

# RAT-STATS Products

1.0

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# Chapter 1

## Namespace Index

### 1.1 Namespace List

Here is a list of all documented namespaces with brief descriptions:

[oig::ratstats::ui::UIRStatsUtils](#)

This namespace represents a collection of reusable functions that have access to the Qt classes 9

[oig::ratstats::utils::RStatsUtils](#)

This namespace provides commonly used functions without requiring any dependencies on the Qt SDK ..... 14



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## Chapter 4

# Namespace Documentation

### 4.1 `oig::ratstats::ui::UIRStatsUtils` Namespace Reference

This namespace represents a collection of reusable functions that have access to the Qt classes.

#### Functions

- void `desktopOpen` (const std::string &url)  
*desktopOpen Opens files and web urls on the desktop*
- void `launchHtml` (const std::string &content)  
*launchHtml Displays html content in system web browser*
- void `launchHelp` (const std::string &pdf)  
*launchHelp Builds a url to the pdf item. Launches system pdf viewer with url as filePath.*
- void `setCurrentText` (QComboBox \*combo, const std::string &text)  
*setCurrentText*
- QPixmap `getPixmap` (const std::string &pixmapFileName)  
*getPixmap*
- QIcon `getIcon` (const std::string &iconFileName)  
*getIcon*
- std::string `getCurrentTheme` ()  
*getCurrentTheme*
- void `loadThemeSettings` (QApplication \*app)  
*loadThemeSettings*
- void `highlightErrorInValidationConsole` (QListWidget \*widget)  
*highlightErrorInValidationConsole Ensures that the next error in the validation console is highlighted/focused.*
- void `populateWithColumns` (const std::set< size\_t > &columns, QComboBox \*comboBox)  
*populateWithColumns Populates combobox widget with column headers*
- void `populateWithRows` (const std::set< size\_t > &rows, QComboBox \*comboBox)  
*populateWithRows Populates combobox widget with row numbers*
- void `bindUIToSheet` (QTableWidget \*table, `oig::ratstats::utils::RStatsWorksheet` &sheetOut)  
*bindUIToSheet*
- void `bindSheetToUI` (const `oig::ratstats::utils::RStatsWorksheet` &sheetIn, QTableWidget \*table, bool checkableHeader=false, int padRows=0, int padColumns=0, int numDecimalPlaces=-1, bool readOnly=false, bool disableAllFormatting=false)  
*bindSheetToUI This function copies fields in the model class (RStatsWorksheet) into the view object (QTableWidget)*

- QString **setOutputFile** (QCheckBox \*checkBox, const QString &title, const QString &extension)  
*setOutputFile Common code used by all the modules for saving output file*
- template<typename ModuleType >  
std::pair< QActionGroup \*, QAction \* > **buildRecentSessions** (QWidget \*parent, QAction \*menuRecent←  
Action, std::map< std::string, utils::RStatsModuleSessionDataPtr > &sessionMapOut, const std::string  
&sessionExtension)  
*buildRecentSessions Constructs the "Recently Used" menu used by the modules*
- void **initAction** (QAction \*action, const QString &icon, const QString &shortcut, const QFont &font=QFont())  
*initAction*
- void **initButton** (QPushButton \*button, const QString &icon, const QFont &font=QFont(), int height=32)  
*initButton*

### 4.1.1 Detailed Description

This namespace represents a collection of reusable functions that have access to the Qt classes.

### 4.1.2 Function Documentation

- 4.1.2.1 void **oig::ratstats::ui::UIRStatsUtils::bindSheetToUI** ( const **oig::ratstats::utils::RStatsWorksheet** & *sheetIn*,  
**QTableWidget** \* *table*, bool *checkableHeader* = false, int *padRows* = 0, int *padColumns* = 0, int *numDecimalPlaces*  
= -1, bool *readOnly* = false, bool *disableAllFormatting* = false ) [inline]

**bindSheetToUI** This function copies fields in the model class (RStatsWorksheet) into the view object (QTableWidget)

#### Parameters

<i>sheet</i>	The (model) worksheet input
<i>table</i>	The (view) table widget output
<i>padRows</i>	Number of extra (blank) rows to add
<i>padColumns</i>	Number of extra (blank) columns to add
<i>numDecimalPlaces</i>	Number of decimal places to round numeric values
<i>readOnly</i>	Makes the output table cells read only
<i>disableAllFormatting</i>	Overrides any formatting settings in worksheet

- 4.1.2.2 void **oig::ratstats::ui::UIRStatsUtils::bindUIToSheet** ( **QTableWidget** \* *table*, **oig::ratstats::utils::RStatsWorksheet**  
& *sheetOut* ) [inline]

**bindUIToSheet**

#### Parameters

<i>table</i>	
<i>sheetOut</i>	

4.1.2.3 `template<typename ModuleType > std::pair<QActionGroup *, QAction*> oig::ratstats::ui::UIRStatsUtils::buildRecentSessions ( QWidget * parent, QAction * menuRecentAction, std::map< std::string, utils::RStatsModuleSessionDataPtr > & sessionMapOut, const std::string & sessionExtension ) [inline]`

buildRecentSessions Constructs the "Recently Used" menu used by the modules

#### Parameters

<i>parent</i>	The parent widget to hold the sessions
<i>menuRecentAction</i>	The "Recently Used" menu item widget
<i>sessionMapOut</i>	The map to hold the session data pointers
<i>sessionExtension</i>	The extension/id using for saving/loading the sessions

#### Returns

Returns an action group and action pair to be used in module menu bar

4.1.2.4 `void oig::ratstats::ui::UIRStatsUtils::desktopOpen ( const std::string & url ) [inline]`

desktopOpen Opens files and web urls on the desktop

#### Parameters

<i>url</i>	Location of item to open
------------	--------------------------

4.1.2.5 `std::string oig::ratstats::ui::UIRStatsUtils::getCurrentTheme ( ) [inline]`

getCurrentTheme

#### Returns

4.1.2.6 `QIcon oig::ratstats::ui::UIRStatsUtils::getIcon ( const std::string & iconFileName ) [inline]`

getIcon

#### Parameters

<i>iconFileName</i>	
---------------------	--

#### Returns

#### 4.1.2.7 QPixmap oig::ratstats::ui::UIRStatsUtils::getPixmap ( const std::string & *pixmapFileName* ) [inline]

getPixmap

Parameters

<i>pixmapFileName</i>	
-----------------------	--

Returns

#### 4.1.2.8 void oig::ratstats::ui::UIRStatsUtils::highlightErrorInValidationConsole ( QListWidget \* *widget* ) [inline]

highlightErrorInValidationConsole Ensures that the next error in the validation console is highlighted/focused.

Parameters

<i>widget</i>	The validation console list widget
---------------	------------------------------------

#### 4.1.2.9 void oig::ratstats::ui::UIRStatsUtils::initAction ( QAction \* *action*, const QString & *icon*, const QString & *shortcut*, const QFont & *font* = QFont() ) [inline]

initAction

Parameters

<i>action</i>	
<i>icon</i>	
<i>shortcut</i>	
<i>font</i>	

#### 4.1.2.10 void oig::ratstats::ui::UIRStatsUtils::initButton ( QPushButton \* *button*, const QString & *icon*, const QFont & *font* = QFont(), int *height* = 32 ) [inline]

initButton

Parameters

<i>button</i>	
<i>icon</i>	
<i>font</i>	
<i>height</i>	



4.1.2.11 `void oig::ratstats::ui::UIRStatsUtils::launchHelp ( const std::string & pdf )` `[inline]`

launchHelp Builds a url to the pdf item. Launches system pdf viewer with url as filePath.

Parameters

<i>pdf</i>	The filename portion of full url path
------------	---------------------------------------

4.1.2.12 `void oig::ratstats::ui::UIRStatsUtils::launchHtml ( const std::string & content )` `[inline]`

launchHtml Displays html content in system web browser

Parameters

<i>content</i>	The html content to display
----------------	-----------------------------

4.1.2.13 `void oig::ratstats::ui::UIRStatsUtils::loadThemeSettings ( QApplication * app )` `[inline]`

loadThemeSettings

Parameters

<i>app</i>	
------------	--

4.1.2.14 `void oig::ratstats::ui::UIRStatsUtils::populateWithColumns ( const std::set< size_t > & columns, QComboBox * comboBox )` `[inline]`

populateWithColumns Populates combobox widget with column headers

Parameters

<i>columns</i>	Unique set of columns
<i>comboBox</i>	The combobox widget to populate

4.1.2.15 `void oig::ratstats::ui::UIRStatsUtils::populateWithRows ( const std::set< size_t > & rows, QComboBox * comboBox )` `[inline]`

populateWithRows Populates combobox widget with row numbers

Parameters

<i>rows</i>	Unique set of rows
<i>comboBox</i>	The combobox to populate

4.1.2.16 `void oig::ratstats::ui::UIRStatsUtils::setCurrentText ( QComboBox * combo, const std::string & text )` `[inline]`

setCurrentText

Parameters

<i>combo</i>	
<i>text</i>	

4.1.2.17 `QString oig::ratstats::ui::UIRStatsUtils::setOutputFile ( QCheckBox * checkBox, const QString & title, const QString & extension )` `[inline]`

setOutputFile Common code used by all the modules for saving output file

Parameters

<i>checkBox</i>	
<i>title</i>	
<i>extension</i>	

Returns

## 4.2 oig::ratstats::utils::RStatsUtils Namespace Reference

This namespace provides commonly used functions without requiring any dependencies on the Qt SDK.

### Functions

- `std::pair< std::string, std::string > getDataFormatTypeStr (RStatsDataFormatType type)`  
*getDataFormatTypeStr Gets the string representation of the data format type enumeration value*
- `template<class T >`  
`RStatsInteger vbRound (T value)`  
*vbRound This function attempts to simulate VB / VBA bankers rounding*
- `template<typename Integer >`  
`Integer ipow (Integer base, Integer exp)`  
*ipow Custom pow function for integers*
- `bool isEqual (RStatsFloat value1, RStatsFloat value2)`  
*isEqual Compares to floating point values*
- `template<typename Number >`  
`Number getSum (const RStatsObjectList< Number > &values, size_t dimension=0)`  
*getSum Return sum of list of numbers*
- `template<typename Float >`  
`Float getSumRaisedTo (const RStatsObjectList< Float > &values, Float power, size_t dimension=0)`  
*getSumRaisedTo Return sum of values raised to power*

- `template<typename Number >`  
`size_t getNumItemsThatMatchCondition` (`RStatsConditionalOperatorType` condition, const `RStatsObjectList` < `Number` > &values, `Number` value, `size_t` dimension=0)  
*getNumItemsThatMatchCondition Attempts to return the number of items in values that match the condition. Conditions can be =, !=, >, <, >= or <=*
- `template<typename Number >`  
`void calculate` (const `RStatsObjectList` < `Number` > &input1, const `RStatsObjectList` < `Number` > &input2, `RStatsObjectList` < `Number` > &result, `RStatsCalculationType` calculation, `size_t` dimension=0)  
*calculate This function takes in to RStatsObjectList structures and performs calculations on each element. The result is returned back in a third RStatsObjectList*
- `template<typename Number >`  
`RStatsObjectList` < `Number` > `getNumbersAdded` (const `RStatsObjectList` < `Number` > &input1, const `RStatsObjectList` < `Number` > &input2, `size_t` dimension=0)  
*getNumbersAdded This function adds together two RStatsObjectList structures and returns the result in another RStatsObjectList*
- `template<typename Number >`  
`RStatsObjectList` < `Number` > `getNumbersSubtracted` (const `RStatsObjectList` < `Number` > &input1, const `RStatsObjectList` < `Number` > &input2, `size_t` dimension=0)  
*getNumbersSubtracted This function subtracts two RStatsObjectList structures and returns the result in another RStatsObjectList*
- `template<typename Number >`  
`RStatsObjectList` < `Number` > `getNumbersMultiplied` (const `RStatsObjectList` < `Number` > &input1, const `RStatsObjectList` < `Number` > &input2, `size_t` dimension=0)  
*getNumbersMultiplied This function multiplies two RStatsObjectList structures and returns the result in another RStatsObjectList*
- `template<typename Number >`  
`RStatsObjectList` < `Number` > `getNumbersDivided` (const `RStatsObjectList` < `Number` > &input1, const `RStatsObjectList` < `Number` > &input2, `size_t` dimension=0)  
*getNumbersDivided This function divides two RStatsObjectList structures and returns the result in another RStatsObjectList*
- `std::string getValidPath` (const `std::string` &pathToValidate)  
*getValidPath RAT-STATS makes use of external files and this function attempts to find a valid path for input files. To remain portable and self-contained, RAT-STATS checks the following places for external files: (1) The execution directory - This is where the RAT-STATS main menu and RAT-STATS internal modules are located.*
- `std::string getModulePropertiesPath` ()  
*getModulePropertiesPath Return valid path to module XML config directory*
- `std::string getConfigPath` ()  
*getConfigPath Return valid path to config directory*
- `std::string getContribPath` ()  
*getContribPath Return valid path to contrib directory*
- `std::string getScriptProviderPropertiesPath` ()  
*getScriptProviderPropertiesPath Return valid path to script provider XML config directory*
- `std::string getResourcePath` ()  
*getResourcePath*
- `std::string getThemeSettingsFilePath` ()  
*getThemeSettingsFilePath*
- `std::vector< RStatsModuleProperties > getModulePropertiesList` ()  
*getModulePropertiesList Read all module properties from disk*
- `std::vector< std::string > getModuleCategories` ()  
*getModuleCategories Get list of all module categories*
- `std::vector< RStatsScriptProviderProperties > getScriptProviderPropertiesList` ()  
*getScriptProviderPropertiesList Get list of all parsed script provider from disk*
- `size_t getColumnIndexFromLabel` (const `std::string` &columnLabel)  
*RStatsWorksheet::getColumnIndexFromLabel.*

- `std::string getColumnLabelFromIndex` (`size_t columnIndex`)  
*RStatsWorksheet::getColumnLabelFromIndex.*
- `std::pair< size_t, size_t > getCellIndexFromAddress` (`const std::string &cellAddress`)  
*getCellIndexFromAddress*
- `void createValidPath` (`const std::string &pathToCreate`)  
*createValidPath*
- `std::string getValidSessionPath` ()  
*getValidSessionPath*
- `std::vector< std::string > getRecentSessions` (`const std::string &sessionExtension`)  
*getRecentSessions*
- `void saveRecentSession` (`RStatsModuleSessionDataPtr sessionPtr`)  
*saveRecentSession*
- `void clearRecentSessions` (`const std::string &sessionExtension`)  
*clearRecentSessions*
- `RStatsFloat divideValues` (`RStatsInteger value1`, `RStatsInteger value2`)  
*divideValues*
- `std::string getAuditName` ()  
*getRandomAuditName Generates random audit name for use when none is provided*
- `std::string getApplicationName` ()  
*getApplicationName Returns name of application*
- `std::string getCellLabel` (`size_t row`, `size_t column`)  
*getCellLabel Gets the spreadsheet cell label (A1, B4, etc) from 0-based row and column indices*
- `std::string getValidModule` (`const std::string &modulePath`)  
*getValidModule Returns string path to validated module*
- `bool isValidModule` (`const std::string &modulePath`)  
*isValidModule Determines if a module path can be validated*

## 4.2.1 Detailed Description

This namespace provides commonly used functions without requiring any dependencies on the Qt SDK.

## 4.2.2 Function Documentation

**4.2.2.1** `template<typename Number > void oig::ratstats::utils::RStatsUtils::calculate ( const RStatsObjectList< Number > & input1, const RStatsObjectList< Number > & input2, RStatsObjectList< Number > & result, RStatsCalculationType calculation, size_t dimension = 0 ) [inline]`

`calculate` This function takes in to `RStatsObjectList` structures and performs calculations on each element. The result is returned back in a third `RStatsObjectList`

### Parameters

<i>input1</i>	The first number list
<i>input2</i>	The second number list
<i>result</i>	Reference to the output list result
<i>calculation</i>	The calculation to perform
<i>dimension</i>	The dimension to perform the calculation in

4.2.2.2 void oig::ratstats::utils::RStatsUtils::clearRecentSessions ( const std::string & *sessionExtension* ) [inline]

clearRecentSessions

Parameters

<i>sessionExtension</i>	
-------------------------	--

4.2.2.3 void oig::ratstats::utils::RStatsUtils::createValidPath ( const std::string & *pathToCreate* ) [inline]

createValidPath

Parameters

<i>pathToCreate</i>	
---------------------	--

4.2.2.4 RStatsFloat oig::ratstats::utils::RStatsUtils::divideValues ( RStatsInteger *value1*, RStatsInteger *value2* ) [inline]

divideValues

Parameters

<i>value1</i>	
<i>value2</i>	

Returns

4.2.2.5 std::string oig::ratstats::utils::RStatsUtils::getApplicationName ( ) [inline]

getApplicationName Returns name of application

Returns

Returns name of application

4.2.2.6 std::string oig::ratstats::utils::RStatsUtils::getAuditName ( ) [inline]

getRandomAuditName Generates random audit name for use when none is provided

Returns

Return newly created random audit name

4.2.2.7 std::pair<size\_t,size\_t> oig::ratstats::utils::RStatsUtils::getCellIndexFromAddress ( const std::string & *cellAddress* ) [inline]

getCellIndexFromAddress

## Parameters

<i>cellAddress</i>	
--------------------	--

## Returns

**4.2.2.8** `std::string oig::ratstats::utils::RStatsUtils::getCellLabel ( size_t row, size_t column )` `[inline]`

getCellLabel Gets the spreadsheet cell label (A1, B4, etc) from 0-based row and column indices

## Parameters

<i>row</i>	The row index
<i>column</i>	The column index

## Returns

Return string with cell label (A1, B4, etc)

**4.2.2.9** `size_t oig::ratstats::utils::RStatsUtils::getColumnIndexFromLabel ( const std::string & columnLabel )` `[inline]`

RStatsWorksheet::getColumnIndexFromLabel.

## Parameters

<i>columnLabel</i>	
--------------------	--

## Returns

**4.2.2.10** `std::string oig::ratstats::utils::RStatsUtils::getColumnLabelFromIndex ( size_t columnIndex )` `[inline]`

RStatsWorksheet::getColumnLabelFromIndex.

## Parameters

<i>columnIndex</i>	
--------------------	--

## Returns

4.2.2.11 `std::string` `oig::ratstats::utils::RStatsUtils::getConfigPath ( )` `[inline]`

`getConfigPath` Return valid path to config directory

Returns

4.2.2.12 `std::string` `oig::ratstats::utils::RStatsUtils::getContribPath ( )` `[inline]`

`getContribPath` Return valid path to contrib directory

Returns

4.2.2.13 `std::pair<std::string, std::string>` `oig::ratstats::utils::RStatsUtils::getDataFormatTypeStr ( RStatsDataFormatType type )` `[inline]`

`getDataFormatTypeStr` Gets the string representation of the data format type enumeration value

Parameters

<i>type</i>	The enumeration value to convert to string
-------------	--------------------------------------------

Returns

Return string representation of data format type enumeration

4.2.2.14 `std::vector<std::string>` `oig::ratstats::utils::RStatsUtils::getModuleCategories ( )` `[inline]`

`getModuleCategories` Get list of all module categories

Returns

Return vector of module category names

4.2.2.15 `std::vector<RStatsModuleProperties>` `oig::ratstats::utils::RStatsUtils::getModulePropertiesList ( )` `[inline]`

`getModulePropertiesList` Read all module properties from disk

Returns

Return vector of all parsed module properties

4.2.2.16 `std::string oig::ratstats::utils::RStatsUtils::getModulePropertiesPath ( ) [inline]`

getModulePropertiesPath Return valid path to module XML config directory

Returns

4.2.2.17 `template<typename Number > RStatsObjectList<Number> oig::ratstats::utils::RStatsUtils::getNumbersAdded ( const RStatsObjectList< Number > & input1, const RStatsObjectList< Number > & input2, size_t dimension = 0 ) [inline]`

getNumbersAdded This function adds together two RStatsObjetList structures and returns the result in another [RStatsObjectList](#)

Parameters

<i>input1</i>	The first number list
<i>input2</i>	The second number list
<i>dimension</i>	The dimension to add

Returns

Return number list of added results

4.2.2.18 `template<typename Number > RStatsObjectList<Number> oig::ratstats::utils::RStatsUtils::getNumbersDivided ( const RStatsObjectList< Number > & input1, const RStatsObjectList< Number > & input2, size_t dimension = 0 ) [inline]`

getNumbersDivided This function divides two RStatsObjetList structures and returns the result in another [RStatsObjectList](#)

Parameters

<i>input1</i>	The first number list
<i>input2</i>	The second number list
<i>dimension</i>	The dimension to divide

Returns

Return number list of divided results

4.2.2.19 `template<typename Number > RStatsObjectList<Number> oig::ratstats::utils::RStatsUtils::getNumbersMultiplied ( const RStatsObjectList< Number > & input1, const RStatsObjectList< Number > & input2, size_t dimension = 0 ) [inline]`

getNumbersMultiplied This function multiplies two RStatsObjetList structures and returns the result in another [RStatsObjectList](#)



## Parameters

<i>input1</i>	The first number list
<i>input2</i>	The second number list
<i>dimension</i>	The dimension to multiply

## Returns

Return number list of multiplied results

**4.2.2.20** `template<typename Number> RStatsObjectList<Number> oig::ratstats::utils::RStatsUtils::getNumbers↔  
Subtracted ( const RStatsObjectList< Number> & input1, const RStatsObjectList< Number> & input2,  
size_t dimension = 0 ) [inline]`

`getNumbersSubtracted` This function subtracts two `RStatsObjectList` structures and returns the result in another [RStatsObjectList](#)

## Parameters

<i>input1</i>	The first number list
<i>input2</i>	The second number list
<i>dimension</i>	The dimension to subtract

## Returns

Return number list of subtracted results

**4.2.2.21** `template<typename Number> size_t oig::ratstats::utils::RStatsUtils::getNumItemsThatMatchCondition (  
RStatsConditionalOperatorType condition, const RStatsObjectList< Number> & values, Number value, size_t  
dimension = 0 ) [inline]`

`getNumItemsThatMatchCondition` Attempts to return the number of items in values that match the condition. Conditions can be `=`, `!=`, `>`, `<`, `>=` or `<=`

## Parameters

<i>condition</i>	The condition to check
<i>values</i>	List of values
<i>value</i>	Number to compare to list of values
<i>dimension</i>	Dimension of values to check

## Returns

total count of values that match condition

**4.2.2.22** `std::vector<std::string> oig::ratstats::utils::RStatsUtils::getRecentSessions ( const std::string & sessionExtension )`  
`[inline]`

getRecentSessions

Parameters

<i>sessionExtension</i>	
-------------------------	--

Returns

**4.2.2.23** `std::string oig::ratstats::utils::RStatsUtils::getResourcePath ( )` `[inline]`

getResourcePath

Returns

**4.2.2.24** `std::vector<RStatsScriptProviderProperties> oig::ratstats::utils::RStatsUtils::getScriptProviderPropertiesList ( )`  
`[inline]`

getScriptProviderPropertiesList Get list of all parsed script provider from disk

Returns

Return vector of script provider properties

**4.2.2.25** `std::string oig::ratstats::utils::RStatsUtils::getScriptProviderPropertiesPath ( )` `[inline]`

getScriptProviderPropertiesPath Return valid path to script provider XML config directory

Returns

**4.2.2.26** `template<typename Number > Number oig::ratstats::utils::RStatsUtils::getSum ( const RStatsObjectList<Number > & values, size_t dimension = 0 )` `[inline]`

getSum Return sum of list of numbers

## Parameters

<i>values</i>	List of numbers to sum
<i>dimension</i>	Dimension of numbers to sum

## Returns

total sum of all values

**4.2.2.27** `template<typename Float > Float oig::ratstats::utils::RStatsUtils::getSumRaisedTo ( const RStatsObjectList< Float > & values, Float power, size_t dimension = 0 ) [inline]`

getSumRaisedTo Return sum of values raised to power

## Parameters

<i>values</i>	List of numbers to sum
<i>power</i>	The power to raise each number to
<i>dimension</i>	The dimension of the numbers to sum

## Returns

total sum of all raised values

**4.2.2.28** `std::string oig::ratstats::utils::RStatsUtils::getThemeSettingsFilePath ( ) [inline]`

getThemeSettingsFilePath

## Returns

**4.2.2.29** `std::string oig::ratstats::utils::RStatsUtils::getValidModule ( const std::string & modulePath ) [inline]`

getValidModule Returns string path to validated module

## Parameters

<i>modulePath</i>	Initial (unvalidated) path to module
-------------------	--------------------------------------

## Returns

Returns validated path to module

## Exceptions

<i>GenericException</i>	if modulePath could not be validated
-------------------------	--------------------------------------

4.2.2.30 `std::string oig::ratstats::utils::RStatsUtils::getValidPath ( const std::string & pathToValidate ) [inline]`

getValidPath RAT-STATS makes use of external files and this function attempts to find a valid path for input files. To remain portable and self-contained, RAT-STATS checks the following places for external files: (1) The execution directory - This is where the RAT-STATS main menu and RAT-STATS internal modules are located.

(2) The users application folder - This is different per platform but it represents a folder that is readable/writable by the current user.

