Description

function used to parse the list of codelists of a SDMX-ML document

Usage

```
codelists.SDMXCodelists(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

codelists.SDMXCodelists is a function used internally to parse the list of codelists during instantiation of "SDMXCodelists" objects

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXCodelists-class](#) [SDMXCodelist-class](#)

concepts.SDMXConcepts *concepts.SDMXConcepts*

Description

function used to parse the list of concepts of a SDMX-ML documents, to ensure backward compatibility with SDMX 1.0 that does not handle concepts in a concept scheme

Usage

```
concepts.SDMXConcepts(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

concepts.SDMXConcepts is a function used internally to parse the list of concepts during instantiation of "SDMXConcepts" objects

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXConcepts-class](#) [SDMXConcept-class](#)

conceptSchemes.SDMXConcepts
conceptSchemes.SDMXConcepts

Description

function used to parse the list of concepts Schemes of a SDMX-ML documents, as defined from SDMX 2.0 specifications

Usage

```
conceptSchemes.SDMXConcepts(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

`concepts.SDMXConcepts` is a function used internally to parse the list of concepts during instantiation of "SDMXConcepts" objects

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXConcepts-class](#) [SDMXConceptScheme-class](#) [SDMXConcept-class](#)

`datastructures.SDMXDataStructures`

datastructures.SDMXDataStructures

Description

function used to parse the list of datastructures / keyfamilies of a SDMX-ML document

Usage

```
datastructures.SDMXDataStructures(xmlObj)
```

Arguments

`xmlObj` an object of class "XMLInternalDocument"

Warning

`datastructures.SDMXDataStructures` is a function used internally to parse the list of datastructure / keyfamily during instantiation of "SDMXDataStructures" objects

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXDataStructures-class](#) [SDMXDataStructure-class](#)

dimensions.SDMXComponents
dimensions.SDMXComponents

Description

function used to parse the list of 'dimension' components of a SDMX-ML documents

Usage

```
dimensions.SDMXComponents(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

dimensions.SDMXComponents is a function used internally to parse the list of dimensions during instantiation of "SDMXComponents" objects (used in DataStructures / KeyFamilies)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXComponents-class](#) [SDMXDataStructure-class](#)

findNamespace *findNamespace*

Description

function used to find a specific namespace within the available namespaces of an SDMX-ML object

Usage

```
findNamespace(namespaces, messageType)
```

Arguments

namespaces A data.frame giving the id and uri of namespaces available in a SDMX-ML object, typically obtained with [getNamespaces](#)

messageType a character representing a message type

Value

an object of class "character" giving the namespace uri if found in the available namespaces

Warning

findNamespace is a function used internally as utility function in SDMX-ML object parsers.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMX-class getNamespaces](#)

getNamespaces-methods *getNamespaces*

Description

Access the namespaces of the SDMX-ML object

Usage

`getNamespaces(obj)`

Arguments

`obj` An object deriving from class "SDMX"

Value

an data.frame giving the id and uri for each of the namespaces handled in the SDMX-ML document.

Methods

obj An object deriving from class "SDMX"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMX-class](#)

getSDMXFooter-methods *getSDMXFooter*

Description

Access the SDMX Footer

Usage

```
getSDMXFooter(obj)
```

Arguments

obj An object deriving from class "SDMX"

Value

an object of class "SDMXFooter"

Methods

obj = "SDMX" An object deriving from class "SDMX"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXFooter-class](#)

getSDMXHeader-methods *getSDMXHeader*

Description

Access the SDMX header

Usage

```
getSDMXHeader(obj)
```

Arguments

obj An object deriving from class "SDMX"

Value

an object of class "SDMXHeader"

Methods

obj = "SDMX" An object deriving from class "SDMX"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXHeader-class](#)

getSDMXSchema-methods *getSDMXSchema*

Description

Access the SDMX-ML schema version

Usage

`getSDMXSchema(obj)`

Arguments

obj An object deriving from class "SDMX"

Value

an object of class "SDMXSchema"

