

Common Utils

1.0

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Chapter 1

utility

Chapter 2

Namespace Index

2.1 Namespace List

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

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Chapter 3

Class Index

3.1 Class List

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

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Chapter 4

Namespace Documentation

4.1 cbtek Namespace Reference

4.1.1 Detailed Description

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Chapter 5

Class Documentation

5.1 cbtek::common::utility::StringUtils::CaseInsensitiveEqual< T > Struct Template Reference

The [CaseInsensitiveEqual](#) struct.

```
#include <StringUtils.hpp>
```

Public Member Functions

- **CaseInsensitiveEqual** (const T &str)
- bool **operator()** (const T &strIn)

5.1.1 Detailed Description

```
template<typename T>  
struct cbtek::common::utility::StringUtils::CaseInsensitiveEqual< T >
```

The [CaseInsensitiveEqual](#) struct.

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

- common/utility/inc/StringUtils.hpp

5.2 cbtek::common::utility::Color Class Reference

Public Member Functions

- [Color](#) ()
Color Constructor for this class.
- [Color](#) (std::uint32_t color)
Color Constructor for this class.
- [Color](#) (const std::string &rgbaHex)
Color Constructor for this class.
- [Color](#) (const std::string &name, const uint8_t &red, const uint8_t &green, const uint8_t &blue, const uint8_t &alpha=255)
Color Constructor for this class.
- [Color](#) (const uint8_t &red, const uint8_t &green, const uint8_t &blue, const uint8_t &alpha=255)
Color Constructor for this class.
- void [set](#) (const uint8_t &red, const uint8_t &green, const uint8_t &blue, const uint8_t &alpha=255)
set Sets the color using rgba components
- void [set](#) (const std::string &htmlColor)
set Sets the color from a html string
- void [setRed](#) (const uint8_t &red)
setRed Sets the red component
- void [setGreen](#) (const uint8_t &green)
setGreen Sets the green component
- void [setBlue](#) (const uint8_t &blue)
setBlue Sets the blue component
- void [setAlpha](#) (const uint8_t &alpha)
setAlpha Sets the alpha component
- std::uint32_t [toInteger](#) () const
toInteger Converts color to 32-bit numeric value
- bool [operator==](#) (const [Color](#) &color) const
operator == Determine if two colors are equal
- bool [operator!=](#) (const [Color](#) &color) const
operator != Determine if two colors are not equal
- uint8_t [getRed](#) () const
getRed Gets the red component
- uint8_t [getGreen](#) () const
getGreen Gets the green component
- uint8_t [getBlue](#) () const
getBlue Gets the blue component
- uint8_t [getAlpha](#) () const
getAlpha Gets the alpha component
- bool [isTransparent](#) () const
isTransparent Return true if color can be considered transparent
- std::string [toString](#) (const ColorStringStyle &style=ColorStringStyle::RGBA_255) const
toString Convert color to string
- std::string [getName](#) () const
getName Get the name of this color
- void [setName](#) (const std::string &name)
setName Sets name for current color

5.2.1 Constructor & Destructor Documentation

5.2.1.1 cbtek::common::utility::Color::Color (std::uint32_t *color*)

[Color](#) Constructor for this class.

Parameters

<i>color</i>	32-bit color defined as 8 bit components of RGBA
--------------	--

5.2.1.2 cbtek::common::utility::Color::Color (const std::string & *rgbaHex*)

[Color](#) Constructor for this class.

Parameters

<i>rgbaHex</i>	Hexadecimal string representing the color to be set upon construction
----------------	---

5.2.1.3 cbtek::common::utility::Color::Color (const std::string & *name*, const uint8_t & *red*, const uint8_t & *green*, const uint8_t & *blue*, const uint8_t & *alpha* = 255)

[Color](#) Constructor for this class.

Parameters

<i>name</i>	String name/id for the color
<i>red</i>	8-bit red component for this color [0-255]
<i>green</i>	8-bit green component for this color [0-255]
<i>blue</i>	8-bit blue component for this color [0-255]
<i>alpha</i>	8-bit opacity component for this color [0-255] Higher value results in less transparency

5.2.1.4 cbtek::common::utility::Color::Color (const uint8_t & *red*, const uint8_t & *green*, const uint8_t & *blue*, const uint8_t & *alpha* = 255)

[Color](#) Constructor for this class.