(3) The users home folder - As a last resort this folder is checked for the location of the file. If none of these paths are valid then an exception is thrown.

## Parameters

<i>pathToValidate</i>	The path to look for in the above 3 locations
-----------------------	-----------------------------------------------

## Returns

Returns validated path to "pathToValidate" item

## Exceptions

<i>FileAccessException</i>	if a valid path could not be found
----------------------------	------------------------------------

4.2.2.31 `std::string oig::ratstats::utils::RStatsUtils::getValidSessionPath ( ) [inline]`

getValidSessionPath

## Returns

4.2.2.32 `template<typename Integer > Integer oig::ratstats::utils::RStatsUtils::ipow ( Integer base, Integer exp ) [inline]`

ipow Custom pow function for integers

## Parameters

<i>base</i>	The base value
<i>exp</i>	The exponential value

## Returns

Computed base raised to exp

**4.2.2.33** `bool oig::ratstats::utils::RStatsUtils::isEqual ( RStatsFloat value1, RStatsFloat value2 )` `[inline]`

isEqual Compares to floating point values

## Parameters

<i>value1</i>	First floating point value
<i>value2</i>	Second floating point value

## Returns

True if the floats are equal, false otherwise

**4.2.2.34** `bool oig::ratstats::utils::RStatsUtils::isValidModule ( const std::string & modulePath )` `[inline]`

isValidModule Determines if a module path can be validated

## Parameters

<i>modulePath</i>	Initial path to module
-------------------	------------------------

## Returns

Returns true if path exists, false otherwise

**4.2.2.35** `void oig::ratstats::utils::RStatsUtils::saveRecentSession ( RStatsModuleSessionDataPtr sessionPtr )` `[inline]`

saveRecentSession

## Parameters

<i>sessionData</i>	
<i>sessionExtension</i>	

**4.2.2.36** `template<class T > RStatsInteger oig::ratstats::utils::RStatsUtils::vbRound ( T value )` `[inline]`

vbRound This function attempts to simulate VB / VBA bankers rounding

## Parameters

<i>value</i>	The value to round
--------------	--------------------

**Returns**

rounded integer value

## Chapter 5

# Class Documentation

### 5.1 oig::ratstats::utils::RStatsCell Struct Reference

The [RStatsCell](#) struct represents a single cell object for a worksheet.

```
#include <RStatsWorksheet.h>
```

#### Public Member Functions

- void **operator=** (const std::string &text)
- void **operator=** (RStatsFloat number)
- void **operator=** (RStatsInteger number)
- **RStatsCell** (const std::string &text="")

#### Public Attributes

- cbtek::common::utility::Font **font**
- cbtek::common::utility::Color **bgColor**
- cbtek::common::utility::Color **fgColor**
- RStatsTextAlignment **alignment**
- std::string **text**

#### Static Public Attributes

- static RStatsTextAlignment **ms\_DefaultAlignment** = RStatsTextAlignment::AlignLeft
- static cbtek::common::utility::Color **ms\_DefaultBGColor** = ColorFactory::create(colors::TRANSPARENT\_1)
- static cbtek::common::utility::Color **ms\_DefaultFGColor** = Color(0,0,0)
- static cbtek::common::utility::Font **ms\_DefaultFont** = cbtek::common::utility::Font("arial")
- static RStatsCellFormat **ms\_DefaultFormat**
- static size\_t **ms\_DefaultFloatingPointDecimals** = 6

### 5.1.1 Detailed Description

The [RStatsCell](#) struct represents a single cell object for a worksheet.

The documentation for this struct was generated from the following files:

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsWorksheet.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/RStatsWorksheet.cpp

## 5.2 `oig::ratstats::utils::RStatsConditionLogger` Class Reference

The [RStatsConditionLogger](#) class provides support for creating warning, informative and error messages based on boolean conditions. This object is used by the modules for realtime error/exception monitoring.

```
#include <RStatsConditionLogger.h>
```

### Public Member Functions

- [RStatsConditionLogger](#) ()  
*RStatsConditionLogger (Constructor)*
- void [addWarning](#) (bool condition, const std::string &message)  
*addWarning Adds warning condition to logger*
- void [addInformation](#) (bool condition, const std::string &message)  
*addInformation Adds information condition to logger*
- void [addError](#) (bool condition, const std::string &message)  
*addError Add error condition to logger*
- const std::vector< std::string > & [getMessages](#) () const  
*getMessages Get all the messages in logger*
- bool [hasMessages](#) () const  
*hasMessages Determine if there are any messages*
- bool [hasError](#) () const  
*hasError Determine if there are any error messages*
- bool [hasWarning](#) () const  
*hasWarning Determine if there are any warning messages*
- bool [hasInformation](#) () const  
*hasInformation Determine if there are any information messages*
- void [clear](#) ()  
*clear Clears all messages from logger*
- void [setWarningQSS](#) (const std::string &qss)  
*setWarningQSS*
- void [setErrorQSS](#) (const std::string &qss)  
*setErrorQSS*
- void [setInformationQSS](#) (const std::string &qss)  
*setInformationQSS*
- bool [isError](#) (size\_t index) const  
*isError*
- bool [isWarning](#) (size\_t index) const  
*isWarning*
- bool [isInformation](#) (size\_t index) const  
*isInformation*
- [~RStatsConditionLogger](#) ()  
*Destructor.*



### 5.2.1 Detailed Description

The [RStatsConditionLogger](#) class provides support for creating warning, informative and error messages based on boolean conditions. This object is used by the modules for realtime error/exception monitoring.

### 5.2.2 Member Function Documentation

5.2.2.1 `void oig::ratstats::utils::RStatsConditionLogger::addError ( bool condition, const std::string & message )`

addError Add error condition to logger

Parameters

<i>condition</i>	Condition that shows error if true
<i>message</i>	The actual error message

5.2.2.2 `void oig::ratstats::utils::RStatsConditionLogger::addInformation ( bool condition, const std::string & message )`

addInformation Adds information condition to logger

Parameters

<i>condition</i>	Condition that shows information if true
<i>message</i>	The actual information message

5.2.2.3 `void oig::ratstats::utils::RStatsConditionLogger::addWarning ( bool condition, const std::string & message )`

addWarning Adds warning condition to logger

Parameters

<i>condition</i>	Condition that shows warning if true
<i>message</i>	The actual warning message

5.2.2.4 `const std::vector< std::string > & oig::ratstats::utils::RStatsConditionLogger::getMessages ( ) const`

getMessages Get all the messages in logger

Returns

Returns vector of string containing all messages

#### 5.2.2.5 `bool oig::ratstats::utils::RStatsConditionLogger::hasError ( ) const`

hasError Determine if there are any error messages

##### Returns

Returns true if error messages exist, false otherwise

#### 5.2.2.6 `bool oig::ratstats::utils::RStatsConditionLogger::hasInformation ( ) const`

hasInformation Determine if there are any information messages

##### Returns

Returns true if info messages exist, false otherwise

#### 5.2.2.7 `bool oig::ratstats::utils::RStatsConditionLogger::hasMessages ( ) const`

hasMessages Determine if there are any messages

##### Returns

Returns true if messages exist, false otherwise

#### 5.2.2.8 `bool oig::ratstats::utils::RStatsConditionLogger::hasWarning ( ) const`

hasWarning Determine if there are any warning messages

##### Returns

Returns true if warning messages exist, false otherwise

#### 5.2.2.9 `bool oig::ratstats::utils::RStatsConditionLogger::isError ( size_t index ) const`

isError

##### Parameters

<i>index</i>	
--------------	--

##### Returns

5.2.2.10 `bool oig::ratstats::utils::RStatsConditionLogger::isInformation ( size_t index ) const`

isInformation

Parameters

<i>index</i>	
--------------	--

Returns

5.2.2.11 `bool oig::ratstats::utils::RStatsConditionLogger::isWarning ( size_t index ) const`

isWarning

Parameters

<i>index</i>	
--------------	--

Returns

5.2.2.12 `void oig::ratstats::utils::RStatsConditionLogger::setErrorQSS ( const std::string & qss )`

setErrorQSS

Parameters

<i>qss</i>	
------------	--

5.2.2.13 `void oig::ratstats::utils::RStatsConditionLogger::setInformationQSS ( const std::string & qss )`

setInformationQSS

Parameters

<i>qss</i>	
------------	--

5.2.2.14 `void oig::ratstats::utils::RStatsConditionLogger::setWarningQSS ( const std::string & qss )`

setWarningQSS

## Parameters

<i>qss</i>	
------------	--

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

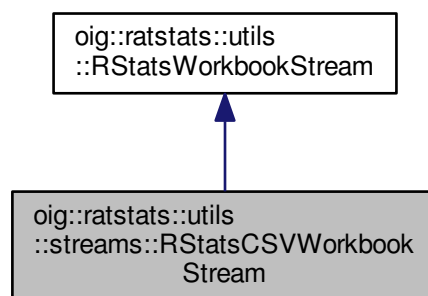
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsConditionLogger.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/RStatsConditionLogger.cpp

### 5.3 oig::ratstats::utils::streams::RStatsCSVWorkbookStream Class Reference

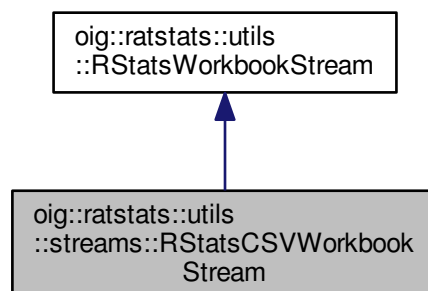
The [RStatsCSVWorkbookStream](#) class provides support for reading/writing to a CSV file.

```
#include <RStatsCSVWorkbookStream.h>
```

Inheritance diagram for oig::ratstats::utils::streams::RStatsCSVWorkbookStream:



Collaboration diagram for oig::ratstats::utils::streams::RStatsCSVWorkbookStream:



## Public Member Functions

- [RStatsCSVWorkbookStream](#) (const std::string &filePath)  
*[RStatsCSVWorkbookStream](#) (Constructor) Sets the path for input/output.*
- virtual void [write](#) (const [RStatsWorkbook](#) &workbook)  
*write Writes a workbook out to file. Note that this will only write the first sheet to the CSV file and add it to the workbook since CSV does not support multiple sheets.*
- virtual [RStatsWorkbook](#) [read](#) ()  
*read Reads a workbook from file. Note that this will only read a single sheet from the CSV file and add it to the workbook since CSV does not support multiple sheets*
- [~RStatsCSVWorkbookStream](#) ()  
*Destructor.*

### 5.3.1 Detailed Description

The [RStatsCSVWorkbookStream](#) class provides support for reading/writing to a CSV file.

### 5.3.2 Constructor & Destructor Documentation

#### 5.3.2.1 `oig::ratstats::utils::streams::RStatsCSVWorkbookStream::RStatsCSVWorkbookStream ( const std::string & filePath )`

[RStatsCSVWorkbookStream](#) (Constructor) Sets the path for input/output.

#### Parameters

<i>filePath</i>	The path to the input/output file
-----------------	-----------------------------------

### 5.3.3 Member Function Documentation

#### 5.3.3.1 `RStatsWorkbook oig::ratstats::utils::streams::RStatsCSVWorkbookStream::read ( ) [virtual]`

[read](#) Reads a workbook from file. Note that this will only read a single sheet from the CSV file and add it to the workbook since CSV does not support multiple sheets

#### Returns

Return constructed Workbook object

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

#### 5.3.3.2 `void oig::ratstats::utils::streams::RStatsCSVWorkbookStream::write ( const RStatsWorkbook & workbook ) [virtual]`

[write](#) Writes a workbook out to file. Note that this will only write the first sheet to the CSV file and add it to the workbook since CSV does not support multiple sheets.

## Parameters

<i>workbook</i>	The workbook object to write
-----------------	------------------------------

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/streams/RStatsCSVWorkbookStream.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/streams/RStatsCSVWorkbookStream.↔  
cpp

## 5.4 oig::ratstats::utils::RStatsDataFormatTypeIndex Struct Reference

The [RStatsDataFormatTypeIndex](#) struct.

```
#include <RStatsTypes.hpp>
```

### Public Attributes

- RStatsDataFormatType **type**
- size\_t **primaryDatasetColumnIndex**
- size\_t **secondaryDatasetColumnIndex**

#### 5.4.1 Detailed Description

The [RStatsDataFormatTypeIndex](#) struct.

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

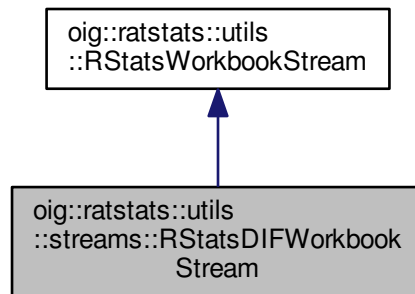
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsTypes.hpp

## 5.5 oig::ratstats::utils::streams::RStatsDIFWorkbookStream Class Reference

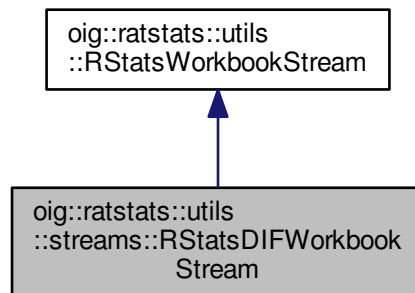
The [RStatsDIFWorkbookStream](#) class provides support for reading from and writing to the data interchange format.

```
#include <RStatsDIFWorkbookStream.h>
```

Inheritance diagram for oig::ratstats::utils::streams::RStatsDIFWorkbookStream:



Collaboration diagram for oig::ratstats::utils::streams::RStatsDIFWorkbookStream:



## Public Member Functions

- [RStatsDIFWorkbookStream](#) (const std::string &filePath)  
*RStatsDIFWorkbookStream (Constructor)*
- virtual void [write](#) (const [RStatsWorkbook](#) &workbook)  
*write* Writes a workbook object to DIF at m\_filePath NOTE: For a multisheet workbook, only the first sheet is written
- virtual [RStatsWorkbook](#) [read](#) ()  
*read* Reads a DIF file at m\_filePath into a workbook object
- [~RStatsDIFWorkbookStream](#) ()  
*Destructor.*

### 5.5.1 Detailed Description

The [RStatsDIFWorkbookStream](#) class provides support for reading from and writing to the data interchange format.

## 5.5.2 Constructor & Destructor Documentation

5.5.2.1 `oig::ratstats::utils::streams::RStatsDIFWorkbookStream::RStatsDIFWorkbookStream ( const std::string & filePath )`

[RStatsDIFWorkbookStream](#) (Constructor)

### Parameters

<i>filePath</i>	The path for reading/writing
-----------------	------------------------------

## 5.5.3 Member Function Documentation

5.5.3.1 `RStatsWorkbook oig::ratstats::utils::streams::RStatsDIFWorkbookStream::read ( ) [virtual]`

read Reads a DIF file at m\_filePath into a workbook object

### Returns

Returs workbook object of parsed DIF file

### Exceptions

<i>GenericException</i>	if file could not be read from
-------------------------	--------------------------------

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

5.5.3.2 `void oig::ratstats::utils::streams::RStatsDIFWorkbookStream::write ( const RStatsWorkbook & workbook ) [virtual]`

write Writes a workbook object to DIF at m\_filePath NOTE: For a multisheet workbook, only the first sheet is written

### Parameters

<i>workbook</i>	The workbook to write
-----------------	-----------------------

### Exceptions

<i>GenericException</i>	if file could not be written to
-------------------------	---------------------------------

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/streams/RStatsDIFWorkbookStream.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/streams/RStatsDIFWorkbookStream.cpp



## 5.6 `oig::ratstats::utils::RStatsMergeCellRange` Struct Reference

The `RStatsMergeCellRange` struct.

```
#include <RStatsWorksheet.h>
```

### Public Member Functions

- `bool contains` (`size_t row`, `size_t column`) `const`
- `bool operator<` (`const RStatsMergeCellRange &value`) `const`

### Public Attributes

- `size_t startRow`
- `size_t startColumn`
- `size_t rowOffset`
- `size_t columnOffset`

#### 5.6.1 Detailed Description

The `RStatsMergeCellRange` struct.

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_utils/inc/RStatsWorksheet.h`

## 5.7 `oig::ratstats::utils::RStatsModuleProperties` Class Reference

The `RStatsModuleProperties` class represents a individual module object in RAT-STATS. It provides a method of loading, saving and removing the module to/from disk.

```
#include <RStatsModuleProperties.h>
```

## Public Member Functions

- [RStatsModuleProperties](#) ()  
*RStatsModuleProperties* (Constructor)
- void [setType](#) (const std::string &value)  
*Setter for m\_type.*
- void [setName](#) (const std::string &value)  
*Setter for m\_name.*
- void [setWorkingDir](#) (const std::string &value)  
*Setter for m\_workingDir.*
- void [setPath](#) (const std::string &value)  
*Setter for m\_location.*
- void [setCategory](#) (const std::string &value)  
*Setter for m\_group.*
- void [setArgs](#) (const std::vector< std::pair< std::string, std::string > > &value)  
*Setter for m\_args.*
- std::string [getGeneratedApplicationCommand](#) () const  
*getGeneratedApplicationCommand This fuction constructs a command string which includes module path, script (if applicable) and command line arguments*
- void [generateApplicationCommand](#) (std::string &commandOut, std::string &argsOut)  
*generateApplicationCommand*
- void [setScriptPath](#) (const std::string &scriptFilePath)  
*setScriptPrefix*
- const std::string & [getScriptPath](#) () const
- const std::string & [getType](#) () const  
*Getter for m\_type.*
- const std::string & [getName](#) () const  
*Getter for m\_name.*
- const std::string & [getWorkingDir](#) () const  
*Getter for m\_workingDir.*
- const std::string & [getPath](#) () const  
*Getter for m\_location.*
- const std::string & [getCategory](#) () const  
*Getter for m\_group.*
- const std::string & [getConfigPath](#) () const  
*getConfigPath*
- const std::string & [getScriptPathArgs](#) () const  
*Getter for m\_args.*
- void [setScriptPathArgs](#) (const std::string &value)  
*setArgs*
- const std::string & [getArgs](#) () const  
*Getter for m\_args.*
- void [setArgs](#) (const std::string &value)  
*setArgs*
- void [setConfigPath](#) (const std::string &path)  
*setConfigPath Sets the XML config file path*
- void [loadConfig](#) (const std::string &filePath)  
*loadConfig*
- void [saveConfig](#) (const std::string &filePath)  
*saveConfig Saves XML config to filePath*
- void [saveConfig](#) ()

- saveConfig Saves XML config to default filePath*
- void [removeConfig](#) ()
- removeConfig Deletes XML config from default filePath*
- void [setIcon](#) (const std::string &applcon)
- setIcon*
- std::string [getIcon](#) () const
- getIcon Returns string relative URL to icon resource*
- bool [isConsoleShown](#) () const
- isConsoleShown Determines if command console should be shown.*
- void [setConsoleShown](#) (bool flag)
- setConsoleShown Sets boolean flag for condition where the command console should be shown when launching a module.*
- [~RStatsModuleProperties](#) ()
- Destructor.*

### 5.7.1 Detailed Description

The [RStatsModuleProperties](#) class represents a individual module object in RAT-STATS. It provides a method of loading, saving and removing the module to/from disk.

### 5.7.2 Member Function Documentation

- 5.7.2.1 void oig::ratstats::utils::RStatsModuleProperties::generateApplicationCommand ( std::string & *commandOut*, std::string & *argsOut* )

generateApplicationCommand

Parameters

<i>commandOut</i>	
<i>argsOut</i>	

- 5.7.2.2 const std::string & oig::ratstats::utils::RStatsModuleProperties::getArgs ( ) const

Getter for m\_args.

Returns

Return copy of m\_args

- 5.7.2.3 const std::string & oig::ratstats::utils::RStatsModuleProperties::getCategory ( ) const

Getter for m\_group.

Returns

Return copy of m\_group

5.7.2.4 `const std::string & oig::ratstats::utils::RStatsModuleProperties::getConfigPath ( ) const`

getConfigPath

Returns

5.7.2.5 `std::string oig::ratstats::utils::RStatsModuleProperties::getGeneratedApplicationCommand ( ) const`

getGeneratedApplicationCommand This fuction constructs a command string which includes module path, script (if applicable) and command line arguments

Returns

Returns string of full command thats ready to be launched

5.7.2.6 `std::string oig::ratstats::utils::RStatsModuleProperties::getIcon ( ) const`

getIcon Returns string relative URL to icon resource

Returns

5.7.2.7 `const std::string & oig::ratstats::utils::RStatsModuleProperties::getName ( ) const`

Getter for m\_name.

Returns

Return copy of m\_name

5.7.2.8 `const std::string & oig::ratstats::utils::RStatsModuleProperties::getPath ( ) const`

Getter for m\_location.

Returns

Return copy of m\_location

5.7.2.9 `const std::string & oig::ratstats::utils::RStatsModuleProperties::getScriptPathArgs ( ) const`

Getter for m\_args.

Returns

Return copy of m\_args

5.7.2.10 `const std::string & oig::ratstats::utils::RStatsModuleProperties::getType ( ) const`

Getter for m\_type.

Returns

Return copy of m\_type

5.7.2.11 `const std::string & oig::ratstats::utils::RStatsModuleProperties::getWorkingDir ( ) const`

Getter for m\_workingDir.

Returns

Return copy of m\_workingDir

5.7.2.12 `bool oig::ratstats::utils::RStatsModuleProperties::isConsoleShown ( ) const`

isConsoleShown Determines if command console should be shown.

Returns

Returns true if console should be shown, false otherwise

5.7.2.13 `void oig::ratstats::utils::RStatsModuleProperties::loadConfig ( const std::string & filePath )`

loadConfig

Parameters

<i>filePath</i>	Reads XML config from filePath
-----------------	--------------------------------

5.7.2.14 `void oig::ratstats::utils::RStatsModuleProperties::setArgs ( const std::vector< std::pair< std::string, std::string > > & value )`

Setter for m\_args.

Parameters

<i>value</i>	to replace m_args
--------------	-------------------

5.7.2.15 `void oig::ratstats::utils::RStatsModuleProperties::setArgs ( const std::string & value )`

setArgs

## Parameters

<i>value</i>	
--------------	--

5.7.2.16 void `oig::ratstats::utils::RStatsModuleProperties::setCategory ( const std::string & value )`

Setter for `m_group`.

## Parameters

<i>value</i>	to replace <code>m_group</code>
--------------	---------------------------------

5.7.2.17 void `oig::ratstats::utils::RStatsModuleProperties::setConfigPath ( const std::string & path )`

`setConfigPath` Sets the XML config file path

## Parameters

<i>path</i>	The path to the XML config file
-------------	---------------------------------

5.7.2.18 void `oig::ratstats::utils::RStatsModuleProperties::setConsoleShown ( bool flag )`

`setConsoleShown` Sets boolean flag for condition where the command console should be shown when launching a module.

## Parameters

<i>flag</i>	The boolean flag to set
-------------	-------------------------

5.7.2.19 void `oig::ratstats::utils::RStatsModuleProperties::setIcon ( const std::string & applcon )`

`setIcon`

## Parameters

<i>applcon</i>	
----------------	--

5.7.2.20 void `oig::ratstats::utils::RStatsModuleProperties::setName ( const std::string & value )`

Setter for `m_name`.

## Parameters

<i>value</i>	to replace m_name
--------------	-------------------

5.7.2.21 void oig::ratstats::utils::RStatsModuleProperties::setPath ( const std::string & *value* )

Setter for m\_location.

## Parameters

<i>value</i>	to replace m_location
--------------	-----------------------

5.7.2.22 void oig::ratstats::utils::RStatsModuleProperties::setScriptPath ( const std::string & *scriptFilePath* )

setScriptPrefix

## Parameters

<i>type</i>	
<i>scriptFilePath</i>	

5.7.2.23 void oig::ratstats::utils::RStatsModuleProperties::setScriptPathArgs ( const std::string & *value* )

setArgs

## Parameters

<i>value</i>	
--------------	--

5.7.2.24 void oig::ratstats::utils::RStatsModuleProperties::setType ( const std::string & *value* )

Setter for m\_type.

## Parameters

<i>value</i>	to replace m_type
--------------	-------------------

5.7.2.25 void oig::ratstats::utils::RStatsModuleProperties::setWorkingDir ( const std::string & *value* )

Setter for m\_workingDir.