Methods

obj = "SDMX" An object deriving from class "SDMX"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXSchema-class](#)

getSDMXType-methods *getSDMXType*

Description

Access the type of SDMX object

Usage

getSDMXType(obj)

Arguments

obj An object deriving from class "SDMX"

Value

an object of class "SDMXType"

Methods

obj An object deriving from class "SDMX"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXType-class](#)

getSoapRequestResult *getSoapRequestResult*

Description

function used to extract the SDMX-ML message from a SOAP request response

Usage

getSoapRequestResult(xmlObj)

Arguments

xmlObj object of class "XMLInternalDocument derived from XML package"

Value

an object of class "XMLInternalDocument derived from XML package"

Warning

`getSoapRequestResult` is a function used internally by [readSDMX](#)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMX-class readSDMX](#)

getStructureType-methods
getStructureType

Description

Access the subtype of `SDMXStructureType` object

Usage

`getStructureType(obj)`

Arguments

`obj` An object deriving from class "SDMXStructureType"

Value

an object of class "character"

Methods

obj An object deriving from class "SDMXStructureType"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXStructureType-class](#)

getType-methods *getType*

Description

Access the type of SDMXTYPE object

Usage

getType(obj)

Arguments

obj An object deriving from class "SDMXTYPE"

Value

an object of class "character"

Methods

obj An object deriving from class "SDMXTYPE"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXTYPE-class getSDMXTYPE](#)

getVersion-methods *getVersion*

Description

Access the version of a SDMXSchema object

Usage

getVersion(obj)

Arguments

obj An object deriving from class "SDMXSchema"

Value

an object of class "character"

Methods

obj An object deriving from class "SDMXSchema"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXSchema-class getSDMXSchema](#)

isSoapRequestEnvelope *isSoapRequestEnvelope*

Description

function used to detect if the XML document corresponds to a SOAP request response

Usage

`isSoapRequestEnvelope(xmlObj)`

Arguments

`xmlObj` object of class "XMLInternalDocument derived from XML package"

Value

an object of class "logical"

Warning

`isSoapRequestEnvelope` is a function used internally by [readSDMX](#)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMX-class readSDMX](#)

namespaces.SDMX *namespaces.SDMX*

Description

function used to get the namespaces handled by an SDMX-ML object

Usage

namespaces.SDMX(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Value

an object of class "data.frame" giving the namespace(s) id and uri

Warning

namespaces.SDMX is a function used internally to get the namespaces of the SDMX-ML object through [getNamespaces](#). This last function is used an utility re-used in the different SDMX document parsers.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXType-class getNamespaces](#)

primarymeasure.SDMXComponents
primarymeasure.SDMXComponents

Description

function used to parse the primarymeasure of a SDMX-ML document

Usage

primarymeasure.SDMXComponents(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

primarymeasure.SDMXComponents is a function used internally to parse the primarymeasure during instantiation of "SDMXComponents" objects (used in DataStructures / KeyFamilies)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXComponents-class](#) [SDMXDataStructure-class](#)

readSDMX	<i>readSDMX</i>
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Description

readSDMX is the main function to use to read SDMX data

Usage

```
readSDMX(file, isURL)
```

Arguments

file path to SDMX-ML document that needs to be parsed
isURL a value of class "logical" either the path is an url, and data has to be downloaded from a SDMXweb-repository. Default value is TRUE.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

