# Package 'factset.protobuf.stachextensions'

October 19, 2023

**Title** 'FactSet' 'STACH' Extensions Package

**Version** 1.0.4

**Description** Allow clients to convert 'FactSet' 'STACH' formatted data to simpler tabular formats in the form of data frames. This package also provides helper methods to extract the meta data from 'FactSet' 'STACH' formatted data. See documentation on the 'GitHub' repository for more information.

**License** Apache License 2.0

**URL** https://github.com/factset/stach-extensions

**BugReports** https://github.com/factset/stach-extensions/issues

**Imports** jsonlite, R6, stringr

**Suggests** testthat

**SystemRequirements** ProtoBuf libraries and compiler version 3.3.0 or later; On Debian/Ubuntu these can be installed as libprotoc-dev, libprotobuf-dev and protobuf-compiler, while on Fedora/CentOS protobuf-devel and protobuf-compiler are needed.

**Encoding** UTF-8

**RoxygenNote** 7.2.1

**NeedsCompilation** no

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**Repository** CRAN

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## R topics documented:

V2ColumnOrganizedStachExtension

*V2ColumnOrganizedStachExtension*

## Description

The purpose of this class is to provide the helper methods for converting stach(column organized) to Tabular format and to get meta data from stach

## Methods

### Public methods:

- V2ColumnOrganizedStachExtension$ConvertToDataFrame()
- V2ColumnOrganizedStachExtension$GetMetadata()
- V2ColumnOrganizedStachExtension$clone()

**Method** `ConvertToDataFrame()`: This function is used for converting stach to Tabular format

*Usage:*

V2ColumnOrganizedStachExtension$ConvertToDataFrame(package, mergeHeaders)

*Arguments:*

package  Stach Data which is represented as a Package object

mergeHeaders  Accepts Type as BOOLEAN,by default takes TRUE. If the value is TRUE, headers will be merged with column data as output in dataframe If the value is FALSE, headers will be added to column data as output in dataframe

*Returns:*  Returns the List of data frame for the stach data

**Method** `GetMetadata()`: This function is used to get meta data from stach

*Usage:*

V2ColumnOrganizedStachExtension$GetMetadata(package)

*Arguments:*

package  Stach Data which is represented as a Package object

*Returns:*  Returns the List of metadata for the stach data

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

V2ColumnOrganizedStachExtension$clone(deep = FALSE)

*Arguments:*

deep  Whether to make a deep clone.

## Examples

```
## Not run:
package <- 'Stach data which is converted into ColumnOrganized Package'
stachExtensioncol <-
factset.protobuf.stachextensions::V2ColumnOrganizedStachExtension$new()
dataFrame <- stachExtensioncol$ConvertToDataFrame(package)

## End(Not run)
```

V2ColumnOrganizedStachUtilities

*V2ColumnOrganizedStachUtilities*

## Description

Provide helper functions for column organized stach

## Methods

### Public methods:

- [V2ColumnOrganizedStachUtilities$GetPrimaryTableIds()](#)
- [V2ColumnOrganizedStachUtilities$Decompress()](#)
- [V2ColumnOrganizedStachUtilities$clone()](#)

**Method** `GetPrimaryTableIds()`: Get Primary Table Ids

*Usage:*

`V2ColumnOrganizedStachUtilities$GetPrimaryTableIds(package)`

*Arguments:*

package  Stach Data which is represented as a Package object

*Returns:*  Returns list of primary table ids

**Method** `Decompress()`: Get decompress stach data

*Usage:*

`V2ColumnOrganizedStachUtilities$Decompress(package)`

*Arguments:*

package  Stach Data which is represented as a Package object

*Returns:*  Returns decompressed stach data

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

`V2ColumnOrganizedStachUtilities$clone(deep = FALSE)`

*Arguments:*

deep  Whether to make a deep clone.

## Examples

```
## Not run:
compressedFilePath <- 'Path of your json file'
compressedData <- jsonlite::read_json(path=compressedFilePath,
auto_unbox=TRUE)
stachUtilities <-
factset.protobuf.stachextensions::V2ColumnOrganizedStachUtilities
primaryTableIds <-
stachUtilities$public_methods$GetPrimaryTableIds(compressedData)

## End(Not run)

## Not run:
compressedFilePath <- 'Path of your json file'
compressedData <- jsonlite::read_json(path=compressedFilePath,
auto_unbox=TRUE)
utility <-
factset.protobuf.stachextensions::V2ColumnOrganizedStachUtilities$new()
deCompressedData <- utility$Decompress(compressedData)

## End(Not run)
```

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V2RowOrganizedStachExtension

*V2RowOrganizedStachExtension*

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## Description

The purpose of this class is to provide the helper methods for converting stach(row organized) to Tabular format and to get meta data from stach

## Methods

### Public methods:

- [V2RowOrganizedStachExtension$ConvertToDataFrame()](#)
- [V2RowOrganizedStachExtension$GetMetadata()](#)
- [V2RowOrganizedStachExtension$clone()](#)

**Method** `ConvertToDataFrame()`: This function is used for converting stach to Tabular format

*Usage:*

`V2RowOrganizedStachExtension$ConvertToDataFrame(package, mergeHeaders)`

*Arguments:*

package  Stach Data which is represented as a Package object

mergeHeaders  Accepts Type as BOOLEAN,by default takes TRUE. If the value is TRUE, headers will be merged with column data as output in dataframe If the value is FALSE, headers will be added to column data as output in dataframe

*Returns:* Returns the List of data frame for the stach data

**Method** `GetMetadata()`: This function is used to get meta data from stach

*Usage:*

`V2RowOrganizedStachExtension$GetMetadata(package)`

*Arguments:*

`package` Stach Data which is represented as a Package object

*Returns:* Returns the List of metadata for the stach data

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

`V2RowOrganizedStachExtension$clone(deep = FALSE)`

*Arguments:*

`deep` Whether to make a deep clone.

## Examples

```
## Not run:
package <- 'Stach data which is converted into RowOrganized Package'
stachExtensionrow <-
factset.protobuf.stachextensions::V2RowOrganizedStachExtension$new()
dataFrame <- stachExtensionrow$ConvertToDataFrame(package)

## End(Not run)
```

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V2StachUtilities *V2StachUtilities*

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## Description

The purpose of this class is to provide the helper methods

## Methods

### Public methods:

- [V2StachUtilities$GetMappingObject()](#)
- [V2StachUtilities$ValueToString()](#)
- [V2StachUtilities$clone()](#)

**Method** `GetMappingObject()`: Helper method for getting the value corresponding to the given key from the object.

*Usage:*

`V2StachUtilities$GetMappingObject(objectMap, key, keyname = "key")`

*Arguments:*

objectMap  Mapping object value

key  Mapping object corresponding key value

keyname  Mapping object corresponding key name

*Returns:*  Returns the value corresponding to the given key from the object

**Method** `ValueToString()`:  Helper method for converting value to string

*Usage:*

```
V2StachUtilities$ValueToString(value)
```

*Arguments:*

value  Value that should be converted to string

*Returns:*  Returns the value by converting corresponding value to string

**Method** `clone()`:  The objects of this class are cloneable with this method.

*Usage:*

```
V2StachUtilities$clone(deep = FALSE)
```

*Arguments:*

deep  Whether to make a deep clone.

## Examples

```
## Not run:
package <- 'Stach data which is converted into RowOrganized Package'
tableData <-
V2StachUtilities$public_methods$GetMappingObject(package$tables,
primaryTableId)$value

## End(Not run)
```

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