## Parameters

<i>value</i>	to replace <code>m_workingDir</code>
--------------	--------------------------------------

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

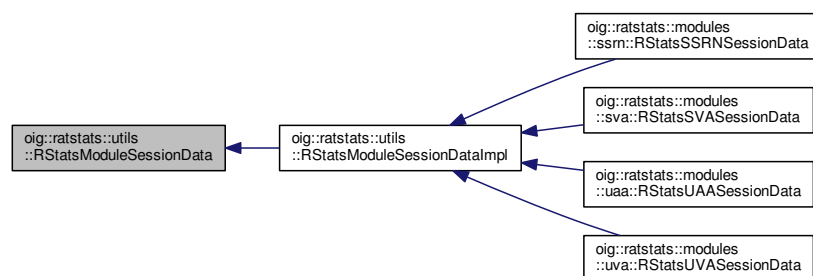
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_utils/inc/RStatsModuleProperties.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_utils/src/RStatsModuleProperties.cpp`

## 5.8 `oig::ratstats::utils::RStatsModuleSessionData` Class Reference

The `RStatsModuleSessionData` interface is used by each of the modules to provide custom session data for the "Recently Used" feature. This interface represents the common functions that have to be implemented for each module.

```
#include <RStatsModuleSessionData.hpp>
```

Inheritance diagram for `oig::ratstats::utils::RStatsModuleSessionData`:



### Public Member Functions

- virtual `std::string getSessionId () const =0`  
*getSessionId Returns unique id associated with this session*
- virtual `std::string getType () const =0`  
*getType The type of child class session data*
- virtual `void save (const std::string &url)=0`  
*save Called by sub-classes for saving custom fields*
- virtual `void load (const std::string &url)=0`  
*load Called by sub-classes for loading custom fields*
- virtual `const cbtek::common::utility::DateEntity &getCreationDate () const =0`  
*Getter for m\_creationDate.*
- virtual `const cbtek::common::utility::TimeEntity &getCreationTime () const =0`  
*Getter for m\_creationTime.*
- virtual `const std::string &getCSVOutputFile () const =0`  
*Getter for m\_csvOutputFile.*
- virtual `const std::string &getTextOutputFile () const =0`



Getter for *m\_textOutputFile*.

- virtual const std::string & [getAuditName](#) () const =0

Getter for *m\_auditName*.

- virtual bool [isViewableInBrowser](#) () const =0

*isViewableInBrowser* Flag to determine if module results are visible within a web browser

- virtual [~RStatsModuleSessionData](#) ()

Virtual Destructor.

### 5.8.1 Detailed Description

The [RStatsModuleSessionData](#) interface is used by each of the modules to provide custom session data for the "Recently Used" feature. This interface represents the common functions that have to be implemented for each module.

### 5.8.2 Member Function Documentation

**5.8.2.1** virtual const std::string& oig::ratstats::utils::RStatsModuleSessionData::getAuditName ( ) const [pure virtual]

Getter for *m\_auditName*.

Returns

Return copy of *m\_auditName*

Implemented in [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.2** virtual const cbtek::common::utility::DateEntity& oig::ratstats::utils::RStatsModuleSessionData::getCreationDate ( ) const [pure virtual]

Getter for *m\_creationDate*.

Returns

Return copy of *m\_creationDate*

Implemented in [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.3** virtual const cbtek::common::utility::TimeEntity& oig::ratstats::utils::RStatsModuleSessionData::getCreationTime ( ) const [pure virtual]

Getter for *m\_creationTime*.

Returns

Return copy of *m\_creationTime*

Implemented in [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.4** `virtual const std::string& oig::ratstats::utils::RStatsModuleSessionData::getCSVOutputFile ( ) const` [pure virtual]

Getter for m\_csvOutputFile.

#### Returns

Return copy of m\_csvOutputFile

Implemented in [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.5** `virtual std::string oig::ratstats::utils::RStatsModuleSessionData::getSessionId ( ) const` [pure virtual]

getSessionId Returns unique id associated with this session

#### Returns

Implemented in [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.6** `virtual const std::string& oig::ratstats::utils::RStatsModuleSessionData::getTextOutputFile ( ) const` [pure virtual]

Getter for m\_textOutputFile.

#### Returns

Return copy of m\_textOutputFile

Implemented in [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.7** `virtual std::string oig::ratstats::utils::RStatsModuleSessionData::getType ( ) const` [pure virtual]

getType The type of child class session data

#### Returns

Return type of session data

Implemented in [oig::ratstats::modules::sva::RStatsSVASessionData](#), [oig::ratstats::modules::uva::RStatsUVA↔SessionData](#), [oig::ratstats::modules::ssrn::RStatsSSRNSessionData](#), [oig::ratstats::modules::uaa::RStatsUAA↔SessionData](#), and [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.8** `virtual bool oig::ratstats::utils::RStatsModuleSessionData::isViewableInBrowser ( ) const` [pure virtual]

isViewableInBrowser Flag to determine if module results are visible within a web browser

#### Returns

Implemented in [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

**5.8.2.9** `virtual void oig::ratstats::utils::RStatsModuleSessionData::load ( const std::string & url )` [pure virtual]

load Called by sub-classes for loading custom fields

## Parameters

<code>url</code>	The location to load the file from
------------------	------------------------------------

Implemented in [`oig::ratstats::modules::sva::RStatsSVASessionData`](#), [`oig::ratstats::modules::uva::RStatsUVA↵  
SessionData`](#), [`oig::ratstats::modules::ssrn::RStatsSSRNSessionData`](#), [`oig::ratstats::modules::uaa::RStatsUAA↵  
SessionData`](#), and [`oig::ratstats::utils::RStatsModuleSessionDataImpl`](#).

**5.8.2.10** `virtual void oig::ratstats::utils::RStatsModuleSessionData::save ( const std::string & url ) [pure virtual]`

save Called by sub-classes for saving custom fields

## Parameters

<code>url</code>	The location to save the file to
------------------	----------------------------------

Implemented in [`oig::ratstats::modules::sva::RStatsSVASessionData`](#), [`oig::ratstats::modules::uva::RStatsUVA↵  
SessionData`](#), [`oig::ratstats::modules::ssrn::RStatsSSRNSessionData`](#), [`oig::ratstats::modules::uaa::RStatsUAA↵  
SessionData`](#), and [`oig::ratstats::utils::RStatsModuleSessionDataImpl`](#).

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

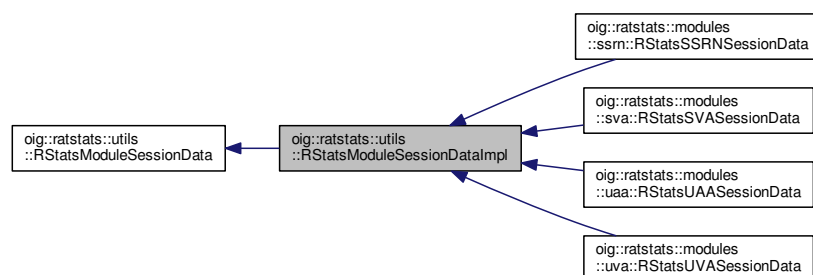
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_utils/inc/RStatsModuleSessionData.hpp`

## 5.9 `oig::ratstats::utils::RStatsModuleSessionDataImpl` Class Reference

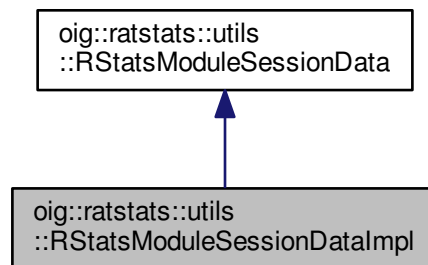
The [`RStatsModuleSessionDataImpl`](#) abstract class is a partial base implementation of the [`RStatsModuleSession↵  
Data`](#) interface. It implements getters/setters for the common values.

```
#include <RStatsModuleSessionDataImpl.h>
```

Inheritance diagram for `oig::ratstats::utils::RStatsModuleSessionDataImpl`:



Collaboration diagram for `oig::ratstats::utils::RStatsModuleSessionDataImpl`:



## Public Member Functions

- [RStatsModuleSessionDataImpl](#) ()  
*RStatsModuleSessionDataImpl.*
- virtual `std::string` [getType](#) () const =0  
*getType Get a string representing the subclass type*
- virtual void [save](#) (const `std::string` &url)=0  
*save Calls virtual subclass method for saving*
- virtual void [load](#) (const `std::string` &url)=0  
*load Calls virtual subclass method for loading*
- virtual `std::string` [getSessionId](#) () const  
*getSessionId Return unique id associated with this session*
- void [setCreationDate](#) (const `cbtek::common::utility::DateEntity` &value)  
*Setter for m\_creationDate.*
- void [setCreationTime](#) (const `cbtek::common::utility::TimeEntity` &value)  
*Setter for m\_creationTime.*
- void [setCSVOutputFile](#) (const `std::string` &value)  
*Setter for m\_csvOutputFile.*
- void [setXLSOutputFile](#) (const `std::string` &value)  
*Setter for m\_xlsOutputFile.*
- void [setTextOutputFile](#) (const `std::string` &value)  
*Setter for m\_textOutputFile.*
- void [setAuditName](#) (const `std::string` &value)  
*Setter for m\_auditName.*
- const `cbtek::common::utility::DateEntity` & [getCreationDate](#) () const  
*Getter for m\_creationDate.*
- const `cbtek::common::utility::TimeEntity` & [getCreationTime](#) () const  
*Getter for m\_creationTime.*
- const `std::string` & [getCSVOutputFile](#) () const  
*Getter for m\_csvOutputFile.*
- const `std::string` & [getXLSOutputFile](#) () const  
*Getter for m\_xlsOutputFile.*
- const `std::string` & [getTextOutputFile](#) () const

- Getter for *m\_textOutputFile*.

  - const std::string & [getAuditName](#) () const

Getter for *m\_auditName*.

  - void [setViewInBrowserFlag](#) (bool flag)

*setViewInBrowserFlag*

  - bool [isViewableInBrowser](#) () const

*isViewableInBrowser*

  - void [createSessionId](#) ()

*createSessionId Generates new session id*

  - [~RStatsModuleSessionDataImpl](#) ()

*Destructor.*

## Protected Member Functions

- void [save](#) (cbtek::common::utility::XMLStreamWriter &writer)
- save Provides XML save support for common values. This is usually called by implementing modules.*
- void [load](#) (cbtek::common::utility::XMLDataElement \*element)
- load Provides XML load support for common values. This is usually called by implementing modules.*

### 5.9.1 Detailed Description

The [RStatsModuleSessionDataImpl](#) abstract class is a partial base implementation of the [RStatsModuleSessionData](#) interface. It implements getters/setters for the common values.

### 5.9.2 Member Function Documentation

#### 5.9.2.1 const std::string & oig::ratstats::utils::RStatsModuleSessionDataImpl::getAuditName ( ) const [virtual]

Getter for *m\_auditName*.

##### Returns

Return copy of *m\_auditName*

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

#### 5.9.2.2 const cbtek::common::utility::DateEntity & oig::ratstats::utils::RStatsModuleSessionDataImpl::getCreationDate ( ) const [virtual]

Getter for *m\_creationDate*.

##### Returns

Return copy of *m\_creationDate*

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

**5.9.2.3** `const cbtek::common::utility::TimeEntity & oig::ratstats::utils::RStatsModuleSessionDataImpl::getCreationTime ( ) const [virtual]`

Getter for m\_creationTime.

Returns

Return copy of m\_creationTime

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

**5.9.2.4** `const std::string & oig::ratstats::utils::RStatsModuleSessionDataImpl::getCSVOutputFile ( ) const [virtual]`

Getter for m\_csvOutputFile.

Returns

Return copy of m\_csvOutputFile

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

**5.9.2.5** `std::string oig::ratstats::utils::RStatsModuleSessionDataImpl::getSessionId ( ) const [virtual]`

getSessionId Return unique id associated with this session

Returns

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

**5.9.2.6** `const std::string & oig::ratstats::utils::RStatsModuleSessionDataImpl::getTextOutputFile ( ) const [virtual]`

Getter for m\_textOutputFile.

Returns

Return copy of m\_textOutputFile

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

**5.9.2.7** `virtual std::string oig::ratstats::utils::RStatsModuleSessionDataImpl::getType ( ) const [pure virtual]`

getType Get a string representing the subclass type

Returns

Return string for type (m\_type)

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

Implemented in [oig::ratstats::modules::sva::RStatsSVASessionData](#), [oig::ratstats::modules::uva::RStatsUVA↵SessionData](#), [oig::ratstats::modules::ssrn::RStatsSSRNSessionData](#), and [oig::ratstats::modules::uaa::RStatsUA↵ASessionData](#).

5.9.2.8 `const std::string & oig::ratstats::utils::RStatsModuleSessionDataImpl::getXLSOutputFile ( ) const`

Getter for `m_xlsOutputFile`.

Returns

Return copy of `m_xlsOutputFile`

5.9.2.9 `bool oig::ratstats::utils::RStatsModuleSessionDataImpl::isViewableInBrowser ( ) const` [virtual]

`isViewableInBrowser`

Returns

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

5.9.2.10 `virtual void oig::ratstats::utils::RStatsModuleSessionDataImpl::load ( const std::string & url )` [pure virtual]

`load` Calls virtual subclass method for loading

Parameters

<i>url</i>	Path to file to load
------------	----------------------

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

Implemented in [oig::ratstats::modules::sva::RStatsSVASessionData](#), [oig::ratstats::modules::uva::RStatsUVA↵SessionData](#), [oig::ratstats::modules::ssrn::RStatsSSRNSessionData](#), and [oig::ratstats::modules::uaa::RStatsUA↵ASessionData](#).

5.9.2.11 `void oig::ratstats::utils::RStatsModuleSessionDataImpl::load ( cbtek::common::utility::XMLDataElement * element )` [protected]

`load` Provides XML load support for common values. This is usually called by implementing modules.

Parameters

<i>element</i>	Pointer to XML parse element
----------------	------------------------------

5.9.2.12 `virtual void oig::ratstats::utils::RStatsModuleSessionDataImpl::save ( const std::string & url )` [pure virtual]

`save` Calls virtual subclass method for saving

## Parameters

<i>url</i>	Path to file to save
------------	----------------------

Implements [oig::ratstats::utils::RStatsModuleSessionData](#).

Implemented in [oig::ratstats::modules::sva::RStatsSVASessionData](#), [oig::ratstats::modules::uva::RStatsUVA↵  
SessionData](#), [oig::ratstats::modules::ssrn::RStatsSSRNSessionData](#), and [oig::ratstats::modules::uaa::RStatsUA↵  
ASessionData](#).

**5.9.2.13** `void oig::ratstats::utils::RStatsModuleSessionDataImpl::save ( cbtek::common::utility::XMLStreamWriter & writer )`  
[protected]

save Provides XML save support for common values. This is usually called by implementing modules.

## Parameters

<i>writer</i>	Reference to the XML outout writer
---------------	------------------------------------

**5.9.2.14** `void oig::ratstats::utils::RStatsModuleSessionDataImpl::setAuditName ( const std::string & value )`

Setter for m\_auditName.

## Parameters

<i>Value</i>	to replace m_auditName
--------------	------------------------

**5.9.2.15** `void oig::ratstats::utils::RStatsModuleSessionDataImpl::setCreationDate ( const cbtek::common::utility::DateEntity & value )`

Setter for m\_creationDate.

## Parameters

<i>Value</i>	to replace m_creationDate
--------------	---------------------------

**5.9.2.16** `void oig::ratstats::utils::RStatsModuleSessionDataImpl::setCreationTime ( const cbtek::common::utility::TimeEntity & value )`

Setter for m\_creationTime.

## Parameters

<i>Value</i>	to replace m_creationTime
--------------	---------------------------



5.9.2.17 void oig::ratstats::utils::RStatsModuleSessionDataImpl::setCSVOutputFile ( const std::string & *value* )

Setter for m\_csvOutputFile.

Parameters

<i>Value</i>	to replace m_csvOutputFile
--------------	----------------------------

5.9.2.18 void oig::ratstats::utils::RStatsModuleSessionDataImpl::setTextOutputFile ( const std::string & *value* )

Setter for m\_textOutputFile.

Parameters

<i>Value</i>	to replace m_textOutputFile
--------------	-----------------------------

5.9.2.19 void oig::ratstats::utils::RStatsModuleSessionDataImpl::setViewInBrowserFlag ( bool *flag* )

setViewInBrowserFlag

Parameters

<i>flag</i>	
-------------	--

5.9.2.20 void oig::ratstats::utils::RStatsModuleSessionDataImpl::setXLSOutputFile ( const std::string & *value* )

Setter for m\_xlsOutputFile.

Parameters

<i>Value</i>	to replace m_xlsOutputFile
--------------	----------------------------

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsModuleSessionDataImpl.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/RStatsModuleSessionDataImpl.cpp

## 5.10 oig::ratstats::utils::RStatsObjectList< T > Class Template Reference

The [RStatsObjectList](#) class is used to represent a simple N-dimensional array with similar add/remove syntax with VB/VBA.

```
#include <RStatsObjectList.hpp>
```

## Public Member Functions

- [RStatsObjectList](#) ()  
*RStatsObjectList (Constructor)*
- [RStatsObjectList](#) (size\_t size, size\_t dimensionCount=1)  
*RStatsObjectList (Constructor)*
- void [initialize](#) (size\_t size, size\_t dimensionCount=1)  
*initialize*
- size\_t [size](#) (size\_t dimension=0) const  
*size Returns the size of the vector at specified dimension*
- void [resize](#) (size\_t newSize)  
*resize Resizes all dimensions to newSize*
- T & [operator\(\)](#) (size\_t index, size\_t dimension=0)  
*operator () Used to access the data by reference*
- const T & [operator\(\)](#) (size\_t index, size\_t dimension=0) const  
*operator () Used to access the data by const reference*
- std::string [toString](#) () const  
*toString Converts all elements into a string and returns it*
- std::string [toString](#) (size\_t orderByDimension) const  
*toString*
- size\_t [getNumDimensions](#) () const  
*getNumDimensions*
- void [addValues](#) (const [RStatsObjectList](#)< T > &values, size\_t sourceDimension=0)  
*addValues*
- void [addValues](#) (const std::vector< T > &values)  
*addValues*
- [RStatsObjectList](#)< T > [getValues](#) (size\_t dimension=0) const  
*getValues*
- const std::vector< T > & [toStdVector](#) (size\_t dimension=0) const  
*toStdVector*
- void [clear](#) ()  
*clear*
- void [sort](#) (size\_t dimension=0)  
*sort*
- [~RStatsObjectList](#) ()  
*Destructor.*

### 5.10.1 Detailed Description

```
template<typename T>
class oig::ratstats::utils::RStatsObjectList< T >
```

The [RStatsObjectList](#) class is used to represent a simple N-dimensional array with similar add/remove syntax with VB/VBA.

### 5.10.2 Constructor & Destructor Documentation

5.10.2.1 `template<typename T> oig::ratstats::utils::RStatsObjectList< T >::RStatsObjectList ( size_t size, size_t dimensionCount = 1 )`

[RStatsObjectList](#) (Constructor)

## Parameters

<i>size</i>	The total size of the array
<i>dimensionCount</i>	The number of dimensions to create

## 5.10.3 Member Function Documentation

5.10.3.1 `template<typename T> void oig::ratstats::utils::RStatsObjectList< T >::addValues ( const RStatsObjectList< T > & values, size_t sourceDimension = 0 )`

## addValues

## Parameters

<i>values</i>	
<i>dimensionForValues</i>	

5.10.3.2 `template<typename T> void oig::ratstats::utils::RStatsObjectList< T >::addValues ( const std::vector< T > & values )`

## addValues

## Parameters

<i>values</i>	
---------------	--

5.10.3.3 `template<typename T> size_t oig::ratstats::utils::RStatsObjectList< T >::getNumDimensions ( ) const`

## getNumDimensions

## Returns

5.10.3.4 `template<typename T> RStatsObjectList< T > oig::ratstats::utils::RStatsObjectList< T >::getValues ( size_t dimension = 0 ) const`

## getValues

## Parameters

<i>dimension</i>	
------------------	--

## Returns

**5.10.3.5** `template<typename T> void oig::ratstats::utils::RStatsObjectList< T >::initialize ( size_t size, size_t dimensionCount = 1 )`

## initialize

## Parameters

<i>size</i>	The total size of the array
<i>dimensionCount</i>	The number of dimensions to create

**5.10.3.6** `template<typename T> T & oig::ratstats::utils::RStatsObjectList< T >::operator() ( size_t index, size_t dimension = 0 )`

operator () Used to access the data by reference

## Parameters

<i>index</i>	Index of the element to access
<i>dimension</i>	The dimension to access

## Returns

Return reference to type T

**5.10.3.7** `template<typename T> const T & oig::ratstats::utils::RStatsObjectList< T >::operator() ( size_t index, size_t dimension = 0 ) const`

operator () Used to access the data by const reference

## Parameters

<i>index</i>	Index of the element to access
<i>dimension</i>	The dimension to access

## Returns

Return const reference to type T

**5.10.3.8** `template<typename T> void oig::ratstats::utils::RStatsObjectList< T >::resize ( size_t newSize )`

resize Resizes all dimensions to newSize

## Parameters

<i>newSize</i>	New size for all dimensions
----------------	-----------------------------

5.10.3.9 `template<typename T> size_t oig::ratstats::utils::RStatsObjectList< T >::size ( size_t dimension = 0 ) const`

size Returns the size of the vector at specified dimension

## Returns

Return size\_t size of vector at specified dimension

5.10.3.10 `template<typename T> void oig::ratstats::utils::RStatsObjectList< T >::sort ( size_t dimension = 0 )`

sort

## Parameters

<i>dimension</i>	
------------------	--

5.10.3.11 `template<typename T> const std::vector< T > & oig::ratstats::utils::RStatsObjectList< T >::toStdVector ( size_t dimension = 0 ) const`

toStdVector

## Parameters

<i>dimension</i>	
------------------	--

## Returns

5.10.3.12 `template<typename T> std::string oig::ratstats::utils::RStatsObjectList< T >::toString ( ) const`

toString Converts all elements into a string and returns it

## Returns

Return string containing all elements

5.10.3.13 `template<typename T> std::string oig::ratstats::utils::RStatsObjectList< T >::toString ( size_t orderByDimension ) const`

toString

## Parameters

<code>orderByDimension</code>	
-------------------------------	--

## Returns

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_utils/inc/RStatsObjectList.hpp`

## 5.11 `oig::ratstats::utils::RStatsScriptProviderProperties` Class Reference

The `RStatsScriptProviderProperties` class represents all the fields necessary to represent a script provider.

```
#include <RStatsScriptProviderProperties.h>
```

### Public Member Functions

- `RStatsScriptProviderProperties ()`  
*RStatsScriptProviderProperties (Constructor)*
- void `setPath` (const std::string &value)  
*Setter for m\_path.*
- void `setIcon` (const std::string &value)  
*Setter for m\_icon.*
- void `setArgs` (const std::string &value)  
*Setter for m\_args.*
- void `setName` (const std::string &value)  
*Setter for m\_name.*
- const std::string & `getPath` () const  
*Getter for m\_path.*
- const std::string & `getIcon` () const  
*Getter for m\_icon.*
- const std::string & `getArgs` () const  
*Getter for m\_args.*
- const std::string & `getName` () const  
*Getter for m\_name.*
- void `saveConfig` ()  
*saveConfig*
- void `saveConfig` (const std::string &filePath)  
*saveConfig*
- void `loadConfig` (const std::string &filePath)  
*loadConfig*
- void `removeConfig` ()  
*removeConfigFile*
- void `setConfigPath` (const std::string &configPath)  
*setConfigPath*
- const std::string & `getConfigPath` () const  
*getConfigPath*
- `~RStatsScriptProviderProperties ()`  
*Destructor.*

### 5.11.1 Detailed Description

The [RStatsScriptProviderProperties](#) class represents all the fields necessary to represent a script provider.

### 5.11.2 Member Function Documentation

#### 5.11.2.1 `const std::string & oig::ratstats::utils::RStatsScriptProviderProperties::getArgs ( ) const`

Getter for m\_args.

##### Returns

Return copy of m\_args

#### 5.11.2.2 `const std::string & oig::ratstats::utils::RStatsScriptProviderProperties::getConfigPath ( ) const`

getConfigPath

##### Returns

#### 5.11.2.3 `const std::string & oig::ratstats::utils::RStatsScriptProviderProperties::getIcon ( ) const`

Getter for m\_icon.

##### Returns

Return copy of m\_icon

#### 5.11.2.4 `const std::string & oig::ratstats::utils::RStatsScriptProviderProperties::getName ( ) const`

Getter for m\_name.

##### Returns

Return copy of m\_name

#### 5.11.2.5 `const std::string & oig::ratstats::utils::RStatsScriptProviderProperties::getPath ( ) const`

Getter for m\_path.

##### Returns

Return copy of m\_path

#### 5.11.2.6 `void oig::ratstats::utils::RStatsScriptProviderProperties::loadConfig ( const std::string & filePath )`

loadConfig

## Parameters

<i>filePath</i>	
-----------------	--

5.11.2.7 void oig::ratstats::utils::RStatsScriptProviderProperties::saveConfig ( const std::string & *filePath* )

saveConfig

## Parameters

<i>filePath</i>	
-----------------	--

5.11.2.8 void oig::ratstats::utils::RStatsScriptProviderProperties::setArgs ( const std::string & *value* )

Setter for m\_args.

## Parameters

<i>value</i>	to replace m_args
--------------	-------------------

5.11.2.9 void oig::ratstats::utils::RStatsScriptProviderProperties::setConfigPath ( const std::string & *configPath* )

setConfigPath

## Parameters

<i>configPath</i>	
-------------------	--

5.11.2.10 void oig::ratstats::utils::RStatsScriptProviderProperties::setIcon ( const std::string & *value* )

Setter for m\_icon.

## Parameters

<i>value</i>	to replace m_icon
--------------	-------------------

5.11.2.11 void oig::ratstats::utils::RStatsScriptProviderProperties::setName ( const std::string & *value* )

Setter for m\_name.

## Parameters

<i>value</i>	to replace m_name
--------------	-------------------



5.11.2.12 void oig::ratstats::utils::RStatsScriptProviderProperties::setPath ( const std::string & value )

Setter for m\_path.