Examples

```
# SDMX datasets  
#-----  
## Not run:  
# Not run  
# (local dataset examples)  
#with SDMX 2.0  
tmp <- system.file("extdata", "Example_Eurostat_2.0.xml", package="rsdmx")  
sdmx4 <- readSDMX(tmp, isURL = FALSE)
```

```

stats4 <- as.data.frame(sdmx4)
head(stats4)

#with SDMX 2.1
tmpnew <- system.file("extdata","Example_Eurostat_2.1.xml", package="rsdmx")
sdmx5 <- readSDMX(tmpnew, isURL = FALSE)
stats5 <- as.data.frame(sdmx5)
head(stats5)
## End(**Not run**)

## End(Not run)

# Not run by 'R CMD check'
# (reliable remote datasource but with possible occasional unavailability)
#example 1: FAO data
url1 <- paste("http://data.fao.org/sdmx/repository/data/",
              "CROP_PRODUCTION/.156.5312.515./FAO?startPeriod=2008&endPeriod=2008",
              sep = "")
sdmx1 <- readSDMX(url1)
stats1 <- as.data.frame(sdmx1)
head(stats1)

#example 2: OECD data
url2 <- paste("http://stats.oecd.org/restsdmx/sdmx.ashx/GetData/",
              "MIG/TOT.B11.TOT.FRA/OECD?startTime=2011&endTime=2011",
              sep = "")
sdmx2 <- readSDMX(url2)
stats2 <- as.data.frame(sdmx2)
head(stats2)

#example 3: Eurostat data
#using url (Eurostat REST SDMX 2.1)
url3 <- paste("http://ec.europa.eu/eurostat/SDMX/diss-web/rest/data/",
              "cdh_e_fos/..PC.FOS1.BE/?startperiod=2011&endPeriod=2011",
              sep = "")
sdmx3 <- readSDMX(url3)
stats3 <- as.data.frame(sdmx3)
head(stats3)

## End(**Not run**)

# SDMX Concepts / ConceptSchemes
#-----

# Not run by 'R CMD check'
# (reliable remote datasource but with possible occasional unavailability)
csUrl <- paste("http://data.fao.org/sdmx/registry/conceptscheme",
              "/FAO/ALL/LATEST/?detail=full&references=none&version=2.1",
              sep = "")
csobj <- readSDMX(csUrl)
csdf <- as.data.frame(csobj)

```

```

head(csdF)
## End(**Not run**)

# SDMX Codelists
#-----

# Not run by 'R CMD check'
# (reliable remote datasource but with possible occasional unavailability)
clUrl <- "http://data.fao.org/sdmx/registry/codelist/FAO/CL_FAO_MAJOR_AREA/0.1"
clobj <- readSDMX(clUrl)
cldf <- as.data.frame(clobj)
head(cldf)
## End(**Not run**)

# SDMX DataStructureDefinition (DSD)
#-----

# Not run by 'R CMD check'
# (reliable remote datasource but with possible occasional unavailability)
dsdUrl <- paste("http://stats.oecd.org/restsdmx/sdmx.ashx/GetDataStructure/",
               "WATER_ABSTRACT",
               sep = "")
dsd <- readSDMX(dsdUrl)

#get codelists from DSD
cls <- dsd@codelists
codelists <- sapply(cls@codelists, function(x) x@id) #get list of codelists

#get a codelist
codelist <- as.data.frame(dsd@codelists,
                         codelistId = "CL_WATER_ABSTRACT_SOURCE")

#get concepts from DSD
concepts <- as.data.frame(dsd@concepts)

## End(**Not run**)

```

Description

RSDMX is a package to parse/read SDMX documents in R. It provides a set of classes and methods to read data and metadata documents exchanged through the Statistical Data and Metadata Exchange (SDMX) framework. The package currently focuses on the SDMX XML standard format (SDMX-ML).

Details

Package: rsdmx
Type: Package
Version : 0.4-7
Date: 2015-07-14
License: GPL(>=2.0)
LazyLoad: yes

Author(s)

Emmanuel Blondel <emmanuel.blondel1@gmail.com>

SDMX

SDMX

Description

create objects of class SDMX

Usage

SDMX(xmlObj)

Arguments

xmlObj object of class "XMLInternalDocument derived from XML package"

Value

Returns an object of class "SDMX"

Warning

SDMX function is used as internal constructor by readSDMX to instantiate SDMX objects. This function should not be used.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMX-class readSDMX](#)

SDMX-class

Class "SDMX"

Description

An abstract class from which SDMX classes are derived

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; only derived classes can be meaningful