Parameters

<i>red</i>	8-bit red component for this color [0-255]
<i>green</i>	8-bit green component for this color [0-255]
<i>blue</i>	8-bit blue component for this color [0-255]
<i>alpha</i>	8-bit opacity component for this color [0-255] Higher value results in less transparency

5.2.2 Member Function Documentation

5.2.2.1 `uint8_t cbtek::common::utility::Color::getAlpha () const`

getAlpha Gets the alpha component

Returns

8-bit alpha component value

5.2.2.2 `uint8_t cbtek::common::utility::Color::getBlue () const`

getBlue Gets the blue component

Returns

8-bit blue component value

5.2.2.3 `uint8_t cbtek::common::utility::Color::getGreen () const`

getGreen Gets the green component

Returns

8-bit green component value

5.2.2.4 `std::string cbtek::common::utility::Color::getName () const`

getName Get the name of this color

Returns

Return name of color

5.2.2.5 `uint8_t cbtek::common::utility::Color::getRed () const`

getRed Gets the red component

Returns

8-bit red component value

5.2.2.6 `bool cbtek::common::utility::Color::isTransparent () const`

isTransparent Return true if color can be considered transparent

Returns

Return true if transparent, false otherwise

5.2.2.7 `bool cbtek::common::utility::Color::operator!= (const Color & color) const`

operator != Determine if two colors are not equal

Parameters

<i>color</i>	The color to test against
--------------	---------------------------

Returns

Return true if colors don't match, false otherwise

5.2.2.8 `bool cbtek::common::utility::Color::operator==(const Color & color) const`

`operator ==` Determine if two colors are equal

Parameters

<i>color</i>	The color to test against
--------------	---------------------------

Returns

Return true if colors match, false otherwise

5.2.2.9 `void cbtek::common::utility::Color::set (const uint8_t & red, const uint8_t & green, const uint8_t & blue, const uint8_t & alpha = 255)`

`set` Sets the color using rgba components

Parameters

<i>red</i>	8-bit red component for this color [0-255]
<i>green</i>	8-bit green component for this color [0-255]
<i>blue</i>	8-bit blue component for this color [0-255]
<i>alpha</i>	8-bit opacity component for this color [0-255] Higher value results in less transparency

5.2.2.10 `void cbtek::common::utility::Color::set (const std::string & htmlColor)`

`set` Sets the color from a html string

Parameters

<i>htmlColor</i>	The string containing color information (e.g #AAFFCC, #abc, #ef41af)
------------------	--

5.2.2.11 `void cbtek::common::utility::Color::setAlpha (const uint8_t & alpha)`

`setAlpha` Sets the alpha component

Parameters

<i>Alpha</i>	intensity value for the alpha component [0-255]
--------------	---

5.2.2.12 `void cbtek::common::utility::Color::setBlue (const uint8_t & blue)`

setBlue Sets the blue component

Parameters

<i>Blue</i>	intensity value for the blue component [0-255]
-------------	--

5.2.2.13 `void cbtek::common::utility::Color::setGreen (const uint8_t & green)`

setGreen Sets the green component

Parameters

<i>Green</i>	intensity value for the green component [0-255]
--------------	---

5.2.2.14 `void cbtek::common::utility::Color::setName (const std::string & name)`

setName Sets name for current color

Parameters

<i>name</i>	String representing name
-------------	--------------------------

5.2.2.15 `void cbtek::common::utility::Color::setRed (const uint8_t & red)`

setRed Sets the red component

Parameters

<i>Red</i>	intensity value for the red component [0-255]
------------	---

5.2.2.16 `std::uint32_t cbtek::common::utility::Color::toInteger () const`

toInteger Converts color to 32-bit numeric value

Returns

Integer of converted color

5.2.2.17 `std::string cbtek::common::utility::Color::toString (const ColorStringStyle & style = ColorStringStyle::RGBA_255) const`

toString Convert color to string

Parameters

<i>style</i>	Use string style in ColorStringStyle
--------------	--------------------------------------

Returns

Converted string

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

- common/utility/inc/ColorUtils.h
- common/utility/src/ColorUtils.cpp

5.3 cbtek::common::utility::ColorFactory Class Reference

Static Public Member Functions

- static [Color create](#) (const std::string &rgba)
create
- static [Color create](#) (const colors::ColorType &color)
create
- static [Color create](#) (const float &r, const float &g, const float &b, const float &a=1.0f)
create
- static [Color createNextColor](#) ()
createNextColor
- static [Color createRandomNamedColor](#) ()
createRandomNamedColor
- static [Color createRandomColor](#) ()
createRandomColor
- static [Color createRandomDarkColor](#) ()
createRandomDarkColor
- static [Color createRandomLightColor](#) ()
createRandomLightColor
- static void [resetNextColor](#) ()
resetNextColor

5.3.1 Member Function Documentation

5.3.1.1 [Color](#) cbtek::common::utility::ColorFactory::create (const std::string & *rgba*) [static]

create

Parameters

<i>rgba</i>	
-------------	--

Returns**5.3.1.2 Color cbtek::common::utility::ColorFactory::create (const colors::ColorType & *color*) [static]****create****Parameters**

<i>color</i>	
--------------	--

Returns**5.3.1.3 Color cbtek::common::utility::ColorFactory::create (const float & *r*, const float & *g*, const float & *b*, const float & *a* = 1.0f) [static]****create****Parameters**

<i>r</i>	
<i>g</i>	
<i>b</i>	
<i>a</i>	

Returns**5.3.1.4 Color cbtek::common::utility::ColorFactory::createNextColor () [static]****createNextColor****Returns**