Parameters

<i>value</i>	to replace m_path
--------------	-------------------

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

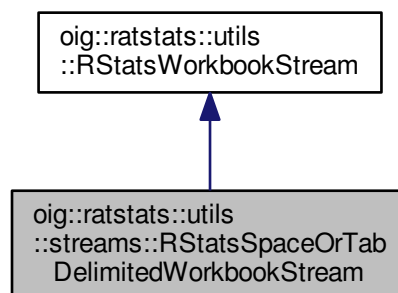
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsScriptProviderProperties.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/RStatsScriptProviderProperties.cpp

## 5.12 oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream Class Reference

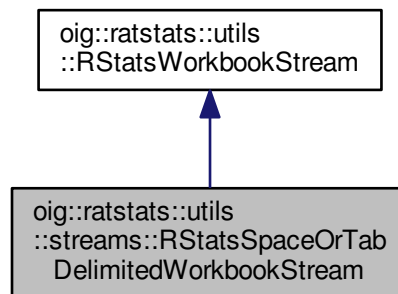
The [RStatsSpaceOrTabDelimitedWorkbookStream](#) class provides support for reading and writing to space and tab delimited files.

```
#include <RStatsSpaceOrTabDelimitedWorkbookStream.h>
```

Inheritance diagram for oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream:



Collaboration diagram for `oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream`:



## Public Member Functions

- [RStatsSpaceOrTabDelimitedWorkbookStream](#) (const std::string &filePath)  
[RStatsSpaceOrTabDelimitedWorkbookStream](#) (Constructor) Sets the path for input/output.
- virtual void [write](#) (const [RStatsWorkbook](#) &workbook)  
*write* Writes a workbook out to file. Note that this will only write the first sheet to the ssv,txt or dat file and add it to the workbook since CSV does not support multiple sheets.
- virtual [RStatsWorkbook](#) [read](#) ()  
*read* Reads a workbook from file. Note that this will only read a single sheet from the ssv,txt or dat file and add it to the workbook since they do not support multiple sheets
- [~RStatsSpaceOrTabDelimitedWorkbookStream](#) ()  
*Destructor.*

## 5.12.1 Detailed Description

The [RStatsSpaceOrTabDelimitedWorkbookStream](#) class provides support for reading and writing to space and tab delimited files.

## 5.12.2 Constructor & Destructor Documentation

- 5.12.2.1 `oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream::RStatsSpaceOrTabDelimitedWorkbookStream ( const std::string & filePath )`↔

[RStatsSpaceOrTabDelimitedWorkbookStream](#) (Constructor) Sets the path for input/output.

### Parameters

<i>filePath</i>	The path to the input/output file
-----------------	-----------------------------------

### 5.12.3 Member Function Documentation

#### 5.12.3.1 RStatsWorkbook oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream::read ( ) [virtual]

read Reads a workbook from file. Note that this will only read a single sheet from the ssv,txt or dat file and add it to the workbook since they do not support multiple sheets

##### Returns

Return constructed Workbook object

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

#### 5.12.3.2 void oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream::write ( const RStatsWorkbook & workbook ) [virtual]

write Writes a workbook out to file. Note that this will only write the first sheet to the ssv,txt or dat file and add it to the workbook since CSV does not support multiple sheets.

##### Parameters

<i>workbook</i>	The workbook object to write
-----------------	------------------------------

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/streams/RStatsSpaceOrTabDelimitedWorkbookStream.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/streams/RStatsSpaceOrTabDelimitedWorkbookStream.cpp

## 5.13 oig::ratstats::modules::ssrn::RStatsSSRN Class Reference

The [RStatsSSRN](#) class represents the Single Stage Random Numbers function. In the model-view-controller paradigm, this class represents the controller.

```
#include <RStatsSSRN.h>
```

### Public Member Functions

- [RStatsSSRNOutputData execute](#) (const std::string &auditName, RStatsFloat inputSeed, oig::ratstats::utils::RStatsInteger sequentialOrder, oig::ratstats::utils::RStatsInteger sparesInRandomOrder, oig::ratstats::utils::RStatsInteger lowNumber, oig::ratstats::utils::RStatsInteger highNumber)  
*generateRandomNumbers*
- void [saveToCSVFile](#) (const std::string &filePath)  
*saveToCSVWorksheetFile*
- void [saveToWorksheet](#) ([oig::ratstats::utils::RStatsWorksheet](#) &worksheetOut)  
*saveToWorksheet Saves output results to worksheet reference*
- void [saveToTextFile](#) (const std::string &filePath)  
*saveToTextFile*

### 5.13.1 Detailed Description

The [RStatsSSRN](#) class represents the Single Stage Random Numbers function. In the model-view-controller paradigm, this class represents the controller.

### 5.13.2 Member Function Documentation

**5.13.2.1 RStatsSSRNOutputData** `oig::ratstats::modules::ssrn::RStatsSSRN::execute ( const std::string & auditName, RStatsFloat inputSeed, oig::ratstats::utils::RStatsInteger sequentialOrder, oig::ratstats::utils::RStatsInteger sparesInRandomOrder, oig::ratstats::utils::RStatsInteger lowNumber, oig::ratstats::utils::RStatsInteger highNumber )`

generateRandomNumbers

Parameters

<i>auditName</i>	
<i>inputSeed</i>	
<i>sequentialOrder</i>	
<i>sparesInRandomOrder</i>	
<i>lowNumber</i>	
<i>highNumber</i>	

Returns

**5.13.2.2** `void oig::ratstats::modules::ssrn::RStatsSSRN::saveToCSVFile ( const std::string & filePath )`

saveToCSVWorksheetFile

Parameters

<i>filePath</i>	
-----------------	--

**5.13.2.3** `void oig::ratstats::modules::ssrn::RStatsSSRN::saveToTextFile ( const std::string & filePath )`

saveToTextFile

Parameters

<i>filePath</i>	
-----------------	--

5.13.2.4 `void oig::ratstats::modules::ssrn::RStatsSSRN::saveToWorksheet ( oig::ratstats::utils::RStatsWorksheet & worksheetOut )`

`saveToWorksheet` Saves output results to worksheet reference

Parameters

<code>worksheetOut</code>	Reference to worksheet to be returned
---------------------------	---------------------------------------

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/inc/RStatsSSRN.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/src/RStatsSSRN.cpp`

## 5.14 `oig::ratstats::modules::ssrn::RStatsSSRNInputData` Struct Reference

The `RStatsSSRNInputData` struct.

```
#include <RStatsSSRN.h>
```

### Public Attributes

- double **ratStatValue**
- double **excelValue**
- `oig::ratstats::utils::RStatsInteger` **stepValue**

### 5.14.1 Detailed Description

The `RStatsSSRNInputData` struct.

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/inc/RStatsSSRN.h`

## 5.15 `oig::ratstats::modules::ssrn::RStatsSSRNOutputData` Struct Reference

The `RStatsSSRNOutputData` struct.

```
#include <RStatsSSRN.h>
```

## Public Attributes

- std::string **auditName**
- std::vector< [RStatsSSRNValue](#) > **values**
- oig::ratstats::utils::RStatsInteger **sum**
- oig::ratstats::utils::RStatsInteger **upper**
- oig::ratstats::utils::RStatsInteger **lower**
- oig::ratstats::utils::RStatsFloat **seed**
- oig::ratstats::utils::RStatsInteger **frameSize**
- oig::ratstats::utils::RStatsInteger **sparesCount**
- oig::ratstats::utils::RStatsInteger **sequentialCount**
- cbtek::common::utility::DateEntity **createDate**
- cbtek::common::utility::TimeEntity **createTime**

### 5.15.1 Detailed Description

The [RStatsSSRNOutputData](#) struct.

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

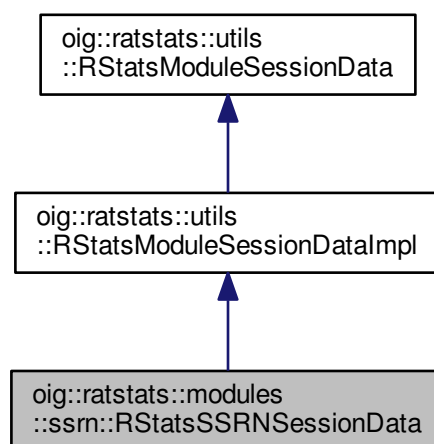
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/single\_stage\_random\_numbers/inc/RStatsSSRN.h

## 5.16 oig::ratstats::modules::ssrn::RStatsSSRNSessionData Class Reference

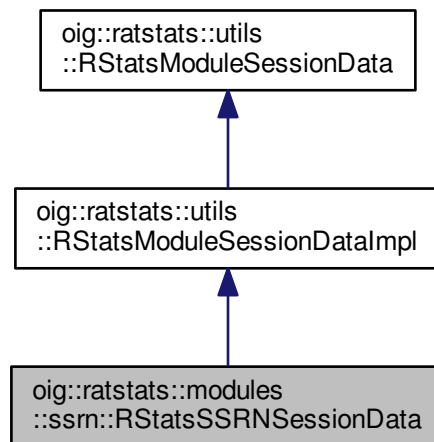
The [RStatsSSRNSessionData](#) class represents the custom session data for single stage random numbers (SSRN)

```
#include <RStatsSSRNSessionData.h>
```

Inheritance diagram for oig::ratstats::modules::ssrn::RStatsSSRNSessionData:



Collaboration diagram for oig::ratstats::modules::ssrn::RStatsSSRNSessionData:



## Public Member Functions

- [RStatsSSRNSessionData](#) ()  
*Constructor for [RStatsSSRNSessionData](#).*
- void [setSeed](#) (const utils::RStatsFloat &value)  
*Setter for `m_seed`.*
- void [setOrder](#) (const utils::RStatsInteger &value)  
*Setter for `m_order`.*
- void [setSpares](#) (const utils::RStatsInteger &value)  
*Setter for `m_spares`.*
- void [setLow](#) (const utils::RStatsInteger &value)  
*Setter for `m_low`.*
- void [setHigh](#) (const utils::RStatsInteger &value)  
*Setter for `m_high`.*
- const utils::RStatsFloat & [getSeed](#) () const  
*Getter for `m_seed`.*
- const utils::RStatsInteger & [getOrder](#) () const  
*Getter for `m_order`.*
- const utils::RStatsInteger & [getSpares](#) () const  
*Getter for `m_spares`.*
- const utils::RStatsInteger & [getLow](#) () const  
*Getter for `m_low`.*
- const utils::RStatsInteger & [getHigh](#) () const  
*Getter for `m_high`.*
- std::string [getType](#) () const  
*getType Get a string representing the subclass type*
- void [load](#) (const std::string &url)  
*load*

- void [save](#) (const std::string &url)  
    *save*
- [~RStatsSSRNSessionData](#) ()  
    *Destructor.*

## Additional Inherited Members

### 5.16.1 Detailed Description

The [RStatsSSRNSessionData](#) class represents the custom session data for single stage random numbers (SSRN)

### 5.16.2 Constructor & Destructor Documentation

#### 5.16.2.1 `oig::ratstats::modules::ssrn::RStatsSSRNSessionData::RStatsSSRNSessionData ( )`

Constructor for [RStatsSSRNSessionData](#).

Detailed description for [RStatsSSRNSessionData](#)

### 5.16.3 Member Function Documentation

#### 5.16.3.1 `const RStatsInteger & oig::ratstats::modules::ssrn::RStatsSSRNSessionData::getHigh ( ) const`

Getter for m\_high.

##### Returns

Return copy of m\_high

#### 5.16.3.2 `const RStatsInteger & oig::ratstats::modules::ssrn::RStatsSSRNSessionData::getLow ( ) const`

Getter for m\_low.

##### Returns

Return copy of m\_low

#### 5.16.3.3 `const RStatsInteger & oig::ratstats::modules::ssrn::RStatsSSRNSessionData::getOrder ( ) const`

Getter for m\_order.

##### Returns

Return copy of m\_order



5.16.3.4 `const RStatsFloat & oig::ratstats::modules::ssrn::RStatsSSRNSessionData::getSeed ( ) const`

Getter for `m_seed`.

Returns

Return copy of `m_seed`

5.16.3.5 `const RStatsInteger & oig::ratstats::modules::ssrn::RStatsSSRNSessionData::getSpares ( ) const`

Getter for `m_spares`.

Returns

Return copy of `m_spares`

5.16.3.6 `std::string oig::ratstats::modules::ssrn::RStatsSSRNSessionData::getType ( ) const` `[virtual]`

`getType` Get a string representing the subclass type

Returns

Return string for type (`m_type`)

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.16.3.7 `void oig::ratstats::modules::ssrn::RStatsSSRNSessionData::load ( const std::string & url )` `[virtual]`

`load`

Parameters

<code>url</code>	
------------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.16.3.8 `void oig::ratstats::modules::ssrn::RStatsSSRNSessionData::save ( const std::string & url )` `[virtual]`

`save`

Parameters

<code>url</code>	
------------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.16.3.9 `void oig::ratstats::modules::ssrn::RStatsSSRNSessionData::setHigh ( const utils::RStatsInteger & value )`

Setter for m\_high.

Parameters

<i>value</i>	to replace m_high
--------------	-------------------

5.16.3.10 `void oig::ratstats::modules::ssrn::RStatsSSRNSessionData::setLow ( const utils::RStatsInteger & value )`

Setter for m\_low.

Parameters

<i>value</i>	to replace m_low
--------------	------------------

5.16.3.11 `void oig::ratstats::modules::ssrn::RStatsSSRNSessionData::setOrder ( const utils::RStatsInteger & value )`

Setter for m\_order.

Parameters

<i>value</i>	to replace m_order
--------------	--------------------

5.16.3.12 `void oig::ratstats::modules::ssrn::RStatsSSRNSessionData::setSeed ( const utils::RStatsFloat & value )`

Setter for m\_seed.

Parameters

<i>value</i>	to replace m_seed
--------------	-------------------

5.16.3.13 `void oig::ratstats::modules::ssrn::RStatsSSRNSessionData::setSpares ( const utils::RStatsInteger & value )`

Setter for m\_spares.

Parameters

<i>value</i>	to replace m_spares
--------------	---------------------

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/inc/RStatsSSRNSessionData.h`

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/src/RStatsSSRNSessionData.cpp`

## 5.17 `oig::ratstats::modules::ssrn::RStatsSSRNValue` Struct Reference

The `RStatsSSRNValue` struct.

```
#include <RStatsSSRN.h>
```

### Public Attributes

- `RStatsInteger` **orderIndex**
- `RStatsInteger` **value**
- `RStatsSSRNOrderType` **orderType**

#### 5.17.1 Detailed Description

The `RStatsSSRNValue` struct.

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/inc/RStatsSSRN.h`

## 5.18 `oig::ratstats::modules::sva::RStatsSVA` Class Reference

The `RStatsSVA` class represents the stratified variable appraisal function. In the model-view-controller paradigm, this class represents the controller.

```
#include <RStatsSVA.h>
```

### Public Member Functions

- `RStatsSVA ()`  
*Constructor for `RStatsSVA`.*
- `RStatsSVAOutputDataList execute (const std::string &auditName, const oig::ratstats::utils::RStatsWorksheet &dataSheet, const oig::ratstats::utils::RStatsWorksheet &sizeSheet, const utils::RStatsDataFormatType &dataSheetIndex, size_t dataSheetRowStart, size_t sizeSheetSampleSizeColumn, size_t sizeSheetUniverseSizeColumn, size_t sizeSheetRowStart)`  
*execute*
- `void saveToWorkbook (oig::ratstats::utils::RStatsWorkbook &workbookOut)`  
*saveToWorkbook*
- `~RStatsSVA ()`  
*Destructor.*

### 5.18.1 Detailed Description

The [RStatsSVA](#) class represents the stratified variable appraisal function. In the model-view-controller paradigm, this class represents the controller.

### 5.18.2 Constructor & Destructor Documentation

#### 5.18.2.1 `oig::ratstats::modules::sva::RStatsSVA::RStatsSVA ( )`

Constructor for [RStatsSVA](#).

Detailed description for [RStatsSVA](#)

### 5.18.3 Member Function Documentation

#### 5.18.3.1 `RStatsSVAOutputDataList oig::ratstats::modules::sva::RStatsSVA::execute ( const std::string & auditName, const oig::ratstats::utils::RStatsWorksheet & dataSheet, const oig::ratstats::utils::RStatsWorksheet & sizeSheet, const utils::RStatsDataFormatTypeIndex & dataSheetIndex, size_t dataSheetRowStart, size_t sizeSheetSampleSizeColumn, size_t sizeSheetUniverseSizeColumn, size_t sizeSheetRowStart )`

execute

Parameters

<i>sizeSheet</i>	
<i>inputSheet</i>	
<i>dataFormatType</i>	

Returns

#### 5.18.3.2 `void oig::ratstats::modules::sva::RStatsSVA::saveToWorkbook ( oig::ratstats::utils::RStatsWorkbook & workbookOut )`

saveToWorkbook

Parameters

<i>outputList</i>	
<i>workbookOut</i>	

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/stratified_variable_appraisal/inc/RStatsSVA.h`

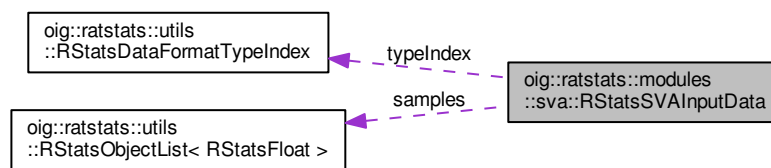
- [/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\\_modules/stratified\\_variable\\_appraisal/src/RStatsSVA.cpp](#)

## 5.19 oig::ratstats::modules::sva::RStatsSVAInputData Struct Reference

The [RStatsSVAInputData](#) struct represents the input data to the SVA function.

```
#include <RStatsSVA.h>
```

Collaboration diagram for oig::ratstats::modules::sva::RStatsSVAInputData:



### Public Attributes

- oig::ratstats::utils::RStatsInteger **sampleSize**
- oig::ratstats::utils::RStatsInteger **universeSize**
- oig::ratstats::utils::RStatsInteger **interestSize**
- [oig::ratstats::utils::RStatsFloatList](#) **samples**
- [oig::ratstats::utils::RStatsDataFormatTypeIndex](#) **typeIndex**
- oig::ratstats::utils::RStatsInteger **count**
- oig::ratstats::utils::RStatsInteger **offset**

### 5.19.1 Detailed Description

The [RStatsSVAInputData](#) struct represents the input data to the SVA function.

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

- [/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\\_modules/stratified\\_variable\\_appraisal/inc/RStatsSVA.h](#)

## 5.20 oig::ratstats::modules::sva::RStatsSVAOutputData Struct Reference

The [RStatsSVAOutputData](#) struct represents the output data for the SVA function.

```
#include <RStatsSVA.h>
```

## Public Attributes

- `std::string typeName`
- `oig::ratstats::utils::RStatsDataFormatType type`
- `bool isDisplaySummary`
- `bool isValid`
- `cbtek::common::utility::DateEntity createDate`
- `cbtek::common::utility::TimeEntity createTime`
- `std::string auditName`
- `oig::ratstats::utils::RStatsInteger populationSize`
- `oig::ratstats::utils::RStatsInteger sampleSize`
- `oig::ratstats::utils::RStatsInteger nonZeroCount`
- `oig::ratstats::utils::RStatsFloat mean`
- `oig::ratstats::utils::RStatsFloat standardDeviation`
- `oig::ratstats::utils::RStatsFloat skewness`
- `oig::ratstats::utils::RStatsFloat standardErrorMean`
- `oig::ratstats::utils::RStatsFloat standardErrorTotal`
- `oig::ratstats::utils::RStatsFloat kurtosis`
- `oig::ratstats::utils::RStatsFloat pointEstimate`
- `oig::ratstats::utils::RStatsFloat lower80`
- `oig::ratstats::utils::RStatsFloat lower90`
- `oig::ratstats::utils::RStatsFloat lower95`
- `oig::ratstats::utils::RStatsFloat upper80`
- `oig::ratstats::utils::RStatsFloat upper90`
- `oig::ratstats::utils::RStatsFloat upper95`
- `oig::ratstats::utils::RStatsFloat precisionAmount80`
- `oig::ratstats::utils::RStatsFloat precisionAmount90`
- `oig::ratstats::utils::RStatsFloat precisionAmount95`
- `oig::ratstats::utils::RStatsFloat tValue80`
- `oig::ratstats::utils::RStatsFloat tValue90`
- `oig::ratstats::utils::RStatsFloat tValue95`
- `oig::ratstats::utils::RStatsFloat precisionPercent80`
- `oig::ratstats::utils::RStatsFloat precisionPercent90`
- `oig::ratstats::utils::RStatsFloat precisionPercent95`

### 5.20.1 Detailed Description

The [RStatsSVAOutputData](#) struct represents the output data for the SVA function.

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

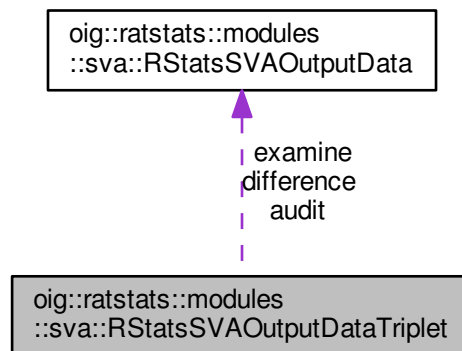
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/stratified_variable_appraisal/inc/RStatsSVA.h`

## 5.21 `oig::ratstats::modules::sva::RStatsSVAOutputDataTriplet` Struct Reference

The `RStatsSVAOutputDataTriplet` struct.

```
#include <RStatsSVA.h>
```

Collaboration diagram for `oig::ratstats::modules::sva::RStatsSVAOutputDataTriplet`:



### Public Attributes

- `RStatsSVAOutputData` **audit**
- `RStatsSVAOutputData` **examine**
- `RStatsSVAOutputData` **difference**

#### 5.21.1 Detailed Description

The `RStatsSVAOutputDataTriplet` struct.

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

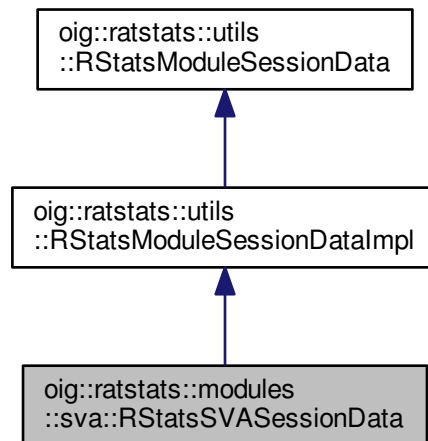
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/stratified_variable_appraisal/inc/RStatsSVA.h`

## 5.22 `oig::ratstats::modules::sva::RStatsSVASessionData` Class Reference

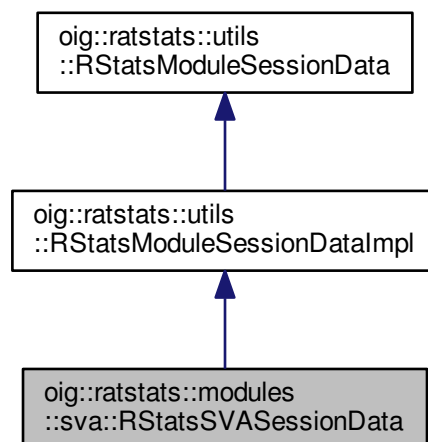
The `RStatsSVASessionData` class represents the custom session data for stratified variable appraisal (SVA)

```
#include <RStatsSVASessionData.h>
```

Inheritance diagram for `oig::ratstats::modules::sva::RStatsSVASessionData`:



Collaboration diagram for `oig::ratstats::modules::sva::RStatsSVASessionData`:





## Public Member Functions

- [RStatsSVASessionData](#) ()  
*Constructor for `RStatsSVASessionData`.*
- void [setDataFormat](#) (const `utils::RStatsDataFormatType` &value)  
*Setter for `m_dataFormat`.*
- void [setSizeTableFilePath](#) (const `std::string` &value)  
*Setter for `m_sizeTable`.*
- void [setDataTableFilePath](#) (const `std::string` &value)  
*Setter for `m_dataTable`.*
- void [setSizeTableRowStart](#) (const `utils::RStatsInteger` &value)  
*Setter for `m_sizeTableRowStart`.*
- void [setDataTableRowStart](#) (const `utils::RStatsInteger` &value)  
*Setter for `m_dataTableRowStart`.*
- void [setUniverseColumn](#) (const `std::string` &value)  
*Setter for `m_universeColumn`.*
- void [setSampleColumn](#) (const `std::string` &value)  
*Setter for `m_sampleColumn`.*
- void [setDifferenceColumn](#) (const `std::string` &value)  
*Setter for `m_differenceColumn`.*
- void [setAuditColumn](#) (const `std::string` &value)  
*Setter for `m_auditColumn`.*
- void [setExamineColumn](#) (const `std::string` &value)  
*Setter for `m_examineColumn`.*
- const `utils::RStatsDataFormatType` & [getDataFormat](#) () const  
*Getter for `m_dataFormat`.*
- const `std::string` & [getSizeTableFilePath](#) () const  
*Getter for `m_sizeTable`.*
- const `std::string` & [getDataTableFilePath](#) () const  
*Getter for `m_dataTable`.*
- const `utils::RStatsInteger` & [getSizeTableRowStart](#) () const  
*Getter for `m_sizeTableRowStart`.*
- const `utils::RStatsInteger` & [getDataTableRowStart](#) () const  
*Getter for `m_dataTableRowStart`.*
- const `std::string` & [getUniverseColumn](#) () const  
*Getter for `m_universeColumn`.*
- const `std::string` & [getSampleColumn](#) () const  
*Getter for `m_sampleColumn`.*
- const `std::string` & [getDifferenceColumn](#) () const  
*Getter for `m_differenceColumn`.*
- const `std::string` & [getAuditColumn](#) () const  
*Getter for `m_auditColumn`.*
- const `std::string` & [getExamineColumn](#) () const  
*Getter for `m_examineColumn`.*
- `std::string` [getType](#) () const  
*getType*
- void [load](#) (const `std::string` &url)  
*load*
- void [save](#) (const `std::string` &url)  
*save*
- void [setSizeTableSheetName](#) (const `std::string` &name)

- setSizeTableSheetName*
- void [setDataTableSheetName](#) (const std::string &name)
- setDataTableSheetName*
- std::string [getDataTableSheetName](#) () const
- getDataTableSheetName*
- std::string [getSizeTableSheetName](#) () const
- getSizeTableSheetName*
- [~RStatsSVASessionData](#) ()
- Destructor.*

## Additional Inherited Members

### 5.22.1 Detailed Description

The [RStatsSVASessionData](#) class represents the custom session data for stratified variable appraisal (SVA)

### 5.22.2 Constructor & Destructor Documentation

#### 5.22.2.1 `oig::ratstats::modules::sva::RStatsSVASessionData::RStatsSVASessionData ( )`

Constructor for [RStatsSVASessionData](#).