Slots

xmlObj Object of class "XMLInternalDocument" derived from XML package

schema Object of class "SDMXSchema" which handles the version of SDMX-ML implementation

header Object of class "SDMXHeader" which handles the SDMX-ML document header

footer Object of class "SDMXFooter" which handles the SDMX-ML document footer

Methods

as.XML signature(obj = "SDMX"): Retrieves the object of class "XMLInternalDocument" derived from XML package

getSDMXSchema signature(obj = "SDMX"): Get the SDMX-ML schema version

getSDMXHeader signature(obj = "SDMX"): Get the SDMX header object

getSDMXType signature(obj = "SDMX"): Get an object of class "SDMXType"

getSDMXFooter signature(obj = "SDMX"): Get an object of class "SDMXFooter"

Warning

this class is not useful in itself, but all SDMX classes in this package derive from it

Note

Currently, the approach drafted in [r sdmx](#) package was to rely on XML package, read the xml object and store it as part of the SDMX R object. Another approach being investigated is to use XML handlers that could avoid to load the entire XML tree in the SDMX R object (xmlObj). Indeed, SDMX data could be huge and causes issues of memory if the complete XML tree is loaded in the R user session.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXAttribute-class *Class "SDMXAttribute"*

Description

A basic class to handle a SDMX Attribute

Usage

SDMXAttribute(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXComponents-class](#) class

Slots

conceptRef Object of class "character" giving the attribute conceptRef (required)
conceptVersion Object of class "character" giving the attribute concept version
conceptAgency Object of class "character" giving the attribute concept agency
conceptSchemeRef Object of class "character" giving the attribute conceptScheme ref
conceptSchemeAgency Object of class "character" giving the attribute conceptScheme agency
codelist Object of class "character" giving the codelist ref name
codelistVersion Object of class "character" giving the codelist ref version
codelistAgency Object of class "character" giving the codelist ref agency
attachmentLevel Object of class "character" giving the attachment level (e.g. DataSet)
assignmentStatus Object of class "character" giving the assignment status (e.g. Mandatory)
isTimeFormat Object of class "logical"
crossSectionalAttachDataset Object of class "logical"
crossSectionalAttachGroup Object of class "logical"
crossSectionalAttachSection Object of class "logical"
crossSectionalAttachObservation Object of class "logical"
isEntityAttribute Object of class "logical" indicating if the Attribute is an entity Attribute.
 Default value is FALSE
isNonObservationTimeAttribute Object of class "logical" indicating if the Attribute is a non-
 observation Attribute. Default value is FALSE
isCountAttribute Object of class "logical" indicating if the Attribute is a count Attribute. Default
 value is FALSE

isFrequencyAttribute Object of class "logical" indicating if the Attribute is a frequency Attribute. Default value is FALSE

isIdentityAttribute Object of class "logical" indicating if the Attribute is an identity Attribute. Default value is FALSE

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (DataStructures, or DataStructureDefinitions)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXCode-class

Class "SDMXCode"

Description

A basic class to handle a SDMX Code

Usage

SDMXCode(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived class [SDMXCodelists-class](#)

Slots

id Object of class "character" giving the ID of the code (required). In SDMX 2.0 documents, this slot will handle the 'value' attribute

urn Object of class "character" giving the code urn

parentCode Object of class "character" giving the parent code

label Object of class "list" giving the code label (by language). In SDMX 2.0, it takes the code 'Description' element vs. 'Name' element in SDMX 2.1

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (Codelists, or DataStructureDefinition)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXCodelist-class *Class "SDMXCodelist"*

Description

A basic class to handle a SDMX Codelist

Usage

SDMXCodelist(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXCodelists-class](#) classes

Slots

id Object of class "character" giving the ID of the codelist (required)
 agencyID Object of class "character" giving the AgencyID
 version Object of class "character" giving the version
 uri Object of class "character" giving the codelist uri
 urn Object of class "character" giving the codelist urn
 isExternalReference Object of class "logical" indicating if the codelist is an external reference
 isFinal Object of class "logical" indicating if the codelist is final
 validFrom Object of class "character" indicating the start validity period
 validTo Object of class "character" indicating the end validity period
 Name Object of class "list" giving the codelist (by language) - required
 Description Object of class "list" giving the codelist description (by language)
 Code Object of class "list" giving the list of "SDMXCode" objects included in the codelist (see [SDMXCode-class](#))

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (Codelists, or DataStructureDefinition)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXCodelists-class *Class "SDMXCodelists"*

Description

A basic class to handle SDMX Codelists

Usage

SDMXCodelists(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used as target object by [readSDMX](#) , or intend to be used by SDMX derived classes like SDMXDataStructureDefinition (DSD)

Slots

codelists Object of class "list" giving the list of "SDMXCodelist"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXCompactData-class *Class "SDMXCompactData"*

Description

A basic class to handle a SDMX-ML compact data set

Usage

SDMXCompactData(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; will be used by the [readSDMX](#) main parser function

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXComponents-class *Class "SDMXComponents"*

Description

A basic class to handle SDMX Components

Usage

SDMXComponents(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXDataStructure-class](#) class

Slots

Dimensions Object of class "list" giving the list of dimensions (see [SDMXDimension-class](#))

TimeDimension Object of class "SDMXTimeDimension"

PrimaryMeasure Object of class "SDMXPrimaryMeasure"

Attributes Object of class "list" giving the list of attributes (see [SDMXAttribute-class](#))

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (DataStructures, or DataStructureDefinitions)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXConcept-class *Class "SDMXConcept"*

Description

A basic class to handle a SDMX Concept

Usage

SDMXConcept(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXConceptScheme-class](#) and [SDMXConcepts-class](#) classes

Slots

id Object of class "character" giving the ID of the concept (required)
agencyID Object of class "character" giving the AgencyID
version Object of class "character" giving the concept version
uri Object of class "character" giving the concept uri
urn Object of class "character" giving the concept urn
isExternalReference Object of class "logical" indicating if the concept is an external reference
coreRepresentation Object of class "character" giving the core representation
coreRepresentationAgency Object of class "character" giving the core representation agency
parent Object of class "character" giving the concept parent
parentAgency Object of class "character" giving the parentAgency
Name Object of class "list" giving the concept name (by language) - required
Description Object of class "list" giving the concept description (by language)

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (Concepts, or DataStructureDefinition)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXConcepts-class *Class "SDMXConcepts"*

Description

A basic class to handle SDMX Concepts

Usage

SDMXConcepts(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used as target object by [readSDMX](#) (in case of conceptSchemes document), or intend to be used by SDMX derived classes like SDMXDataStructureDefinition (DSD)

Slots

concepts Object of class "list" giving the list of "SDMXConcept". This slot is available to ensure backward compatibility with SDMX 1.0 in SDMX 2.0 or 2.1 documents

conceptSchemes Object of class "list" giving the list of "SDMXConceptScheme", which will encapsulate the list of "SDMXConcept" (defined from SDMX 2.0)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXConceptScheme-class
Class "SDMXConceptScheme"

Description

A basic class to handle a SDMX Concept scheme

Usage

SDMXConceptScheme(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXConcepts-class](#) classes

Slots

id Object of class "character" giving the ID of the concept scheme (required)
 agencyID Object of class "character" giving the AgencyID
 version Object of class "character" giving the version
 uri Object of class "character" giving the concept uri
 urn Object of class "character" giving the concept urn
 isExternalReference Object of class "logical" indicating if the concept scheme is an external reference
 isFinal Object of class "logical" indicating if the concept scheme is final
 validFrom Object of class "character" indicating the start validity period
 validTo Object of class "character" indicating the end validity period
 Name Object of class "list" giving the concept scheme name (by language) - required
 Description Object of class "list" giving the concept scheme description (by language)
 Concept Object of class "list" giving the list of "SDMXConcept" objects (see [SDMXConcept-class](#))

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (Concepts, or DataStructureDefinition)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXDataStructure-class

Class "SDMXDataStructure"

Description

A basic class to handle a SDMX DataStructure (or KeyFamily)

Usage

SDMXDataStructure(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXCodelists-class](#) classes