Detailed description for [RStatsSVASessionData](#)

### 5.22.3 Member Function Documentation

#### 5.22.3.1 `const std::string & oig::ratstats::modules::sva::RStatsSVASessionData::getAuditColumn ( ) const`

Getter for `m_auditColumn`.

##### Returns

Return copy of `m_auditColumn`

#### 5.22.3.2 `const RStatsDataFormatType & oig::ratstats::modules::sva::RStatsSVASessionData::getDataFormat ( ) const`

Getter for `m_dataFormat`.

##### Returns

Return copy of `m_dataFormat`

5.22.3.3 `const std::string & oig::ratstats::modules::sva::RStatsSVASessionData::getDataTableFilePath ( ) const`

Getter for m\_dataTable.

Returns

Return copy of m\_dataTable

5.22.3.4 `const RStatsInteger & oig::ratstats::modules::sva::RStatsSVASessionData::getDataTableRowStart ( ) const`

Getter for m\_dataTableRowStart.

Returns

Return copy of m\_dataTableRowStart

5.22.3.5 `std::string oig::ratstats::modules::sva::RStatsSVASessionData::getDataTableSheetName ( ) const`

getDataTableSheetName

Returns

5.22.3.6 `const std::string & oig::ratstats::modules::sva::RStatsSVASessionData::getDifferenceColumn ( ) const`

Getter for m\_differenceColumn.

Returns

Return copy of m\_differenceColumn

5.22.3.7 `const std::string & oig::ratstats::modules::sva::RStatsSVASessionData::getExamineColumn ( ) const`

Getter for m\_examineColumn.

Returns

Return copy of m\_examineColumn

5.22.3.8 `const std::string & oig::ratstats::modules::sva::RStatsSVASessionData::getSampleColumn ( ) const`

Getter for m\_sampleColumn.

Returns

Return copy of m\_sampleColumn

5.22.3.9 `const std::string & oig::ratstats::modules::sva::RStatsSVASessionData::getSizeTableFilePath ( ) const`

Getter for m\_sizeTable.

#### Returns

Return copy of m\_sizeTable

5.22.3.10 `const RStatsInteger & oig::ratstats::modules::sva::RStatsSVASessionData::getSizeTableRowStart ( ) const`

Getter for m\_sizeTableRowStart.

#### Returns

Return copy of m\_sizeTableRowStart

5.22.3.11 `std::string oig::ratstats::modules::sva::RStatsSVASessionData::getSizeTableSheetName ( ) const`

getSizeTableSheetName

#### Returns

5.22.3.12 `std::string oig::ratstats::modules::sva::RStatsSVASessionData::getType ( ) const` [virtual]

getType

#### Returns

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.22.3.13 `const std::string & oig::ratstats::modules::sva::RStatsSVASessionData::getUniverseColumn ( ) const`

Getter for m\_universeColumn.

#### Returns

Return copy of m\_universeColumn

5.22.3.14 `void oig::ratstats::modules::sva::RStatsSVASessionData::load ( const std::string & url )` [virtual]

load

## Parameters

<i>url</i>	
------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.22.3.15 void oig::ratstats::modules::sva::RStatsSVASessionData::save ( const std::string & *url* ) [virtual]

save

## Parameters

<i>url</i>	
------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.22.3.16 void oig::ratstats::modules::sva::RStatsSVASessionData::setAuditColumn ( const std::string & *value* )

Setter for m\_auditColumn.

## Parameters

<i>value</i>	to replace m_auditColumn
--------------	--------------------------

5.22.3.17 void oig::ratstats::modules::sva::RStatsSVASessionData::setDataFormat ( const utils::RStatsDataFormatType & *value* )

Setter for m\_dataFormat.

## Parameters

<i>value</i>	to replace m_dataFormat
--------------	-------------------------

5.22.3.18 void oig::ratstats::modules::sva::RStatsSVASessionData::setDataTableFilePath ( const std::string & *value* )

Setter for m\_dataTable.

## Parameters

<i>value</i>	to replace m_dataTable
--------------	------------------------

5.22.3.19 void oig::ratstats::modules::sva::RStatsSVASessionData::setDataTableRowStart ( const utils::RStatsInteger & *value* )

Setter for m\_dataTableRowStart.

## Parameters

<i>value</i>	to replace m_dataTableRowStart
--------------	--------------------------------

5.22.3.20 void oig::ratstats::modules::sva::RStatsSVASessionData::setDataTableSheetName ( const std::string & *name* )

setDataTableSheetName

## Parameters

<i>name</i>	
-------------	--

5.22.3.21 void oig::ratstats::modules::sva::RStatsSVASessionData::setDifferenceColumn ( const std::string & *value* )

Setter for m\_differenceColumn.

## Parameters

<i>value</i>	to replace m_differenceColumn
--------------	-------------------------------

5.22.3.22 void oig::ratstats::modules::sva::RStatsSVASessionData::setExamineColumn ( const std::string & *value* )

Setter for m\_examineColumn.

## Parameters

<i>value</i>	to replace m_examineColumn
--------------	----------------------------

5.22.3.23 void oig::ratstats::modules::sva::RStatsSVASessionData::setSampleColumn ( const std::string & *value* )

Setter for m\_sampleColumn.

## Parameters

<i>value</i>	to replace m_sampleColumn
--------------	---------------------------

5.22.3.24 void oig::ratstats::modules::sva::RStatsSVASessionData::setSizeTableFilePath ( const std::string & *value* )

Setter for m\_sizeTable.

## Parameters

<i>value</i>	to replace m_sizeTable
--------------	------------------------

5.22.3.25 void oig::ratstats::modules::sva::RStatsSVASessionData::setSizeTableRowStart ( const utils::RStatsInteger & *value* )

Setter for m\_sizeTableRowStart.

Parameters

<i>value</i>	to replace m_sizeTableRowStart
--------------	--------------------------------

5.22.3.26 void oig::ratstats::modules::sva::RStatsSVASessionData::setSizeTableSheetName ( const std::string & *name* )

setSizeTableSheetName

Parameters

<i>name</i>	
-------------	--

5.22.3.27 void oig::ratstats::modules::sva::RStatsSVASessionData::setUniverseColumn ( const std::string & *value* )

Setter for m\_universeColumn.

Parameters

<i>value</i>	to replace m_universeColumn
--------------	-----------------------------

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/stratified\_variable\_appraisal/inc/RStatsSVASessionData.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/stratified\_variable\_appraisal/src/RStatsSVASessionData.cpp

## 5.23 oig::ratstats::modules::uaa::RStatsUAA Class Reference

The [RStatsUAA](#) class represents the unrestricted attribute appraisal function. In the model-view-controller paradigm, this class represents the controller.

```
#include <RStatsUAA.h>
```

### Public Member Functions

- [RStatsUAA](#) ()  
*Constructor for RStatsUAA.*
- [RStatsUAAOutputData execute](#) (const std::string &auditName, utils::RStatsInteger sampleSize, utils::RStatsInteger universeSize, utils::RStatsInteger coiSize, RStatsUAAConfidenceIntervalType type=RStatsUAAConfidenceIntervalType::TwoSided)

- execute* This function executes the main unrestricted attribute appraisal function
- void [saveToCSVFile](#) (const std::string &filePath)  
*saveToCSVWorksheetFile* Saves output result to CSV file
- void [saveToWorksheet](#) (oig::ratstats::utils::RStatsWorksheet &worksheetOut)  
*saveToWorksheet* Saves output results to worksheet object
- void [saveToTextFile](#) (const std::string &filePath)  
*saveToTextFile* Saves output result to text file
- [~RStatsUAA](#) ()  
*Destructor.*

### 5.23.1 Detailed Description

The [RStatsUAA](#) class represents the unrestricted attribute appraisal function. In the model-view-controller paradigm, this class represents the controller.

### 5.23.2 Constructor & Destructor Documentation

#### 5.23.2.1 oig::ratstats::modules::uaa::RStatsUAA::RStatsUAA ( )

Constructor for [RStatsUAA](#).

Detailed description for [RStatsUAA](#)

### 5.23.3 Member Function Documentation

#### 5.23.3.1 RStatsUAAOutputData oig::ratstats::modules::uaa::RStatsUAA::execute ( const std::string & auditName, utils::RStatsInteger sampleSize, utils::RStatsInteger universeSize, utils::RStatsInteger coiSize, RStatsUAAConfidenceIntervalType type = RStatsUAAConfidenceIntervalType::TwoSided )

*execute* This function executes the main unrestricted attribute appraisal function

##### Parameters

<i>auditName</i>	The name of the audit
<i>sampleSize</i>	The input sample size
<i>universeSize</i>	The input universe size
<i>coiSize</i>	The characteristic of interest count
<i>type</i>	The data format type

##### Returns

#### 5.23.3.2 void oig::ratstats::modules::uaa::RStatsUAA::saveToCSVFile ( const std::string & filePath )

*saveToCSVWorksheetFile* Saves output result to CSV file



## Parameters

<code>filePath</code>	
-----------------------	--

5.23.3.3 `void oig::ratstats::modules::uaa::RStatsUAA::saveToTextFile ( const std::string & filePath )`

`saveToTextFile` Saves output result to text file

## Parameters

<code>filePath</code>	
-----------------------	--

5.23.3.4 `void oig::ratstats::modules::uaa::RStatsUAA::saveToWorksheet ( oig::ratstats::utils::RStatsWorksheet & worksheetOut )`

`saveToWorksheet` Saves output results to worksheet object

## Parameters

<code>worksheetOut</code>	The worksheet to save to
---------------------------	--------------------------

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

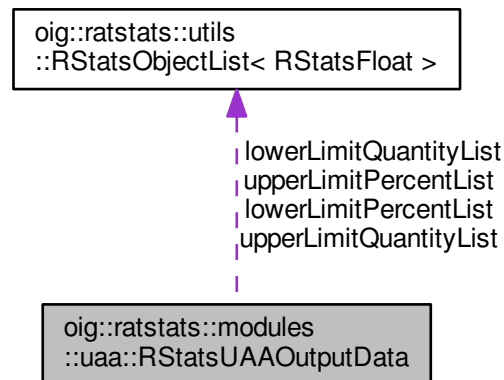
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_attribute_appraisal/inc/RStatsUAA.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_attribute_appraisal/src/RStatsUAA.cpp`

## 5.24 `oig::ratstats::modules::uaa::RStatsUAAOutputData` Struct Reference

The `RStatsUAAOutputData` struct represents the output produced by the unrestricted attribute appraisal function.

```
#include <RStatsUAA.h>
```

Collaboration diagram for `oig::ratstats::modules::uaa::RStatsUAAOutputData`:



## Public Attributes

- `cbtek::common::utility::DateEntity` **createDate**
- `cbtek::common::utility::TimeEntity` **createTime**
- `std::string` **auditName**
- `RStatsUAAConfidenceIntervalType` **confidenceIntervalType**
- `oig::ratstats::utils::RStatsInteger` **universeSize**
- `oig::ratstats::utils::RStatsInteger` **sampleSize**
- `oig::ratstats::utils::RStatsInteger` **coiSize**
- `oig::ratstats::utils::RStatsFloat` **projectedTotal**
- `oig::ratstats::utils::RStatsFloat` **projectedTotalPercent**
- `oig::ratstats::utils::RStatsFloat` **variance**
- `oig::ratstats::utils::RStatsFloat` **standardError**
- `oig::ratstats::utils::RStatsFloat` **standardErrorPercent**
- `oig::ratstats::utils::RStatsFloatList` **upperLimitPercentList**
- `oig::ratstats::utils::RStatsFloatList` **lowerLimitQuantityList**
- `oig::ratstats::utils::RStatsFloatList` **upperLimitQuantityList**
- `oig::ratstats::utils::RStatsFloatList` **lowerLimitPercentList**

### 5.24.1 Detailed Description

The `RStatsUAAOutputData` struct represents the output produced by the unrestricted attribute appraisal function.

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

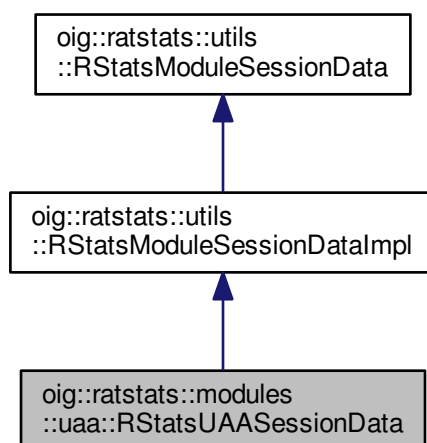
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_attribute_appraisal/inc/RStatsUAA.h`

## 5.25 `oig::ratstats::modules::uaa::RStatsUAASessionData` Class Reference

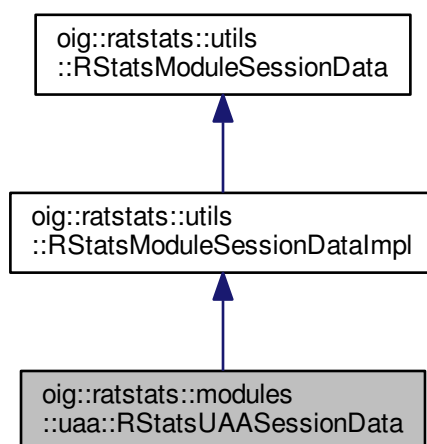
The `RStatsUAASessionData` class represents the custom session data for unrestricted attribute appraisal (UAA)

```
#include <RStatsUAASessionData.h>
```

Inheritance diagram for `oig::ratstats::modules::uaa::RStatsUAASessionData`:



Collaboration diagram for `oig::ratstats::modules::uaa::RStatsUAASessionData`:



## Public Member Functions

- [RStatsUAASessionData](#) ()  
*Constructor for [RStatsUAASessionData](#).*
- void [setDataFormat](#) (const utils::RStatsDataFormatType &value)  
*Setter for m\_dataFormat.*
- void [setUniverseSize](#) (const utils::RStatsInteger &value)  
*Setter for m\_universeSize.*
- void [setSampleSize](#) (const utils::RStatsInteger &value)  
*Setter for m\_sampleSize.*
- void [setCoiSize](#) (const utils::RStatsInteger &value)  
*Setter for m\_coiSize.*
- const utils::RStatsDataFormatType & [getDataFormat](#) () const  
*Getter for m\_dataFormat.*
- const utils::RStatsInteger & [getUniverseSize](#) () const  
*Getter for m\_universeSize.*
- const utils::RStatsInteger & [getSampleSize](#) () const  
*Getter for m\_sampleSize.*
- const utils::RStatsInteger & [getCoiSize](#) () const  
*Getter for m\_coiSize.*
- std::string [getType](#) () const  
*getType*
- void [load](#) (const std::string &url)  
*load*
- void [save](#) (const std::string &url)  
*save*
- [~RStatsUAASessionData](#) ()  
*Destructor.*

## Additional Inherited Members

### 5.25.1 Detailed Description

The [RStatsUAASessionData](#) class represents the custom session data for unrestricted attribute appraisal (UAA)

### 5.25.2 Constructor & Destructor Documentation

#### 5.25.2.1 `oig::ratstats::modules::uaa::RStatsUAASessionData::RStatsUAASessionData ( )`

Constructor for [RStatsUAASessionData](#).

Detailed description for [RStatsUAASessionData](#)

### 5.25.3 Member Function Documentation

#### 5.25.3.1 `const utils::RStatsInteger & oig::ratstats::modules::uaa::RStatsUAASessionData::getCoiSize ( ) const`

Getter for `m_coiSize`.

Returns

Return copy of `m_coiSize`

#### 5.25.3.2 `const utils::RStatsDataFormatType & oig::ratstats::modules::uaa::RStatsUAASessionData::getDataFormat ( ) const`

Getter for `m_dataFormat`.

Returns

Return copy of `m_dataFormat`

#### 5.25.3.3 `const utils::RStatsInteger & oig::ratstats::modules::uaa::RStatsUAASessionData::getSampleSize ( ) const`

Getter for `m_sampleSize`.

Returns

Return copy of `m_sampleSize`

#### 5.25.3.4 `std::string oig::ratstats::modules::uaa::RStatsUAASessionData::getType ( ) const` [virtual]

`getType`

Returns

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

#### 5.25.3.5 `const utils::RStatsInteger & oig::ratstats::modules::uaa::RStatsUAASessionData::getUniverseSize ( ) const`

Getter for `m_universeSize`.

Returns

Return copy of `m_universeSize`

#### 5.25.3.6 `void oig::ratstats::modules::uaa::RStatsUAASessionData::load ( const std::string & url )` [virtual]

`load`

## Parameters

<i>url</i>	
------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.25.3.7 void oig::ratstats::modules::uaa::RStatsUAASessionData::save ( const std::string & *url* ) [virtual]

save

## Parameters

<i>url</i>	
------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.25.3.8 void oig::ratstats::modules::uaa::RStatsUAASessionData::setCoiSize ( const utils::RStatsInteger & *value* )

Setter for m\_coiSize.

## Parameters

<i>value</i>	to replace m_coiSize
--------------	----------------------

5.25.3.9 void oig::ratstats::modules::uaa::RStatsUAASessionData::setDataFormat ( const utils::RStatsDataFormatType & *value* )

Setter for m\_dataFormat.

## Parameters

<i>value</i>	to replace m_dataFormat
--------------	-------------------------

5.25.3.10 void oig::ratstats::modules::uaa::RStatsUAASessionData::setSampleSize ( const utils::RStatsInteger & *value* )

Setter for m\_sampleSize.

## Parameters

<i>value</i>	to replace m_sampleSize
--------------	-------------------------

5.25.3.11 void oig::ratstats::modules::uaa::RStatsUAASessionData::setUniverseSize ( const utils::RStatsInteger & *value* )

Setter for m\_universeSize.

## Parameters

<i>value</i>	to replace <code>m_universeSize</code>
--------------	----------------------------------------

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_attribute_appraisal/inc/RStatsUAASessionData.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_attribute_appraisal/src/RStatsUAASessionData.cpp`

## 5.26 `oig::ratstats::modules::uva::RStatsUVA` Class Reference

The `RStatsUVA` class represents the unrestricted variable appraisal function. In the model-view-controller paradigm, this class represents the controller.

```
#include <RStatsUVA.h>
```

### Public Member Functions

- `RStatsUVA ()`  
*Constructor for `RStatsUVA`.*
- `void execute (const std::string &auditName, size_t universeSize, const oig::ratstats::utils::RStatsWorksheet &dataSheetInput, size_t dataSheetRowOffset, const oig::ratstats::utils::RStatsDataFormatTypeIndex &dataSheetDatasetColumnTypeIndex)`  
*execute This function executes the unrestricted variable appraisal algorithm*
- `void saveToWorkbook (oig::ratstats::utils::RStatsWorkbook &workbook)`  
*saveToWorkbook This function saves all data output into a workbook structure*
- `~RStatsUVA ()`  
*Destructor.*

### 5.26.1 Detailed Description

The `RStatsUVA` class represents the unrestricted variable appraisal function. In the model-view-controller paradigm, this class represents the controller.

### 5.26.2 Constructor & Destructor Documentation

#### 5.26.2.1 `oig::ratstats::modules::uva::RStatsUVA::RStatsUVA ( )`

Constructor for `RStatsUVA`.

Detailed description for `RStatsUVA`

### 5.26.3 Member Function Documentation

#### 5.26.3.1 `void oig::ratstats::modules::uva::RStatsUVA::execute ( const std::string & auditName, size_t universeSize, const oig::ratstats::utils::RStatsWorksheet & dataSheetInput, size_t dataSheetRowOffset, const oig::ratstats::utils::RStatsDataFormatTypeIndex & dataSheetDatasetColumnTypeIndex )`

`execute` This function executes the unrestricted variable appraisal algorithm

## Parameters

<i>auditName</i>	Name of the audit
<i>universeSize</i>	Universe/Population size
<i>dataSheetInput</i>	Datasheet containing all the values
<i>dataSheetRowOffset</i>	Starting row for the data
<i>dataSheetDatasetColumnTypeIndex</i>	Structure that contains column information for the sheet as well as data output format

### 5.26.3.2 void `oig::ratstats::modules::uva::RStatsUVA::saveToWorkbook ( oig::ratstats::utils::RStatsWorkbook & workbook )`

`saveToWorkbook` This function saves all data output into a workbook structure

## Parameters

<i>workbook</i>	The workbook to write to
-----------------	--------------------------

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_variable_appraisal/inc/RStatsUVA.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_variable_appraisal/src/RStatsUVA.cpp`

## 5.27 `oig::ratstats::modules::uva::RStatsUVAOutputData` Struct Reference

The `RStatsUVAOutputData` struct This structure holds data for an single instance of output It is primarily used to populate the worksheet for saving.

```
#include <RStatsUVA.h>
```

## Public Attributes

- `std::string title`
- `oig::ratstats::utils::RStatsInteger populationSize`
- `oig::ratstats::utils::RStatsInteger sampleSize`
- `oig::ratstats::utils::RStatsInteger nonZeroSize`
- `oig::ratstats::utils::RStatsFloat mean`
- `oig::ratstats::utils::RStatsFloat standardDeviation`
- `oig::ratstats::utils::RStatsFloat standardErrorMean`
- `oig::ratstats::utils::RStatsInteger standardErrorTotal`
- `oig::ratstats::utils::RStatsInteger pointEstimate`
- `oig::ratstats::utils::RStatsFloat lower80`
- `oig::ratstats::utils::RStatsFloat lower90`
- `oig::ratstats::utils::RStatsFloat lower95`
- `oig::ratstats::utils::RStatsFloat upper80`



- `oig::ratstats::utils::RStatsFloat` **upper90**
- `oig::ratstats::utils::RStatsFloat` **upper95**
- `oig::ratstats::utils::RStatsFloat` **kurtosis**
- `oig::ratstats::utils::RStatsFloat` **skewness**
- `oig::ratstats::utils::RStatsFloat` **precisionAmount80**
- `oig::ratstats::utils::RStatsFloat` **precisionAmount90**
- `oig::ratstats::utils::RStatsFloat` **precisionAmount95**
- `oig::ratstats::utils::RStatsFloat` **precisionPercent80**
- `oig::ratstats::utils::RStatsFloat` **precisionPercent90**
- `oig::ratstats::utils::RStatsFloat` **precisionPercent95**
- `oig::ratstats::utils::RStatsFloat` **tValue80**
- `oig::ratstats::utils::RStatsFloat` **tValue90**
- `oig::ratstats::utils::RStatsFloat` **tValue95**
- `oig::ratstats::utils::RStatsFloat` **totalAmount**

### 5.27.1 Detailed Description

The [RStatsUVAOutputData](#) struct This structure holds data for an single instance of output It is primarily used to populate the worksheet for saving.