Slots

id Object of class "character" giving the ID (required)
 agencyID Object of class "character" giving the AgencyID
 version Object of class "character" giving the version
 uri Object of class "character" giving the uri
 urn Object of class "character" giving the urn
 isExternalReference Object of class "logical" indicating if the datastructure / keyfamily is an external reference
 isFinal Object of class "logical" indicating if the datastructure / keyfamily is final
 validFrom Object of class "character" indicating the start validity period
 validTo Object of class "character" indicating the end validity period
 Name Object of class "list" giving the codelist (by language) - required
 Description Object of class "list" giving the codelist description (by language)
 Components Object of class "SDMXComponents" (see [SDMXComponents-class](#))

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (DataStructures, or DataStructureDefinition)

Note

This class is named according to SDMX 2.1 specifications. The SDMX 2.0 KeyFamily type is handled with this unique class, the 'DataStructure' being the new term for 'KeyFamily'

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXDataStructureDefinition-class
Class "SDMXDataStructureDefinition"

Description

A basic class to handle a SDMX DataStructureDefinition (DSD)

Usage

SDMXDataStructureDefinition(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; retrieved by [readSDMX](#)

Slots

concepts Object of class "SDMXConcepts" giving the list of concepts or conceptSchemes (see [SDMXConcepts-class](#))

codelists Object of class "SDMXCodelists" giving the list of codelists (see [SDMXCodelists-class](#))

datastructures Object of class "SDMXDataStructures" giving the list of datastructures /key families (see [SDMXDataStructures-class](#))

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXDataStructures-class

Class "SDMXDataStructures"

Description

A basic class to handle a SDMX DataStructures (or KeyFamilies)

Usage

```
SDMXDataStructures(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; retrieved by [readSDMX](#) for DataStructures documents, or as part of a DataStructureDefinitions (DSD)

Slots

datastructures Object of class "list" giving the list of DataStructures, (see [SDMXDataStructure-class](#))

Note

This class is named according to SDMX 2.1 specifications. The SDMX 2.0 KeyFamilies type is handled with this unique class, the 'DataStructures' being the new term for 'KeyFamilies'

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXDimension-class *Class "SDMXDimension"*

Description

A basic class to handle a SDMX Dimension

Usage

SDMXDimension(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXComponents-class](#) class

Slots

conceptRef Object of class "character" giving the dimension conceptRef (required)
conceptVersion Object of class "character" giving the dimension concept version
conceptAgency Object of class "character" giving the dimension concept agency
conceptSchemeRef Object of class "character" giving the dimension conceptScheme ref
conceptSchemeAgency Object of class "character" giving the dimension conceptScheme agency
odelist Object of class "character" giving the codelist ref name
odelistVersion Object of class "character" giving the codelist ref version
odelistAgency Object of class "character" giving the codelist ref agency
isMeasureDimension Object of class "logical" indicating if the dimension is a measure dimension.
Default value is FALSE
isFrequencyDimension Object of class "logical" indicating if the dimension is a frequency dimension.
Default value is FALSE
isEntityDimension Object of class "logical" indicating if the dimension is an entity dimension.
Default value is FALSE

isCountDimension Object of class "logical" indicating if the dimension is a count dimension. Default value is FALSE

isNonObservationTimeDimension Object of class "logical" indicating if the dimension is a non-observation dimension. Default value is FALSE

isIdentityDimension Object of class "logical" indicating if the dimension is an identity dimension. Default value is FALSE

crossSectionalAttachDataset Object of class "logical"

crossSectionalAttachGroup Object of class "logical"

crossSectionalAttachSection Object of class "logical"

crossSectionalAttachObservation Object of class "logical"

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (DataStructures, or DataStructureDefinitions)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXFooter-class	Class "SDMXFooter"
------------------	--------------------

Description

A basic class to handle the footer of a SDMX-ML document

Usage

SDMXFooter(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived classes

Slots

messages Object of class "SDMXFooterMessage" giving the list of messages

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document

Note

This class is especially useful for SDMX 2.1 compliant documents. Footer messages are not supported in SDMX 2.0 standard format. In this case, the footer will return an empty message list().

According to the SDMX 2.1 standard, the message severity takes one of the following values: "Error", "Warning", "Information". Given the possible typos handled by data providers, rsdmx adopts a permissive strategy and does not validate the object according to such controlled terms.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXFooterMessage-class

Class "SDMXFooterMessage"

Description

A basic class to handle a footer message of a SDMX-ML document

Usage

SDMXFooterMessage(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived classes

Slots

code Object of class "character" giving the status code

severity Object of class "character" giving the severity of the message

messages Object of class "list" giving the list of messages

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document

Note

This class is especially useful for SDMX 2.1 compliant documents. Footer messages are not supported in SDMX 2.0 standard format.

According to the SDMX 2.1 standard, the message severity takes one of the following values: "Error", "Warning", "Information". Given the possible typos handled by data providers, rsdmx adopts a permissive strategy and does not validate the object according to such controlled terms.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXGenericData-class *Class "SDMXGenericData"*

Description

A basic class to handle a SDMX-ML generic data set

Usage

```
SDMXGenericData(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; will be used by the [readSDMX](#) main parser function

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXHeader-class	Class "SDMXHeader"
------------------	--------------------

Description

A basic class to handle the header of a SDMX-ML document

Usage

SDMXHeader(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived classes

Slots

ID Object of class "character" giving the ID of the SDMX-ML document

Test Object of class "logical" indicating if the SDMX-ML document is disseminated for test purpose

Truncated Object of class "logical" indicating if the SDMX-ML document is truncated

Name Object of class "character" giving the name of SDMX-ML document

Sender Object of class "list" giving the id of the sender and eventually its in name, possibly in multi-languages

Receiver Object of class "list" giving the id of the receiver and eventually its in name, possibly in multi-languages

Prepared Object of class "POSIXlt" giving the preparation date of the SDMX-ML document

Extracted Object of class "POSIXlt" giving the extraction date of the SDMX-ML document

ReportingBegin Object of class "POSIXlt" giving the reporting begin date for the data retrieved in the SDMX-ML document

ReportingEnd Object of class "POSIXlt" giving the reporting end date for the data retrieved in the SDMX-ML document

Source Object of class "character" giving the source of the SDMX-ML document

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document

Note

Some SDMXHeader properties are not yet supported and thus not available as "slots". These are "KeyFamilyRef", "KeyFamilyAgency", "DataSetAgency", "DataSetID", "DataSetAction"

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXMessageGroup-class

Class "SDMXMessageGroup"

Description

A basic class to handle a SDMX-ML message group

Usage

SDMXMessageGroup(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; will be used by the [readSDMX](#) main parser function

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXPrimaryMeasure-class

Class "SDMXPrimaryMeasure"

Description

A basic class to handle a SDMX PrimaryMeasure

Usage

SDMXPrimaryMeasure(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXComponents-class](#) class

Slots

conceptRef Object of class "character" giving the dimension conceptRef (required)
conceptVersion Object of class "character" giving the dimension concept version
conceptAgency Object of class "character" giving the dimension concept agency
conceptSchemeRef Object of class "character" giving the dimension conceptScheme ref
conceptSchemeAgency Object of class "character" giving the dimension conceptScheme agency
odelist Object of class "character" giving the codelist ref name
odelistVersion Object of class "character" giving the codelist ref version
odelistAgency Object of class "character" giving the codelist ref agency

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (DataStructures, or DataStructureDefinitions)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXSchema-class	<i>Class "SDMXSchema"</i>
------------------	---------------------------

Description

A basic class to handle the version of the SDMX-ML Schema

Usage

SDMXSchema(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived classes

Slots

version Object of class "character" giving the SDMX-ML schema version

Methods

getVersion Retrieves the version of the SDMX-ML schema version

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXStructureSpecificData-class

Class "SDMXStructureSpecificData"