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

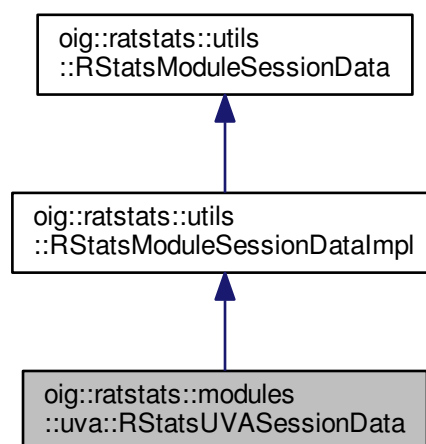
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_variable_appraisal/inc/RStatsUVA.h`

## 5.28 `oig::ratstats::modules::uva::RStatsUVASessionData` Class Reference

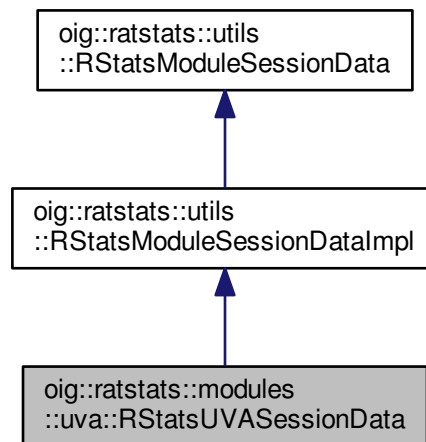
The [RStatsUVASessionData](#) class represents the custom session data for unrestricted variable appraisal (UVA)

```
#include <RStatsUVASessionData.h>
```

Inheritance diagram for `oig::ratstats::modules::uva::RStatsUVASessionData`:



Collaboration diagram for `oig::ratstats::modules::uva::RStatsUVASessionData`:



## Public Member Functions

- [RStatsUVASessionData](#) ()  
*Constructor for `RStatsUVASessionData`.*
- void [setDataFormat](#) (const `utils::RStatsDataFormatType` &value)  
*Setter for `m_dataFormat`.*
- void [setUniverseSize](#) (const `utils::RStatsInteger` &value)  
*Setter for `m_universeSize`.*
- void [setDataRowStart](#) (const `utils::RStatsInteger` &value)  
*Setter for `m_dataRowStart`.*
- void [setDataTableFilePath](#) (const `std::string` &value)  
*Setter for `m_dataTable`.*
- void [setDataTableSheetName](#) (const `std::string` &value)  
*Setter for `m_dataTable`.*
- void [setExamineColumn](#) (const `std::string` &value)  
*Setter for `m_examineColumn`.*
- void [setAuditColumn](#) (const `std::string` &value)  
*Setter for `m_auditColumn`.*
- void [setDifferenceColumn](#) (const `std::string` &value)  
*Setter for `m_differenceColumn`.*
- const `utils::RStatsDataFormatType` & [getDataFormat](#) () const  
*Getter for `m_dataFormat`.*
- const `utils::RStatsInteger` & [getUniverseSize](#) () const  
*Getter for `m_universeSize`.*
- const `utils::RStatsInteger` & [getDataRowStart](#) () const  
*Getter for `m_dataRowStart`.*
- const `std::string` & [getDataTableFilePath](#) () const  
*Getter for `m_dataTable`.*

- const std::string & [getDataTableSheetName](#) () const  
*Getter for m\_dataTable.*
- const std::string & [getExamineColumn](#) () const  
*Getter for m\_examineColumn.*
- const std::string & [getAuditColumn](#) () const  
*Getter for m\_auditColumn.*
- const std::string & [getDifferenceColumn](#) () const  
*Getter for m\_differenceColumn.*
- std::string [getType](#) () const  
*getType*
- void [save](#) (const std::string &url)  
*save*
- void [load](#) (const std::string &url)  
*load*
- [~RStatsUVASessionData](#) ()  
*Destructor.*

## Additional Inherited Members

### 5.28.1 Detailed Description

The [RStatsUVASessionData](#) class represents the custom session data for unrestricted variable appraisal (UVA)

### 5.28.2 Constructor & Destructor Documentation

#### 5.28.2.1 oig::ratstats::modules::uva::RStatsUVASessionData::RStatsUVASessionData ( )

Constructor for [RStatsUVASessionData](#).

Detailed description for [RStatsUVASessionData](#)

### 5.28.3 Member Function Documentation

#### 5.28.3.1 const std::string & oig::ratstats::modules::uva::RStatsUVASessionData::getAuditColumn ( ) const

Getter for m\_auditColumn.

Returns

Return copy of m\_auditColumn

#### 5.28.3.2 const RStatsDataFormatType & oig::ratstats::modules::uva::RStatsUVASessionData::getDataFormat ( ) const

Getter for m\_dataFormat.

Returns

Return copy of m\_dataFormat

5.28.3.3 `const RStatsInteger & oig::ratstats::modules::uva::RStatsUVASessionData::getDataRowStart ( ) const`

Getter for m\_dataRowStart.

Returns

Return copy of m\_dataRowStart

5.28.3.4 `const std::string & oig::ratstats::modules::uva::RStatsUVASessionData::getDataTableFilePath ( ) const`

Getter for m\_dataTable.

Returns

Return url of data table

5.28.3.5 `const std::string & oig::ratstats::modules::uva::RStatsUVASessionData::getDataTableSheetName ( ) const`

Getter for m\_dataTable.

Returns

Return url of data table

5.28.3.6 `const std::string & oig::ratstats::modules::uva::RStatsUVASessionData::getDifferenceColumn ( ) const`

Getter for m\_differenceColumn.

Returns

Return copy of m\_differenceColumn

5.28.3.7 `const std::string & oig::ratstats::modules::uva::RStatsUVASessionData::getExamineColumn ( ) const`

Getter for m\_examineColumn.

Returns

Return copy of m\_examineColumn

5.28.3.8 `std::string oig::ratstats::modules::uva::RStatsUVASessionData::getType ( ) const` [virtual]

getType

Returns

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.28.3.9 `const RStatsInteger & oig::ratstats::modules::uva::RStatsUVASessionData::getUniverseSize ( ) const`

Getter for `m_universeSize`.

Returns

Return copy of `m_universeSize`

5.28.3.10 `void oig::ratstats::modules::uva::RStatsUVASessionData::load ( const std::string & url ) [virtual]`

load

Parameters

<i>url</i>	
------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.28.3.11 `void oig::ratstats::modules::uva::RStatsUVASessionData::save ( const std::string & url ) [virtual]`

save

Parameters

<i>url</i>	
------------	--

Implements [oig::ratstats::utils::RStatsModuleSessionDataImpl](#).

5.28.3.12 `void oig::ratstats::modules::uva::RStatsUVASessionData::setAuditColumn ( const std::string & value )`

Setter for `m_auditColumn`.

Parameters

<i>value</i>	to replace <code>m_auditColumn</code>
--------------	---------------------------------------

5.28.3.13 `void oig::ratstats::modules::uva::RStatsUVASessionData::setDataFormat ( const utils::RStatsDataFormatType & value )`

Setter for `m_dataFormat`.

Parameters

<i>value</i>	to replace <code>m_dataFormat</code>
--------------	--------------------------------------

5.28.3.14 `void oig::ratstats::modules::uva::RStatsUVASessionData::setDataRowStart ( const utils::RStatsInteger & value )`

Setter for `m_dataRowStart`.

Parameters

<i>value</i>	to replace <code>m_dataRowStart</code>
--------------	----------------------------------------

5.28.3.15 `void oig::ratstats::modules::uva::RStatsUVASessionData::setDataTableFilePath ( const std::string & value )`

Setter for `m_dataTable`.

Parameters

<i>value</i>	to replace <code>m_dataTable</code>
--------------	-------------------------------------

5.28.3.16 `void oig::ratstats::modules::uva::RStatsUVASessionData::setDataTableSheetName ( const std::string & value )`

Setter for `m_dataTable`.

Parameters

<i>value</i>	to replace <code>m_dataTable</code>
--------------	-------------------------------------

5.28.3.17 `void oig::ratstats::modules::uva::RStatsUVASessionData::setDifferenceColumn ( const std::string & value )`

Setter for `m_differenceColumn`.

Parameters

<i>value</i>	to replace <code>m_differenceColumn</code>
--------------	--------------------------------------------

5.28.3.18 `void oig::ratstats::modules::uva::RStatsUVASessionData::setExamineColumn ( const std::string & value )`

Setter for `m_examineColumn`.

Parameters

<i>value</i>	to replace <code>m_examineColumn</code>
--------------	-----------------------------------------

5.28.3.19 `void oig::ratstats::modules::uva::RStatsUVASessionData::setUniverseSize ( const utils::RStatsInteger & value )`

Setter for `m_universeSize`.

## Parameters

<i>value</i>	to replace m_universeSize
--------------	---------------------------

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/unrestricted\_variable\_appraisal/inc/RStatsUVASessionData.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/unrestricted\_variable\_appraisal/src/RStatsUVASessionData.cpp

## 5.29 oig::ratstats::utils::RStatsWorkbook Class Reference

The [RStatsWorkbook](#) class represents a simple container for multiple worksheet objects.

```
#include <RStatsWorkbook.h>
```

### Public Member Functions

- [RStatsWorkbook](#) ()  
*RStatsWorkbook* (Constructor)
- void [insertWorksheet](#) (const [RStatsWorksheet](#) &sheet, size\_t index)  
*insertWorksheet* Inserts a worksheet at any position within worksheet array.
- void [save](#) (const std::string &filePath)  
*save* Saves the workbook to file. This function will call the [RStatsWorkbookStreamFactory](#) to determine how the file should be saved.
- void [load](#) (const std::string &filePath)  
*load* Loads a workbook from file. This function will call the [RStatsWorkbookStreamFactory](#) to determine how the file should be loaded.
- void [addWorksheet](#) (const [RStatsWorksheet](#) &sheet)  
*addWorksheet* Appends worksheet to end of worksheet array
- [RStatsWorksheet](#) & [createWorksheet](#) (const std::string &name)  
*createWorksheet* Creates an empty worksheet object and returns a reference to it.
- const std::vector< [RStatsWorksheet](#) > & [getWorksheets](#) () const  
*getWorksheets* Returns reference vector of worksheets
- void [removeWorksheet](#) (size\_t index)  
*removeWorksheet* Deletes worksheet from workbook
- size\_t [getNumWorksheets](#) () const  
*getNumWorksheets* Gets the number of worksheets
- [RStatsWorksheet](#) & [operator\(\)](#) (size\_t index)  
*operator ()* Overloaded operator to ease accessing worksheet.
- const [RStatsWorksheet](#) & [operator\(\)](#) (size\_t index) const  
*operator ()* Overloaded operator to ease accessing worksheet.
- std::vector< std::string > [getWorksheetNames](#) () const  
*getWorksheetNames* Get list of all worksheet names
- [RStatsWorksheet](#) [mergeSheets](#) ([RStatsWorkbookMergeDirection](#) direction=[RStatsWorkbookMergeDirection::MergeBottom](#), size\_t padding=1)  
*mergeSheets* This function merges all the sheets in the workbooks into a single sheet. This is useful for outputting to formats that only support a single sheet.
- void [clear](#) ()  
*clear* Clears all worksheets
- [~RStatsWorkbook](#) ()  
*Destructor.*

### 5.29.1 Detailed Description

The [RStatsWorkbook](#) class represents a simple container for multiple worksheet objects.

### 5.29.2 Member Function Documentation

#### 5.29.2.1 `void oig::ratstats::utils::RStatsWorkbook::addWorksheet ( const RStatsWorksheet & sheet )`

`addWorksheet` Appends worksheet to end of worksheet array

##### Parameters

<i>sheet</i>	Worksheet object to add
--------------	-------------------------

#### 5.29.2.2 `RStatsWorksheet & oig::ratstats::utils::RStatsWorkbook::createWorksheet ( const std::string & name )`

`createWorksheet` Creates an empty worksheet object and returns a reference to it.

##### Parameters

<i>name</i>	The name of the worksheet
-------------	---------------------------

##### Returns

Returns reference of worksheet created

#### 5.29.2.3 `size_t oig::ratstats::utils::RStatsWorkbook::getNumWorksheets ( ) const`

`getNumWorksheets` Gets the number of worksheets

##### Returns

Return `size_t` of worksheet count

#### 5.29.2.4 `std::vector< std::string > oig::ratstats::utils::RStatsWorkbook::getWorksheetNames ( ) const`

`getWorksheetNames` Get list of all worksheet names

##### Returns

Return vector containing strings of worksheet names



5.29.2.5 `const std::vector< RStatsWorksheet > & oig::ratstats::utils::RStatsWorkbook::getWorksheets ( ) const`

getWorksheets Returns reference vector of worksheets

Returns

5.29.2.6 `void oig::ratstats::utils::RStatsWorkbook::insertWorksheet ( const RStatsWorksheet & sheet, size_t index )`

insertWorksheet Inserts a worksheet at any position within worksheet array.

Parameters

<i>sheet</i>	The worksheet to insert
<i>index</i>	The index to insert the worksheet at

5.29.2.7 `void oig::ratstats::utils::RStatsWorkbook::load ( const std::string & filePath )`

load Loads a workbook from file. This function will call the [RStatsWorkbookStreamFactory](#) to determine how the file should be loaded.

Parameters

<i>filePath</i>	Path to file to load
-----------------	----------------------

5.29.2.8 `RStatsWorksheet oig::ratstats::utils::RStatsWorkbook::mergeSheets ( RStatsWorkbookMergeDirection direction = RStatsWorkbookMergeDirection::MergeBottom, size_t padding = 1 )`

mergeSheets This function merges all the sheets in the workbooks into a single sheet. This is useful for outputting to formats that only support a single sheet.

Parameters

<i>direction</i>	The direction in which to merge the sheets
<i>padding</i>	Determines how many extra rows/columns of padding to add between each merged sheet in the final output

Returns

Returns merged worksheet object of all sheets in workbook

5.29.2.9 `RStatsWorksheet & oig::ratstats::utils::RStatsWorkbook::operator() ( size_t index )`

operator () Overloaded operator to ease accessing worksheet.

## Parameters

<i>index</i>	Index of worksheet to access
--------------	------------------------------

## Returns

This function returns reference to worksheet object.

## Exceptions

<i>GenericException</i>	if index is out of range
-------------------------	--------------------------

**5.29.2.10** `const RStatsWorksheet & oig::ratstats::utils::RStatsWorkbook::operator() ( size_t index ) const`

`operator ()` Overloaded operator to ease accessing worksheet.

## Parameters

<i>index</i>	Index of worksheet to access
--------------	------------------------------

## Returns

This function returns a const reference to worksheet object.

## Exceptions

<i>GenericException</i>	if index is out of range
-------------------------	--------------------------

**5.29.2.11** `void oig::ratstats::utils::RStatsWorkbook::removeWorksheet ( size_t index )`

`removeWorksheet` Deletes worksheet from workbook

## Parameters

<i>index</i>	Index of worksheet to delete
--------------	------------------------------

**5.29.2.12** `void oig::ratstats::utils::RStatsWorkbook::save ( const std::string & filePath )`

`save` Saves the workbook to file. This function will call the [RStatsWorkbookStreamFactory](#) to determine how the file should be saved.

## Parameters

<i>filePath</i>	Path to file to save
-----------------	----------------------

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

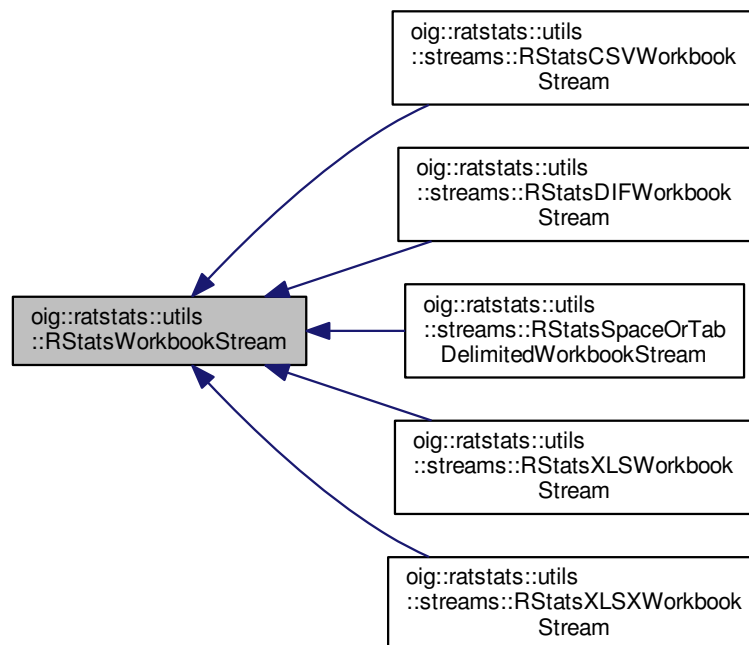
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsWorkbook.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/RStatsWorkbook.cpp

## 5.30 oig::ratstats::utils::RStatsWorkbookStream Class Reference

The [RStatsWorkbookStream](#) interface represents a simple read/write stream for various workbook file formats.

```
#include <RStatsWorkbookStream.hpp>
```

Inheritance diagram for oig::ratstats::utils::RStatsWorkbookStream:



### Public Member Functions

- virtual void [write](#) (const [RStatsWorkbook](#) &workbook)=0  
*write This function will be inherited by implementing classes to provide support for writing a workbook to file*
- virtual [RStatsWorkbook](#) [read](#) ()=0  
*read This function will be inherited by implementing classes to provide support for reading a workbook from file*
- virtual [~RStatsWorkbookStream](#) ()  
*Virtual Destructor.*

#### 5.30.1 Detailed Description

The [RStatsWorkbookStream](#) interface represents a simple read/write stream for various workbook file formats.

### 5.30.2 Member Function Documentation

#### 5.30.2.1 virtual RStatsWorkbook oig::ratstats::utils::RStatsWorkbookStream::read ( ) [pure virtual]

read This function will be inherited by implementing classes to provide support for reading a workbook from file

##### Returns

Implemented in [oig::ratstats::utils::streams::RStatsDIFWorkbookStream](#), [oig::ratstats::utils::streams::RStatsXLSXWorkbookStream](#), [oig::ratstats::utils::streams::RStatsCSVWorkbookStream](#), [oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream](#), and [oig::ratstats::utils::streams::RStatsXLSWorkbookStream](#).

#### 5.30.2.2 virtual void oig::ratstats::utils::RStatsWorkbookStream::write ( const RStatsWorkbook & workbook ) [pure virtual]

write This function will be inherited by implementing classes to provide support for writing a workbook to file

##### Parameters

<i>workbook</i>	The workbook to write
-----------------	-----------------------

Implemented in [oig::ratstats::utils::streams::RStatsDIFWorkbookStream](#), [oig::ratstats::utils::streams::RStatsXLSXWorkbookStream](#), [oig::ratstats::utils::streams::RStatsCSVWorkbookStream](#), [oig::ratstats::utils::streams::RStatsSpaceOrTabDelimitedWorkbookStream](#), and [oig::ratstats::utils::streams::RStatsXLSWorkbookStream](#).

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsWorkbookStream.hpp

## 5.31 oig::ratstats::utils::RStatsWorkbookStreamFactory Class Reference

The [RStatsWorkbookStreamFactory](#) static class provides a method for instantiating workbook streams for reading/writing. The extension on the filePath is used to determine which workbook stream implementation to use.

```
#include <RStatsWorkbookStreamFactory.h>
```

### Static Public Member Functions

- static RStatsWorkbookStreamPtr [create](#) (const std::string &filePath)  
*create Creates a initialization of a workbook stream object*

#### 5.31.1 Detailed Description

The [RStatsWorkbookStreamFactory](#) static class provides a method for instantiating workbook streams for reading/writing. The extension on the filePath is used to determine which workbook stream implementation to use.

### 5.31.2 Member Function Documentation

#### 5.31.2.1 `RStatsWorkbookStreamPtr` `oig::ratstats::utils::RStatsWorkbookStreamFactory::create ( const std::string & filePath )` [static]

`create` Creates a initialization of a workbook stream object

##### Parameters

<code>filePath</code>	The path to file for reading/writing from/to
-----------------------	----------------------------------------------

##### Returns

Return a shared pointer instance of a workbook stream object

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

- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_utils/inc/RStatsWorkbookStreamFactory.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_utils/src/RStatsWorkbookStreamFactory.cpp`

## 5.32 `oig::ratstats::utils::RStatsWorksheet` Class Reference

The `RStatsWorksheet` class attempts to emulate a simple spreadsheet object basic formatting of cells.

```
#include <RStatsWorksheet.h>
```

### Public Member Functions

- `RStatsWorksheet` (const std::string &name="NewSheet")  
*RStatsWorksheet* (Constructor)
- void `setWorksheetTitle` (const std::string &value)  
*Setter for m\_worksheetTitle.*
- const std::string & `getWorksheetTitle` () const  
*Getter for m\_worksheetTitle.*
- `RStatsCell` & `operator()` (size\_t row, size\_t column)  
*operator () Allows ease of accessing cells using row/column indices. If row/column is out of range a new cell is created and returned for the index pair.*
- const `RStatsCell` & `operator()` (size\_t row, size\_t column) const  
*operator () Allows ease of accessing cells using row/column indices. This function provides read only access and therefore if a row/column is out of range an exception is thrown.*
- const `RStatsCell` & `getCell` (size\_t row, size\_t column) const  
*getCell Returns const reference to cell via row/column indices. This function provides read only access and therefore if a row/column is out of range an exception is thrown.*
- `RStatsCell` & `operator()` (const std::string &address)  
*operator () Allows ease of accessing cells using string address (e.g A1, B15, Z24, etc). If row/column is out of range a new cell is created and returned for the index pair.*
- size\_t `getNumRows` () const  
*getNumRows*

- `size_t` [getNumColumns](#) () const  
*getNumColumns*
- `std::pair< size_t, size_t >` [getLastDataRowAndColumn](#) () const  
*getLastDataRow*
- `const RStatsCellMap &` [getCells](#) () const  
*getCells*
- `void` [setDefaultTextAlignment](#) (RStatsTextAlignment alignment)  
*setDefaultTextAlignment*
- `void` [setDefaultBGColor](#) (const cbtek::common::utility::Color &bgColor)  
*setDefaultBGColor*
- `void` [setDefaultFGColor](#) (const cbtek::common::utility::Color &fgColor)  
*setDefaultFGColor*
- `void` [setDefaultFont](#) (const cbtek::common::utility::Font &font)  
*setDefaultFont*
- `void` [setDefaultFloatingPointDecimals](#) (size\_t count)  
*setDefaultFloatingPointDecimals*
- `void` [resetDefaults](#) ()  
*resetDefaults*
- `std::set< RStatsCellFormat >` [getCellFormatSet](#) () const
- `std::string` [toCommaDelimitedString](#) () const  
*toCommaDelimitedString*
- `std::string` [toTabDelimitedString](#) () const  
*toTabDelimitedString*
- `std::string` [toHTMLTableString](#) (bool includeRowLabels=false, bool includeColumnLabels=false) const  
*toHTMLTableString*
- `std::string` [toEvenlySpacedString](#) () const  
*toEvenlySpacedString* Converts worksheet to evenly spaced human readable string output.
- `bool` [isEmpty](#) () const  
*isEmpty*
- `void` [findDataRowsAndColumns](#) (std::set< size\_t > &rowsOut, std::set< size\_t > &columnsOut) const  
*findDataRowsAndColumns*
- `void` [setFormatEnabled](#) (RStatsCellFormat format, bool flag)  
*setFormatEnabled*
- `void` [setThousandsSeperatorEnabled](#) (bool flag)  
*setThousandsSeperatorEnabled*
- `void` [setRowBackgroundColor](#) (size\_t row, const cbtek::common::utility::Color &color)  
*setRowBackgroundColor*
- `void` [setColumnBackgroundColor](#) (size\_t column, const cbtek::common::utility::Color &color)  
*setColumnBackgroundColor*
- `void` [clear](#) ()  
*clear*
- [~RStatsWorksheet](#) ()  
*Destructor.*
- `void` [setRowBorderColor](#) (size\_t row, const cbtek::common::utility::Color &color)  
*setRowBorderColor*
- `void` [setColumnBorderColor](#) (size\_t column, const cbtek::common::utility::Color &color)  
*setColumnBorderColor*
- `void` [removeRow](#) (size\_t row)  
*removeRow*
- `void` [removeColumn](#) (size\_t column)  
*removeColumn*

- void [removeEmptyRows](#) ()  
*removeEmptyRows Removes empty rows from worksheet*
- void [removeEmptyColumns](#) ()  
*removeEmptyColumns Removes empty columns from worksheet*
- bool [validateWorksheet](#) (size\_t rowOffset, [oig::ratstats::utils::RStatsConditionLogger](#) &logger, const std::string &context="data")  
*validateWorksheet Adds errors to logger if data appears to be invalid in the input sheet*

### 5.32.1 Detailed Description

The [RStatsWorksheet](#) class attempts to emulate a simple spreadsheet object basic formatting of cells.

### 5.32.2 Constructor & Destructor Documentation

5.32.2.1 [oig::ratstats::utils::RStatsWorksheet::RStatsWorksheet](#) ( const std::string & *name* = "NewSheet " )

[RStatsWorksheet](#) (Constructor)

Parameters

<i>name</i>	The name of the worksheet
-------------	---------------------------

### 5.32.3 Member Function Documentation

5.32.3.1 void [oig::ratstats::utils::RStatsWorksheet::findDataRowsAndColumns](#) ( std::set< size\_t > & *rowsOut*, std::set< size\_t > & *columnsOut* ) const

[findDataRowsAndColumns](#)

Parameters

<i>rowsOut</i>	
<i>columnsOut</i>	

5.32.3.2 const [RStatsCell](#) & [oig::ratstats::utils::RStatsWorksheet::getCell](#) ( size\_t *row*, size\_t *column* ) const

[getCell](#) Returns const reference to cell via row/column indices. This function provides read only access and therefore if a row/column is out of range an exception is thrown.

Parameters

<i>row</i>	The row to access
<i>column</i>	The column to access

**Returns**

Return const reference to [RStatsCell](#)

**Exceptions**

<i>GenericException</i>	if row/column do not exist.
-------------------------	-----------------------------

**5.32.3.3** `const RStatsCellMap & oig::ratstats::utils::RStatsWorksheet::getCells ( ) const`

getCells

**Returns**

**5.32.3.4** `std::pair< size_t, size_t > oig::ratstats::utils::RStatsWorksheet::getLastDataRowAndColumn ( ) const`

getLastDataRow

**Returns**

**5.32.3.5** `size_t oig::ratstats::utils::RStatsWorksheet::getNumColumns ( ) const`

getNumColumns

**Returns**

**5.32.3.6** `size_t oig::ratstats::utils::RStatsWorksheet::getNumRows ( ) const`

getNumRows

**Returns**

**5.32.3.7** `const std::string & oig::ratstats::utils::RStatsWorksheet::getWorksheetTitle ( ) const`

Getter for m\_worksheetTitle.

**Returns**

Return copy of m\_worksheetTitle



## 5.32.3.8 bool oig::ratstats::utils::RStatsWorksheet::isEmpty ( ) const

isEmpty

Returns

## 5.32.3.9 RStatsCell &amp; oig::ratstats::utils::RStatsWorksheet::operator() ( size\_t row, size\_t column )

operator ( ) Allows ease of accessing cells using row/column indices. If row/column is out of range a new cell is created and returned for the index pair.

Parameters

<i>row</i>	The row to access
<i>column</i>	The column to access

Returns

Return reference to [RStatsCell](#)

## 5.32.3.10 const RStatsCell &amp; oig::ratstats::utils::RStatsWorksheet::operator() ( size\_t row, size\_t column ) const

operator ( ) Allows ease of accessing cells using row/column indices. This function provides read only access and therefore if a row/column is out of range an exception is thrown.

Parameters

<i>row</i>	The row to access
<i>column</i>	The column to access

Returns

Return const reference to [RStatsCell](#)

Exceptions

<i>GenericException</i>	if row/column do not exist.
-------------------------	-----------------------------

## 5.32.3.11 RStatsCell &amp; oig::ratstats::utils::RStatsWorksheet::operator() ( const std::string &amp; address )

operator ( ) Allows ease of accessing cells using string address (e.g A1, B15, Z24, etc). If row/column is out of range a new cell is created and returned for the index pair.

## Parameters

<i>address</i>	The cell address to return
----------------	----------------------------

## Returns

Return reference to [RStatsCell](#)

5.32.3.12 `void oig::ratstats::utils::RStatsWorksheet::removeColumn ( size_t column )`

## removeColumn

## Parameters

<i>column</i>	
---------------	--

5.32.3.13 `void oig::ratstats::utils::RStatsWorksheet::removeRow ( size_t row )`

## removeRow

## Parameters

<i>row</i>	
------------	--

5.32.3.14 `void oig::ratstats::utils::RStatsWorksheet::setColumnBackgroundColor ( size_t column, const cbtek::common::utility::Color & color )`

## setColumnBackgroundColor

## Parameters

<i>row</i>	
<i>color</i>	

5.32.3.15 `void oig::ratstats::utils::RStatsWorksheet::setColumnBorderColor ( size_t column, const cbtek::common::utility::Color & color )`

## setColumnBorderColor

## Parameters

<i>row</i>	
<i>color</i>	

5.32.3.16 void oig::ratstats::utils::RStatsWorksheet::setDefaultBGColor ( const cbtek::common::utility::Color & *bgColor* )

setDefaultBGColor

Parameters

<i>bgColor</i>	
----------------	--

5.32.3.17 void oig::ratstats::utils::RStatsWorksheet::setDefaultFGColor ( const cbtek::common::utility::Color & *fgColor* )

setDefaultFGColor

Parameters

<i>fgColor</i>	
----------------	--

5.32.3.18 void oig::ratstats::utils::RStatsWorksheet::setDefaultFloatingPointDecimals ( size\_t *count* )

setDefaultFloatingPointDecimals

Parameters

<i>count</i>	
--------------	--

5.32.3.19 void oig::ratstats::utils::RStatsWorksheet::setDefaultFont ( const cbtek::common::utility::Font & *font* )

setDefaultFont

Parameters

<i>font</i>	
-------------	--

5.32.3.20 void oig::ratstats::utils::RStatsWorksheet::setDefaultTextAlignment ( RStatsTextAlignment *alignment* )

setDefaultTextAlignment

Parameters

<i>alignment</i>	
------------------	--

5.32.3.21 void oig::ratstats::utils::RStatsWorksheet::setFormatEnabled ( RStatsCellFormat *format*, bool *flag* )

setFormatEnabled

## Parameters

<i>format</i>	
<i>flag</i>	

5.32.3.22 void oig::ratstats::utils::RStatsWorksheet::setRowBackgroundColor ( size\_t *row*, const cbtek::common::utility::Color & *color* )

setRowBackgroundColor

## Parameters

<i>row</i>	
<i>color</i>	

5.32.3.23 void oig::ratstats::utils::RStatsWorksheet::setRowBorderColor ( size\_t *row*, const cbtek::common::utility::Color & *color* )

setRowBorderColor

## Parameters

<i>row</i>	
<i>color</i>	

5.32.3.24 void oig::ratstats::utils::RStatsWorksheet::setThousandsSeperatorEnabled ( bool *flag* )

setThousandsSeperatorEnabled

## Parameters

<i>flag</i>	
-------------	--

5.32.3.25 void oig::ratstats::utils::RStatsWorksheet::setWorksheetTitle ( const std::string & *value* )

Setter for m\_worksheetTitle.

## Parameters

<i>Value</i>	to replace m_worksheetTitle
--------------	-----------------------------

5.32.3.26 `std::string oig::ratstats::utils::RStatsWorksheet::toCommaDelimitedString ( ) const`

toCommaDelimitedString

Returns

5.32.3.27 `std::string oig::ratstats::utils::RStatsWorksheet::toEvenlySpacedString ( ) const`

toEvenlySpacedString Converts worksheet to evenly spaced human readable string output.

Returns

5.32.3.28 `std::string oig::ratstats::utils::RStatsWorksheet::toHTMLTableString ( bool includeRowLabels = false, bool includeColumnLabels = false ) const`

toHTMLTableString

Returns

5.32.3.29 `std::string oig::ratstats::utils::RStatsWorksheet::toTabDelimitedString ( ) const`

toTabDelimitedString

Returns

5.32.3.30 `bool oig::ratstats::utils::RStatsWorksheet::validateWorksheet ( size_t rowOffset, oig↔  
::ratstats::utils::RStatsConditionLogger & logger, const std::string & context = "data"  
)`

validateWorksheet Adds errors to logger if data appears to be invalid in the input sheet

Parameters

<i>sheet</i>	The input sheet to check
<i>rowOffset</i>	Offset into to sheet. Used to skip header rows
<i>logger</i>	Conditional logger from modules
<i>context</i>	Name of object related to error

**Returns**

Return true if sheet was valid, false otherwise

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

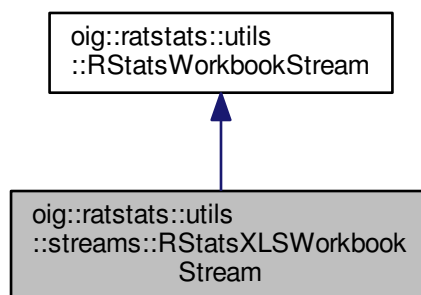
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/RStatsWorksheet.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/RStatsWorksheet.cpp

### 5.33 oig::ratstats::utils::streams::RStatsXLWorkbookStream Class Reference

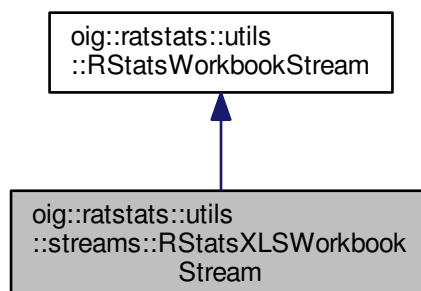
The [RStatsXLWorkbookStream](#) class Provides read/write support for XLS files.

```
#include <RStatsXLWorkbookStream.h>
```

Inheritance diagram for oig::ratstats::utils::streams::RStatsXLWorkbookStream:



Collaboration diagram for oig::ratstats::utils::streams::RStatsXLWorkbookStream:



## Public Member Functions

- **RStatsXLSWorkbookStream** (const std::string &filePath)
- virtual void **write** (const [RStatsWorkbook](#) &workbook)  
*write Saves workbook object to XLS file*
- virtual [RStatsWorkbook](#) **read** ()  
*read Parses XLS file and returns workbook*

### 5.33.1 Detailed Description

The [RStatsXLSWorkbookStream](#) class Provides read/write support for XLS files.

### 5.33.2 Member Function Documentation

#### 5.33.2.1 [RStatsWorkbook](#) oig::ratstats::utils::streams::RStatsXLSWorkbookStream::read ( ) [virtual]

read Parses XLS file and returns workbook

#### Returns

Return fully constructed workbook object from XLS file

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

#### 5.33.2.2 void oig::ratstats::utils::streams::RStatsXLSWorkbookStream::write ( const [RStatsWorkbook](#) & workbook ) [virtual]

write Saves workbook object to XLS file

#### Parameters

<i>workbook</i>	The workbook to save
-----------------	----------------------

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

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

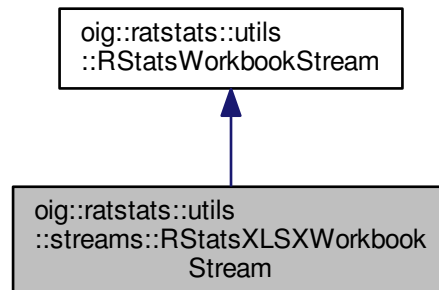
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/inc/streams/RStatsXLSWorkbookStream.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_utils/src/streams/RStatsXLSWorkbookStream.↵  
cpp

## 5.34 oig::ratstats::utils::streams::RStatsXLSXWorkbookStream Class Reference

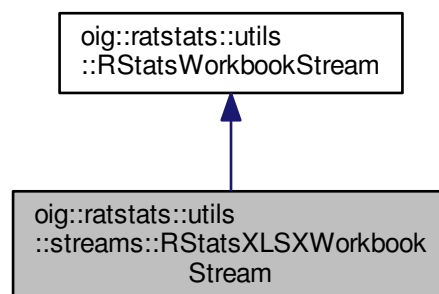
The [RStatsXLSXWorkbookStream](#) class provides read support for XLSX files. WARNING: The write function is not implemented and will throw an exception if called.

```
#include <RStatsXLSXWorkbookStream.h>
```

Inheritance diagram for `oig::ratstats::utils::streams::RStatsXLSXWorkbookStream`:



Collaboration diagram for `oig::ratstats::utils::streams::RStatsXLSXWorkbookStream`:



## Public Member Functions

- [RStatsXLSXWorkbookStream](#) (const std::string &filePath)  
[RStatsXLSXWorkbookStream](#) (Constructor)
- void [write](#) (const [RStatsWorkbook](#) &workbook)  
*write In the future this should write a workbook to a xlsx file. WARNING: The write function is not implemented and will throw an exception if called.*
- [RStatsWorkbook](#) [read](#) ()  
*read Parses XLSX file and returns it as a workbook object*
- [~RStatsXLSXWorkbookStream](#) ()  
*Destructor.*



### 5.34.1 Detailed Description

The `RStatsXLSXWorkbookStream` class provides read support for XLSX files. WARNING: The write function is not implemented and will throw an exception if called.

### 5.34.2 Constructor & Destructor Documentation

5.34.2.1 `oig::ratstats::utils::streams::RStatsXLSXWorkbookStream::RStatsXLSXWorkbookStream ( const std::string & filePath )`

`RStatsXLSXWorkbookStream` (Constructor)

#### Parameters

<i>filePath</i>	The path to read from
-----------------	-----------------------

### 5.34.3 Member Function Documentation

5.34.3.1 `RStatsWorkbook oig::ratstats::utils::streams::RStatsXLSXWorkbookStream::read ( )` [virtual]

read Parses XLSX file and returns it as a workbook object

#### Returns

Returns workbook object of XLSX file

#### Exceptions

<i>GenericException</i>	if xlsx file was unable to be opened
-------------------------	--------------------------------------

Implements `oig::ratstats::utils::RStatsWorkbookStream`.

5.34.3.2 `void oig::ratstats::utils::streams::RStatsXLSXWorkbookStream::write ( const RStatsWorkbook & workbook )` [virtual]

write In the future this should write a workbook to a xlsx file. WARNING: The write function is not implemented and will throw an exception if called.

#### Parameters

<i>workbook</i>	The workbook to write
-----------------	-----------------------

#### Exceptions

<i>GenericException</i>	
-------------------------	--

Implements [oig::ratstats::utils::RStatsWorkbookStream](#).

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

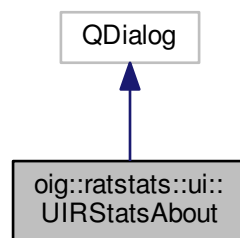
- [/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\\_utils/inc/streams/RStatsXLSXWorkbookStream.h](#)↔
- [/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\\_utils/src/streams/RStatsXLSXWorkbookStream.cpp](#)↔

## 5.35 [oig::ratstats::ui::UIRStatsAbout](#) Class Reference

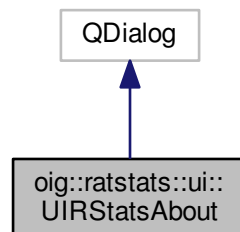
The [UIRStatsAbout](#) class represents the code-behind for the "About" dialog used in RAT-STATS.

```
#include <UIRStatsAbout.h>
```

Inheritance diagram for [oig::ratstats::ui::UIRStatsAbout](#):



Collaboration diagram for [oig::ratstats::ui::UIRStatsAbout](#):



## Public Member Functions

- [UIStatsAbout](#) (QWidget \*parent=0)  
*Constructor for [UIStatsAbout](#).*
- [~UIStatsAbout](#) ()  
*Destructor for [UIStatsAbout](#).*

### 5.35.1 Detailed Description

The [UIStatsAbout](#) class represents the code-behind for the "About" dialog used in RAT-STATS.

### 5.35.2 Constructor & Destructor Documentation

#### 5.35.2.1 oig::ratstats::ui::UIStatsAbout::UIStatsAbout ( QWidget \* *parent* = 0 ) [explicit]

Constructor for [UIStatsAbout](#).

Detailed description for [UIStatsAbout](#)

#### Parameters

<i>parent</i>	points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

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

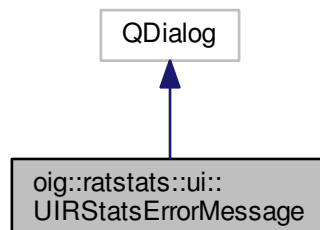
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/inc/UIStatsAbout.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/src/UIStatsAbout.cpp

## 5.36 oig::ratstats::ui::UIStatsErrorMessage Class Reference

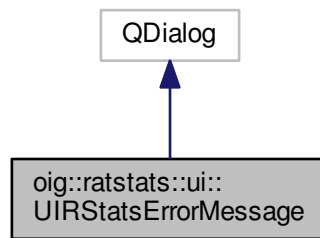
The [UIStatsErrorMessage](#) class represents the code-behind for a custom dialog for displaying error/exception messages.

```
#include <UIStatsErrorMessage.h>
```

Inheritance diagram for oig::ratstats::ui::UIStatsErrorMessage:



Collaboration diagram for `oig::ratstats::ui::UIStatsErrorMessage`:



## Public Member Functions

- [UIStatsErrorMessage](#) (QString &title, QString &message, bool exitApplication=false, QWidget \*parent=0)  
*UIStatsErrorMessage (Constructor)*
- [UIStatsErrorMessage](#) (const std::string &title, const std::string &message, bool exitApplication=false, QWidget \*parent=0)  
*UIStatsErrorMessage (Constructor)*
- [~UIStatsErrorMessage](#) ()  
*Destructor for UIStatsErrorMessage.*

## 5.36.1 Detailed Description

The [UIStatsErrorMessage](#) class represents the code-behind for a custom dialog for displaying error/exception messages.

## 5.36.2 Constructor & Destructor Documentation

5.36.2.1 `oig::ratstats::ui::UIStatsErrorMessage::UIStatsErrorMessage ( QString & title, QString & message, bool exitApplication = false, QWidget * parent = 0 ) [explicit]`

[UIStatsErrorMessage](#) (Constructor)

### Parameters

<i>title</i>	The message to display in title bar
<i>message</i>	The primary error message
<i>exitApplication</i>	Should application exit after message is dismissed
<i>parent</i>	The parent widget

5.36.2.2 oig::ratstats::ui::UIStatsErrorMessage::UIStatsErrorMessage ( const std::string & *title*, const std::string & *message*, bool *exitApplication* = false, QWidget \* *parent* = 0 ) [explicit]

[UIStatsErrorMessage](#) (Constructor)

#### Parameters

<i>title</i>	The message to display in title bar
<i>message</i>	The primary error message
<i>exitApplication</i>	Should application exit after message is dismissed
<i>parent</i>	The parent widget

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

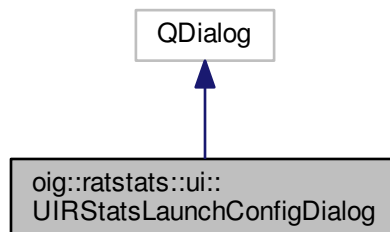
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/inc/UIStatsErrorMessage.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/src/UIStatsErrorMessage.cpp

## 5.37 oig::ratstats::ui::UIStatsLaunchConfigDialog Class Reference

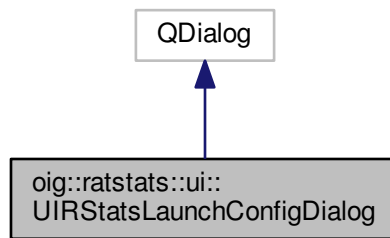
The [UIStatsLaunchConfigDialog](#) class represents the code-behind for editing RStatsModuleProperties.

```
#include <UIStatsLaunchConfigDialog.h>
```

Inheritance diagram for oig::ratstats::ui::UIStatsLaunchConfigDialog:



Collaboration diagram for `oig::ratstats::ui::UIRStatsLaunchConfigDialog`:



## Signals

- void **propertiesSaved** (const [utils::RStatsModuleProperties](#) &props)

## Public Member Functions

- [UIRStatsLaunchConfigDialog](#) (const [utils::RStatsModuleProperties](#) &props, QWidget \*parent=0)  
*Constructor for [UIRStatsLaunchConfigDialog](#).*
- [~UIRStatsLaunchConfigDialog](#) ()  
*Destructor for [UIRStatsLaunchConfigDialog](#).*
- bool **launch** ()  
*launch Calls the exec function for this dialog*

### 5.37.1 Detailed Description

The [UIRStatsLaunchConfigDialog](#) class represents the code-behind for editing `RStatsModuleProperties`.

### 5.37.2 Constructor & Destructor Documentation

5.37.2.1 `oig::ratstats::ui::UIRStatsLaunchConfigDialog::UIRStatsLaunchConfigDialog ( const utils::RStatsModuleProperties & props, QWidget * parent = 0 ) [explicit]`

Constructor for [UIRStatsLaunchConfigDialog](#).

Detailed description for [UIRStatsLaunchConfigDialog](#)

#### Parameters

<i>parent</i>	points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

### 5.37.3 Member Function Documentation

#### 5.37.3.1 bool oig::ratstats::ui::UIRStatsLaunchConfigDialog::launch ( )

launch Calls the exec function for this dialog

#### Returns

Return true if changes were made (OK was pressed) or false if this dialog was canceled

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

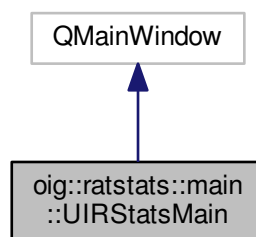
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/inc/UIRStatsLaunchConfigDialog.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/src/UIRStatsLaunchConfigDialog.cpp

## 5.38 oig::ratstats::main::UIRStatsMain Class Reference

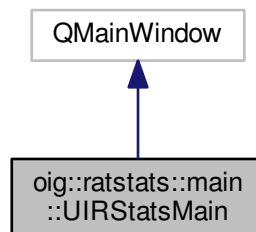
The [UIRStatsMain](#) class contains the code-behind for the RAT-STATS main menu window.

```
#include <UIRStatsMain.h>
```

Inheritance diagram for oig::ratstats::main::UIRStatsMain:



Collaboration diagram for oig::ratstats::main::UIRStatsMain:



## Public Member Functions

- [UIRStatsMain](#) (QWidget \*parent=0)  
*UIRStatsMain (constructor)*
- [~UIRStatsMain](#) ()  
*UIRStatsMain (destructor)*

## Protected Slots

- void [onExit](#) ()  
*onExit*
- void [onLaunchSettingsManager](#) ()  
*onLaunchSettingsManager*
- void [onLaunchAbout](#) ()  
*onLaunchAbout*
- void [onLaunchHelp](#) ()  
*onLaunchHelp*
- void [onLaunchModule](#) (const [utils::RStatsModuleProperties](#) &props, int row)  
*launchModule This is called when module is to be launched*
- void [onLaunchModuleShortcut](#) (QShortcut \*button)  
*onLaunchModuleShortcut*
- void [onUpdateTableHeader](#) (bool isModuleListSelected)  
*onUpdateTableHeader*
- void [onAddNewModule](#) ()  
*onAddNewModule*
- void [onRemoveModuleShortcut](#) (QShortcut \*button)  
*onRemoveModuleShortcut*
- void [onRemoveModule](#) (const [utils::RStatsModuleProperties](#) &props, int row)  
*removeModule This is called when module properties need to be removed*
- void [onEditModuleShortcut](#) (QShortcut \*button)  
*onEditModuleShortcut*
- void [onEditModule](#) (const [utils::RStatsModuleProperties](#) &props, int row)  
*editModule This is called when module properties need to be edited*
- void [onCategoryChanged](#) (int row)  
*onCategoryChanged*
- void [onRepopulateModules](#) (const std::vector< [utils::RStatsModuleProperties](#) > &propsIn)  
*onRepopulateModules*
- void [onModuleCellActivated](#) (QTableWidgetItem \*item)  
*onModuleCellActivated*

## Protected Member Functions

- void [keyPressEvent](#) (QKeyEvent \*event)  
*keyPressEvent*
- void [editModule](#) (const QString &propsPath, int row)  
*editModule This is called when module properties need to be edited*
- void [removeModule](#) (const QString &propsPath, int row)  
*removeModule This is called when module properties need to be removed*
- void [launchModule](#) (const QString &propsPath)  
*launchModule This is called when module is to be launched*



### 5.38.1 Detailed Description

The [UIRStatsMain](#) class contains the code-behind for the RAT-STATS main menu window.