Description

A basic class to handle a SDMX-ML structure specific data set

Usage

```
SDMXStructureSpecificData(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; will be used by the [readSDMX](#) main parser function

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXStructureType-class

Class "SDMXStructureType"

Description

A basic abstract class to handle the type of a SDMX-ML structure document

Usage

SDMXStructureType(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived classes

Slots

type Object of class "character" giving the super type "SDMXStructure"

subtype Object of class "character" giving the structure type of the SDMX-ML document

Methods

getStructureType Returns the structure type of the SDMX-ML document

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXTimeDimension-class

Class "SDMXTimeDimension"

Description

A basic class to handle a SDMX TimeDimension

Usage

SDMXTimeDimension(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived [SDMXComponents-class](#) class

Slots

conceptRef Object of class "character" giving the dimension conceptRef (required)
conceptVersion Object of class "character" giving the dimension concept version
conceptAgency Object of class "character" giving the dimension concept agency
conceptSchemeRef Object of class "character" giving the dimension conceptScheme ref
conceptSchemeAgency Object of class "character" giving the dimension conceptScheme agency
odelist Object of class "character" giving the codelist ref name
odelistVersion Object of class "character" giving the codelist ref version
odelistAgency Object of class "character" giving the codelist ref agency
crossSectionalAttachDataset Object of class "logical"
crossSectionalAttachGroup Object of class "logical"
crossSectionalAttachSection Object of class "logical"
crossSectionalAttachObservation Object of class "logical"

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document (DataStructures, or DataStructureDefinitions)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXType-class	<i>Class "SDMXType"</i>
----------------	-------------------------

Description

A basic class to handle the type of a SDMX-ML document

Usage

SDMXType(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; used by SDMX derived classes

Slots

type Object of class "character" giving the type of the SDMX-ML document

Methods

getType Returns the type of the SDMX-ML document

Warning

this class is not useful in itself, but all SDMX non-abstract classes will encapsulate it as slot, when parsing an SDMX-ML document

Note

At now, the following types have been implemented and tested: GenericDataType, CompactDataType, UtilityDataType and MessageGroupType.

The MessageGroupType was only modeled to allow reading OECD generic data which is provided. Other message types handled in MessageGroup document type are not yet supported.

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

SDMXUtilityData-class Class "SDMXUtilityData"

Description

A basic class to handle a SDMX-ML utility data set

Usage

SDMXUtilityData(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Objects from the Class

are never to be generated; will be used by the [readSDMX](#) main parser function

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

timedimension.SDMXComponents
timedimension.SDMXComponents

Description

function used to parse the timedimension of a SDMX-ML document

Usage

```
timedimension.SDMXComponents(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

timedimension.SDMXComponents is a function used internally to parse the timedimension during instantiation of "SDMXComponents" objects (used in DataStructures / KeyFamilies)

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXComponents-class](#) [SDMXDataStructure-class](#)

type.SDMXStructureType
type.SDMXStructureType

Description

function used to parse the structure type of an SDMX-ML object

Usage

```
type.SDMXStructureType(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Value

an object of class "character"

Warning

type.SDMXStructureType is a function used internally to parse the SDMX structure type during instantiation of SDMX objects

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXStructureType-class](#)

type.SDMXType

type.SDMXType

Description

function used to parse the type of an SDMX-ML object

Usage

type.SDMXType(xmlObj)

Arguments

xmlObj an object of class "XMLInternalDocument"

Value

an object of class "character"

Warning

type.SDMXType is a function used internally to parse the SDMX type during instantiation of SDMX objects

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXType-class](#) [getSDMXType](#)

version.SDMXSchema	<i>version.SDMXSchema</i>
--------------------	---------------------------

Description

function used to parse the schema of an SDMX-ML object

Usage

```
version.SDMXSchema(xmlObj)
```

Arguments

xmlObj an object of class "XMLInternalDocument"

Warning

version.SDMXSchema is a function used internally to parse the SDMX schema during instantiation of SDMX objects

Author(s)

Emmanuel Blondel, <emmanuel.blondel1@gmail.com>

See Also

[SDMXSchema-class getSDMXSchema](#)

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