### 5.38.2 Constructor & Destructor Documentation

5.38.2.1 `oig::ratstats::main::UIRStatsMain ( QWidget * parent = 0 )` `[explicit]`

[UIRStatsMain](#) (constructor)

Parameters

<i>parent</i>	
---------------	--

### 5.38.3 Member Function Documentation

5.38.3.1 `void oig::ratstats::main::UIRStatsMain::editModule ( const QString & propsPath, int row )` `[protected]`

`editModule` This is called when module properties need to be edited

Parameters

<i>propsPath</i>	The path to the module properties config
<i>row</i>	The row of the module to edit

5.38.3.2 `void oig::ratstats::main::UIRStatsMain::keyPressEvent ( QKeyEvent * event )` `[protected]`

`keyPressEvent`

Parameters

<i>event</i>	
--------------	--

5.38.3.3 `void oig::ratstats::main::UIRStatsMain::launchModule ( const QString & propsPath )` `[protected]`

`launchModule` This is called when module is to be launched

Parameters

<i>propsPath</i>	The path to the module properties config
------------------	------------------------------------------

5.38.3.4 `void oig::ratstats::main::UIRStatsMain::onCategoryChanged ( int row )` [protected],[slot]

onCategoryChanged

Parameters

<i>row</i>	
------------	--

5.38.3.5 `void oig::ratstats::main::UIRStatsMain::onEditModule ( const utils::RStatsModuleProperties & props, int row )`  
[protected],[slot]

editModule This is called when module properties need to be edited

Parameters

<i>props</i>	The module properties
<i>row</i>	The row of the module to edit

5.38.3.6 `void oig::ratstats::main::UIRStatsMain::onEditModuleShortcut ( QShortcut * button )` [protected],[slot]

onEditModuleShortcut

Parameters

<i>button</i>	
---------------	--

5.38.3.7 `void oig::ratstats::main::UIRStatsMain::onLaunchModule ( const utils::RStatsModuleProperties & props, int row )`  
[protected],[slot]

launchModule This is called when module is to be launched

Parameters

<i>propsPath</i>	The path to the module properties config
<i>row</i>	The row of the module to be launched

5.38.3.8 `void oig::ratstats::main::UIRStatsMain::onLaunchModuleShortcut ( QShortcut * button )` [protected],[slot]

onLaunchModuleShortcut

Parameters

<i>button</i>	
---------------	--

5.38.3.9 void oig::ratstats::main::UIRStatsMain::onModuleCellActivated ( QTableWidgetItem \* *item* ) [protected],  
[slot]

onModuleCellActivated

Parameters

<i>item</i>	
-------------	--

5.38.3.10 void oig::ratstats::main::UIRStatsMain::onRemoveModule ( const utils::RStatsModuleProperties & *props*, int  
*row* ) [protected], [slot]

removeModule This is called when module properties need to be removed

Parameters

<i>props</i>	The module properties
<i>row</i>	The row of the module to remove

5.38.3.11 void oig::ratstats::main::UIRStatsMain::onRemoveModuleShortcut ( QShortcut \* *button* ) [protected],  
[slot]

onRemoveModuleShortcut

Parameters

<i>button</i>	
---------------	--

5.38.3.12 void oig::ratstats::main::UIRStatsMain::onRepopulateModules ( const std::vector<  
utils::RStatsModuleProperties > & *propsIn* ) [protected], [slot]

onRepopulateModules

Parameters

<i>props</i> ↔ <i>In</i>	
-----------------------------	--

5.38.3.13 void oig::ratstats::main::UIRStatsMain::onUpdateTableHeader ( bool *isModuleListSelected* ) [protected],  
[slot]

onUpdateTableHeader

Parameters

<i>isModuleListSelected</i>	
-----------------------------	--

5.38.3.14 `void oig::ratstats::main::UIRStatsMain::removeModule ( const QString & propsPath, int row )` [protected]

`removeModule` This is called when module properties need to be removed

#### Parameters

<i>propsPath</i>	The path to the module properties config
<i>row</i>	The row of the module to remove

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

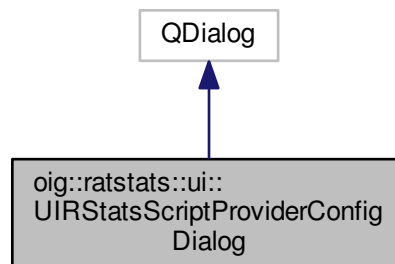
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_main/inc/UIRStatsMain.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_main/src/UIRStatsMain.cpp

## 5.39 oig::ratstats::ui::UIRStatsScriptProviderConfigDialog Class Reference

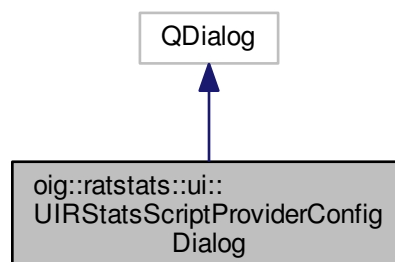
The [UIRStatsScriptProviderConfigDialog](#) class provides code-behind for editing RStatsScriptProviderProperties.

```
#include <UIRStatsScriptProviderConfigDialog.h>
```

Inheritance diagram for oig::ratstats::ui::UIRStatsScriptProviderConfigDialog:



Collaboration diagram for oig::ratstats::ui::UIRStatsScriptProviderConfigDialog:



## Public Member Functions

- [UIRStatsScriptProviderConfigDialog](#) (const [utils::RStatsScriptProviderProperties](#) &props, [QWidget](#) \*parent=0)  
*Constructor for [UIRStatsScriptProviderConfigDialog](#).*
- [~UIRStatsScriptProviderConfigDialog](#) ()  
*Destructor for [UIRStatsScriptProviderConfigDialog](#).*

### 5.39.1 Detailed Description

The [UIRStatsScriptProviderConfigDialog](#) class provides code-behind for editing [RStatsScriptProviderProperties](#).

### 5.39.2 Constructor & Destructor Documentation

5.39.2.1 `oig::ratstats::ui::UIRStatsScriptProviderConfigDialog::UIRStatsScriptProviderConfigDialog ( const utils::RStatsScriptProviderProperties & props, QWidget * parent = 0 ) [explicit]`

Constructor for [UIRStatsScriptProviderConfigDialog](#).

Detailed description for [UIRStatsScriptProviderConfigDialog](#)

#### Parameters

<i>parent</i>	points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

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

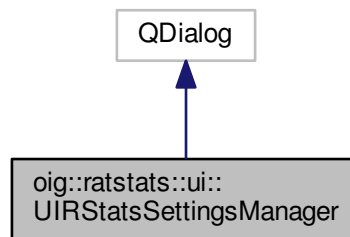
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/inc/UIRStatsScriptProviderConfigDialog.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/src/UIRStatsScriptProviderConfigDialog.cpp

## 5.40 oig::ratstats::ui::UIRStatsSettingsManager Class Reference

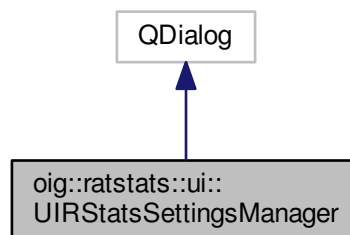
The [UIRStatsSettingsManager](#) class represents the properties in the settings dialog such as theme management and script provider management.

```
#include <UIRStatsSettingsManager.h>
```

Inheritance diagram for `oig::ratstats::ui::UIRStatsSettingsManager`:



Collaboration diagram for `oig::ratstats::ui::UIRStatsSettingsManager`:



## Public Member Functions

- [UIRStatsSettingsManager](#) (`QWidget *parent=0`)  
*Constructor for [UIRStatsSettingsManager](#).*
- [~UIRStatsSettingsManager](#) ()  
*Destructor for [UIRStatsSettingsManager](#).*

### 5.40.1 Detailed Description

The [UIRStatsSettingsManager](#) class represents the properties in the settings dialog such as theme management and script provider management.

### 5.40.2 Constructor & Destructor Documentation

5.40.2.1 `oig::ratstats::ui::UIRStatsSettingsManager::UIRStatsSettingsManager ( QWidget * parent = 0 )` [`explicit`]

Constructor for [UIRStatsSettingsManager](#).

Detailed description for [UIRStatsSettingsManager](#)

## Parameters

<i>parent</i>	points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

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

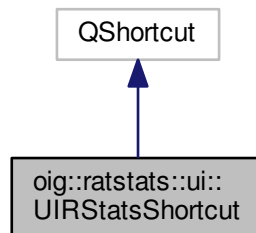
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/inc/UIRStatsSettingsManager.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/src/UIRStatsSettingsManager.cpp

## 5.41 oig::ratstats::ui::UIRStatsShortcut Class Reference

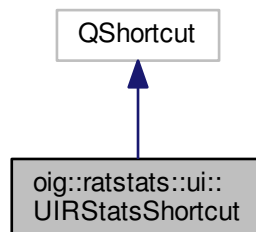
The [UIRStatsShortcut](#) class is a custom overload of `QShortcut` to provide more useful "activated" signal that returns pointer to shortcut.

```
#include <UIRStatsShortcut.h>
```

Inheritance diagram for oig::ratstats::ui::UIRStatsShortcut:



Collaboration diagram for oig::ratstats::ui::UIRStatsShortcut:



## Signals

- void [activated](#) (QShortcut \*shortcut)  
*activated*

## Public Member Functions

- [UIRStatsShortcut](#) (const QKeySequence &sequence, QWidget \*parent)  
*Constructor for [UIRStatsShortcut](#).*
- [~UIRStatsShortcut](#) ()  
*Destructor.*

### 5.41.1 Detailed Description

The [UIRStatsShortcut](#) class is a custom overload of QShortcut to provide more useful "activated" signal that returns pointer to shortcut.

### 5.41.2 Constructor & Destructor Documentation

5.41.2.1 `oig::ratstats::ui::UIRStatsShortcut::UIRStatsShortcut ( const QKeySequence & sequence, QWidget * parent )`

Constructor for [UIRStatsShortcut](#).

Detailed description for [UIRStatsShortcut](#)

### 5.41.3 Member Function Documentation

5.41.3.1 `void oig::ratstats::ui::UIRStatsShortcut::activated ( QShortcut * shortcut )` [*signal*]

activated

Parameters

<i>shortcut</i>	
-----------------	--

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/inc/UIRStatsShortcut.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/src/UIRStatsShortcut.cpp

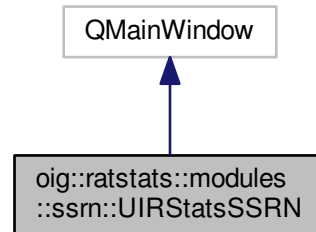
## 5.42 oig::ratstats::modules::ssrn::UIRStatsSSRN Class Reference

The [UIRStatsSSRN](#) class represents the code-behind for the single stage random number user interface. In the model-view-controller paradigm this class represents the view.

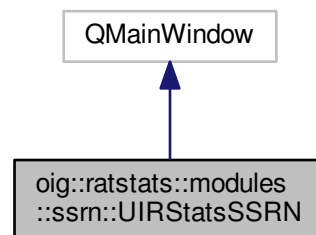


```
#include <UIRStatsSSRN.h>
```

Inheritance diagram for `oig::ratstats::modules::ssrn::UIRStatsSSRN`:



Collaboration diagram for `oig::ratstats::modules::ssrn::UIRStatsSSRN`:



## Public Member Functions

- [`UIRStatsSSRN`](#) (`QWidget *parent=0`)  
*Constructor for [`UIRStatsSSRN`](#).*
- [`~UIRStatsSSRN`](#) ()  
*Destructor for [`UIRStatsSSRN`](#).*

## Protected Member Functions

- void **resizeEvent** (`QResizeEvent *`)

### 5.42.1 Detailed Description

The [`UIRStatsSSRN`](#) class represents the code-behind for the single stage random number user interface. In the model-view-controller paradigm this class represents the view.

## 5.42.2 Constructor & Destructor Documentation

5.42.2.1 `oig::ratstats::modules::ssrn::UIRStatsSSRN::UIRStatsSSRN ( QWidget * parent = 0 ) [explicit]`

Constructor for [UIRStatsSSRN](#).

Detailed description for [UIRStatsSSRN](#)

### Parameters

<i>parent</i>	points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

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

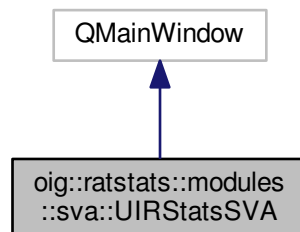
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/inc/UIRStatsSSRN.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/single_stage_random_numbers/src/UIRStatsSSRN.cpp`

## 5.43 `oig::ratstats::modules::sva::UIRStatsSVA` Class Reference

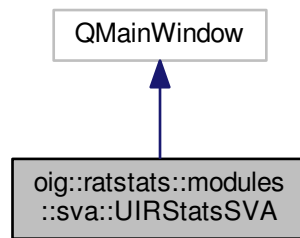
The [UIRStatsSVA](#) class represents the code-behind for the stratified variable appraisal user interface. In the model-view-controller paradigm this class represents the view.

```
#include <UIRStatsSVA.h>
```

Inheritance diagram for `oig::ratstats::modules::sva::UIRStatsSVA`:



Collaboration diagram for oig::ratstats::modules::sva::UIRStatsSVA:



## Public Member Functions

- [UIRStatsSVA](#) (QWidget \*parent=0)  
*Constructor for [UIRStatsSVA](#).*
- [~UIRStatsSVA](#) ()  
*Destructor for [UIRStatsSVA](#).*

## Protected Slots

- void [onSampleDataInputSheetReload](#) ()  
*onSampleDataInputSheetReload*
- void [onSampleSizeInputSheetReload](#) ()  
*onSampleSizeInputSheetReload*
- void [onClearRecentSessions](#) ()  
*onClearRecentSessions*
- void [onRecentSessionSelected](#) (QAction \*action)  
*onRecentSessionSelected*
- void [onUpdateRowColumnExtentsForDataTable](#) ()  
*onUpdateRowColumnExtentsForDataTable*
- void [onUpdateRowColumnExtentsForSizeTable](#) ()  
*onUpdateRowColumnExtentsForSizeTable*
- void [onExecute](#) ()  
*onExecute*
- void [onExit](#) ()  
*onExit*
- void [onSampleSizeInputSheetSelected](#) (const oig::ratstats::utils::RStatsWorksheet &sheet)  
*onSampleSizeInputSheetSelected*
- void [onSampleDataInputSheetSelected](#) (const oig::ratstats::utils::RStatsWorksheet &sheet)  
*onSampleDataInputSheetSelected*
- void [onComboSizeInputSheetSelected](#) (int row)  
*onComboSizeInputSheetSelected*
- void [onComboDataInputSheetSelected](#) (int row)  
*onComboDataInputSheetSelected*

- void [onImportDataInput](#) ()  
*onImportDataInput*
- void [onImportSizeInput](#) ()  
*onImportSizeInput*
- void [onHelp](#) ()  
*onHelp*
- void [onSaveCSVFile](#) ()  
*onSaveCSVFile*
- void [onSaveTextFile](#) ()  
*onSaveTextFile*
- void [onUpdateDataFormatSelection](#) ()  
*onUpdateDataFormatSelection*
- void [onAbout](#) ()  
*onAbout*
- void [onUpdateDataFormatButtons](#) ()  
*onUpdateDataFormatButtons*
- void [onSetTabOrder](#) ()  
*onSetTabOrder*
- void [onSaveXLSFile](#) ()  
*onSaveXLSFile*
- void [onUpdateValidation](#) ()  
*onUpdateValidation Calls the onValidate function*
- void [onLaunchNewWindow](#) ()  
*onLaunchNewWindow Event occurs when user clicks the "New Window" File menu item. Will launch new instance of the [RStatsSVA](#) window*

## Protected Member Functions

- void **resizeEvent** (QResizeEvent \*)

### 5.43.1 Detailed Description

The [UIRStatsSVA](#) class represents the code-behind for the stratified variable appraisal user interface. In the model-view-controller paradigm this class represents the view.

### 5.43.2 Constructor & Destructor Documentation

#### 5.43.2.1 `oig::ratstats::modules::sva::UIRStatsSVA::UIRStatsSVA ( QWidget * parent = 0 ) [explicit]`

Constructor for [UIRStatsSVA](#).

Detailed description for [UIRStatsSVA](#)

#### Parameters

<i>parent</i>	points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

### 5.43.3 Member Function Documentation

5.43.3.1 void oig::ratstats::modules::sva::UIRStatsSVA::onComboDataInputSheetSelected ( int *row* ) [protected],  
[slot]

onComboDataInputSheetSelected

Parameters

<i>row</i>	
------------	--

5.43.3.2 void oig::ratstats::modules::sva::UIRStatsSVA::onComboSizeInputSheetSelected ( int *row* ) [protected],  
[slot]

onComboSizeInputSheetSelected

Parameters

<i>row</i>	
------------	--

5.43.3.3 void oig::ratstats::modules::sva::UIRStatsSVA::onRecentSessionSelected ( QAction \* *action* ) [protected],  
[slot]

onRecentSessionSelected

Parameters

<i>action</i>	
---------------	--

5.43.3.4 void oig::ratstats::modules::sva::UIRStatsSVA::onSampleDataInputSheetSelected ( const  
oig::ratstats::utils::RStatsWorksheet & *sheet* ) [protected], [slot]

onSampleDataInputSheetSelected

Parameters

<i>sheet</i>	
--------------	--

5.43.3.5 void oig::ratstats::modules::sva::UIRStatsSVA::onSampleSizeInputSheetSelected ( const  
oig::ratstats::utils::RStatsWorksheet & *sheet* ) [protected], [slot]

onSampleSizeInputSheetSelected

## Parameters

<i>sheet</i>	
--------------	--

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

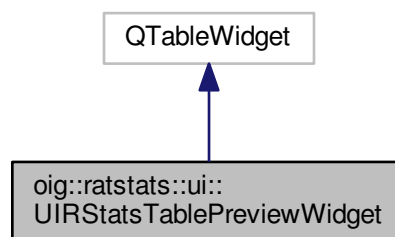
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/stratified\_variable\_appraisal/inc/UIRStatsSVA.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/stratified\_variable\_appraisal/src/UIRStatsSVA.cpp

## 5.44 oig::ratstats::ui::UIRStatsTablePreviewWidget Class Reference

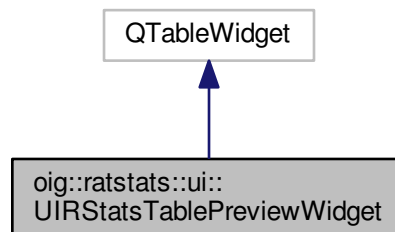
The [UIRStatsTablePreviewWidget](#) is a custom overload of the `QTableWidget` to provide the ability ignore the Tab key when viewing results in table. This allows the Tab key to go to the next sibling widget instead of being stuck in the table.

```
#include <UIRStatsTablePreviewWidget.h>
```

Inheritance diagram for `oig::ratstats::ui::UIRStatsTablePreviewWidget`:



Collaboration diagram for `oig::ratstats::ui::UIRStatsTablePreviewWidget`:



## Public Member Functions

- [UIRStatsTablePreviewWidget](#) (`QWidget *parent=nullptr`)  
*UIRStatsTablePreviewWidget* (Constructor)
- [~UIRStatsTablePreviewWidget](#) ()  
*UIRStatsTablePreviewWidget* (Destructor)

## Protected Member Functions

- void [keyPressEvent](#) (`QKeyEvent *event`)  
*keyPressEvent* Custom event for ignoring the TAB key so that focus is not always stuck in table

### 5.44.1 Detailed Description

The [UIRStatsTablePreviewWidget](#) is a custom overload of the `QTableWidget` to provide the ability ignore the Tab key when viewing results in table. This allows the Tab key to go to the next sibling widget instead of being stuck in the table.

### 5.44.2 Constructor & Destructor Documentation

5.44.2.1 `oig::ratstats::ui::UIRStatsTablePreviewWidget::UIRStatsTablePreviewWidget ( QWidget * parent = nullptr )`  
[explicit]

[UIRStatsTablePreviewWidget](#) (Constructor)

Parameters

<i>parent</i>	
---------------	--

### 5.44.3 Member Function Documentation

5.44.3.1 `void oig::ratstats::ui::UIRStatsTablePreviewWidget::keyPressEvent ( QKeyEvent * event )` [protected]

*keyPressEvent* Custom event for ignoring the TAB key so that focus is not always stuck in table

Parameters

<i>event</i>	The event for keys
--------------	--------------------

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

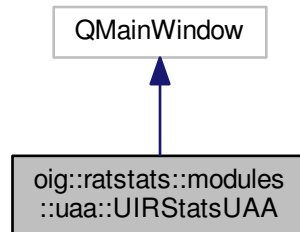
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_ui/inc/UIRStatsTablePreviewWidget.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_ui/src/UIRStatsTablePreviewWidget.cpp`

## 5.45 oig::ratstats::modules::uaa::UIRStatsUAA Class Reference

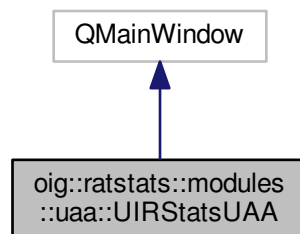
The [UIRStatsUAA](#) class represents the code-behind for the unrestricted attribute appraisal user interface. In the model-view-controller paradigm this class represents the view.

```
#include <UIRStatsUAA.h>
```

Inheritance diagram for oig::ratstats::modules::uaa::UIRStatsUAA:



Collaboration diagram for oig::ratstats::modules::uaa::UIRStatsUAA:



### Public Member Functions

- [UIRStatsUAA](#) (QWidget \*parent=0)  
*UIRStatsUAA Class Destructor.*
- [~UIRStatsUAA](#) ()  
*UIRStatsUAA Class Destructor.*

### Protected Member Functions

- void [resizeEvent](#) (QResizeEvent \*)  
*resizeEvent Called whenever the window is resized*



### 5.45.1 Detailed Description

The `UIRStatsUAA` class represents the code-behind for the unrestricted attribute appraisal user interface. In the model-view-controller paradigm this class represents the view.

### 5.45.2 Constructor & Destructor Documentation

5.45.2.1 `oig::ratstats::modules::uaa::UIRStatsUAA ( QWidget * parent = 0 ) [explicit]`

`UIRStatsUAA` Class Destructor.

Parameters

<i>parent</i>	Points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

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

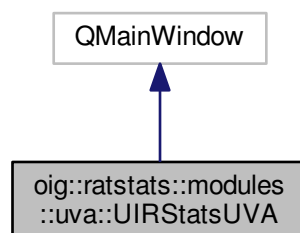
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_attribute_appraisal/inc/UIRStatsUAA.h`
- `/home/cbtek/dev/RStats2017/products/RAT-STATS/rstats_modules/unrestricted_attribute_appraisal/src/UIRStatsUAA.cpp`

## 5.46 `oig::ratstats::modules::uva::UIRStatsUVA` Class Reference

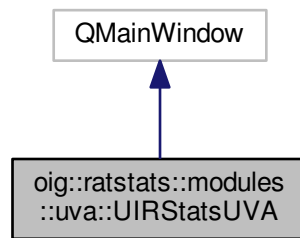
The `UIRStatsUVA` class represents the code-behind for the unrestricted variable appraisal user interface. In the model-view-controller paradigm this class represents the view.

```
#include <UIRStatsUVA.h>
```

Inheritance diagram for `oig::ratstats::modules::uva::UIRStatsUVA`:



Collaboration diagram for `oig::ratstats::modules::uva::UIRStatsUVA`:



## Public Member Functions

- [UIRStatsUVA](#) (QWidget \*parent=0)  
*Constructor for [UIRStatsUVA](#).*
- [~UIRStatsUVA](#) ()  
*Destructor for [UIRStatsUVA](#).*

## Protected Member Functions

- void [resizeEvent](#) (QResizeEvent \*e)  
*resizeEvent Called whenever window is resized. This is called to reposition output labels in the status bar*

### 5.46.1 Detailed Description

The [UIRStatsUVA](#) class represents the code-behind for the unrestricted variable appraisal user interface. In the model-view-controller paradigm this class represents the view.

### 5.46.2 Constructor & Destructor Documentation

#### 5.46.2.1 `oig::ratstats::modules::uva::UIRStatsUVA::UIRStatsUVA ( QWidget * parent = 0 ) [explicit]`

Constructor for [UIRStatsUVA](#).

Detailed description for [UIRStatsUVA](#)

#### Parameters

<i>parent</i>	points to embedding super widget. Defaults to null.
---------------	-----------------------------------------------------

### 5.46.3 Member Function Documentation

#### 5.46.3.1 void oig::ratstats::modules::uva::UIRStatsUVA::resizeEvent ( QResizeEvent \* *e* ) [protected]

resizeEvent Called whenever window is resized. This is called to reposition output labels in the status bar

#### Parameters

<i>e</i>	The resize event object
----------	-------------------------

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

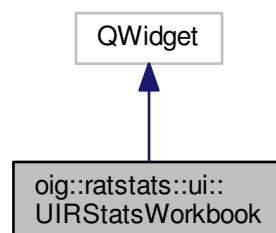
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/unrestricted\_variable\_appraisal/inc/UI↵RStatsUVA.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_modules/unrestricted\_variable\_appraisal/src/UI↵RStatsUVA.cpp

## 5.47 oig::ratstats::ui::UIRStatsWorkbook Class Reference

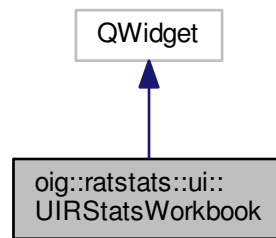
The [UIRStatsWorkbook](#) class is used by the SVA class to provide support for displaying multiple worksheets in the output results.

```
#include <UIRStatsWorkbook.h>
```

Inheritance diagram for oig::ratstats::ui::UIRStatsWorkbook:



Collaboration diagram for `oig::ratstats::ui::UIRStatsWorkbook`:



## Public Member Functions

- [UIRStatsWorkbook](#) (`QWidget *parent=0`)  
*[UIRStatsWorkbook](#) (Constructor)*
- [UIRStatsWorkbook](#) (`const utils::RStatsWorkbook &workbook, QWidget *parent=0`)  
*[UIRStatsWorkbook](#) (Constructor)*
- void [setWorkbook](#) (`const utils::RStatsWorkbook &workbook`)  
*[setWorkbook](#)*
- void [clear](#) ()  
*[clear](#)*
- [~UIRStatsWorkbook](#) ()  
*Destructor for [UIRStatsWorkbook](#).*

### 5.47.1 Detailed Description

The [UIRStatsWorkbook](#) class is used by the SVA class to provide support for displaying multiple worksheets in the output results.

### 5.47.2 Constructor & Destructor Documentation

5.47.2.1 `oig::ratstats::ui::UIRStatsWorkbook::UIRStatsWorkbook ( QWidget *parent = 0 ) [explicit]`

[UIRStatsWorkbook](#) (Constructor)

Parameters

<i>parent</i>	
---------------	--

5.47.2.2 oig::ratstats::ui::UIRStatsWorkbook::UIRStatsWorkbook ( const utils::RStatsWorkbook & *workbook*, QWidget \* *parent* = 0 ) [explicit]

[UIRStatsWorkbook](#) (Constructor)

Parameters

<i>workbook</i>	The workbook to populate the ui with
<i>parent</i>	

### 5.47.3 Member Function Documentation

5.47.3.1 void oig::ratstats::ui::UIRStatsWorkbook::setWorkbook ( const utils::RStatsWorkbook & *workbook* )

setWorkbook

Parameters

<i>workbook</i>	
-----------------	--

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

- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/inc/UIRStatsWorkbook.h
- /home/cbtek/dev/RStats2017/products/RAT-STATS/rstats\_ui/src/UIRStatsWorkbook.cpp



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