5.3.1.5 Color cbtek::common::utility::ColorFactory::createRandomColor () [static]

createRandomColor

Returns

5.3.1.6 Color cbtek::common::utility::ColorFactory::createRandomDarkColor () [static]

createRandomDarkColor

Returns

5.3.1.7 Color cbtek::common::utility::ColorFactory::createRandomLightColor () [static]

createRandomLightColor

Returns

5.3.1.8 Color cbtek::common::utility::ColorFactory::createRandomNamedColor () [static]

createRandomNamedColor

Returns

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

- common/utility/inc/ColorUtils.h
- common/utility/src/ColorUtils.cpp

5.4 cbtek::common::utility::ColorLoop Class Reference

Public Member Functions

- [ColorLoop](#) & [operator<<](#) (const [Color](#) &color)
operator <<
- [ColorLoop](#) & [operator<<](#) (const colors::ColorType &colorType)
operator <<
- [ColorLoop](#) & [operator<<](#) (const colorFunctions::ColorFunction &function)
operator <<
- void [generateUniqueColors](#) (const size_t &count)
generateUniqueColors
- [Color](#) [getNextColor](#) ()
getNextColor
- void [reset](#) ()
reset
- void [clear](#) ()
clear
- [Color](#) [getColorAt](#) (size_t ndx) const
getColorAt
- size_t [getCurrentColorNdx](#) () const
getCurrentColorNdx
- void [setCurrentColorNdx](#) (size_t ndx)
setCurrentColorNdx

5.4.1 Member Function Documentation

5.4.1.1 void cbtek::common::utility::ColorLoop::generateUniqueColors (const size_t & count)

generateUniqueColors

Parameters

<i>count</i>	
--------------	--

5.4.1.2 Color cbtek::common::utility::ColorLoop::getColorAt (size_t ndx) const

getColorAt

Parameters

<i>ndx</i>	
------------	--

Returns

5.4.1.3 `size_t cbtek::common::utility::ColorLoop::getCurrentColorNdx () const`

`getCurrentColorNdx`

Returns

5.4.1.4 `Color cbtek::common::utility::ColorLoop::getNextColor ()`

`getNextColor`

Returns

5.4.1.5 `ColorLoop & cbtek::common::utility::ColorLoop::operator<< (const Color & color)`

`operator <<`

Parameters

<i>color</i>	
--------------	--

Returns

5.4.1.6 `ColorLoop & cbtek::common::utility::ColorLoop::operator<< (const colors::ColorType & colorType)`

`operator <<`

Parameters

<i>colorType</i>	
------------------	--

Returns

5.4.1.7 `ColorLoop & cbtek::common::utility::ColorLoop::operator<< (const colorFunctions::ColorFunction & function)`

`operator <<`

Parameters

function	
----------	--

Returns

5.4.1.8 void cbtek::common::utility::ColorLoop::setCurrentColorNdx (size_t ndx)

setCurrentColorNdx

Parameters

ndx	
-----	--

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

- common/utility/inc/ColorUtils.h
- common/utility/src/ColorUtils.cpp

5.5 cbtek::common::utility::DateEntity Class Reference

The [DateEntity](#) class represents a single date object for use in [DateTimeUtils](#) and [DateUtils](#).

```
#include <DateTimeUtils.hpp>
```

Public Member Functions

- [DateEntity](#) ()
[DateEntity](#) (Constructor) Default.
- [DateEntity](#) (const size_t &month, const size_t &day, const size_t &year)
[DateEntity](#) (Constructor) Send in integer components for month, day and year.
- [DateEntity](#) (const size_t &dateInteger)
[DateEntity](#) (Constructor) Send in integer containing date components in form of YYYYMMDD.
- size_t [getMonth](#) () const
getMonth Gets the month value
- size_t [getDay](#) () const
getDay Gets the day value
- size_t [getYear](#) () const
getYear Gets the year value
- void [setMonth](#) (const size_t &month)
setMonth Sets the month value
- void [setDay](#) (const size_t &day)
setDay Sets the day value
- void [setYear](#) (const size_t &year)

- setYear* Sets the year value
- `size_t toDateInteger () const`
toDateInteger Converts date object into unique integer
- `bool operator< (const DateEntity &date) const`
operator< Checks if date is less than or equal to (*this)
- `bool operator<= (const DateEntity &date) const`
operator<= Checks if date is less than or equal to (*this)
- `bool operator> (const DateEntity &date) const`
operator> Checks if date is greater than to (*this)
- `bool operator>= (const DateEntity &date) const`
operator>= Checks if date is greater than or equal to (*this)
- `bool operator== (const DateEntity &date) const`
operator!= Checks if date is equal to (*this)
- `bool operator!= (const DateEntity &date) const`
operator!= Checks if date is not equal to (*this)
- `size_t operator- (const DateEntity &date) const`
operator- Get number of days between two dates
- `bool isLeapYear () const`
isLeapYear Determine if current year is leap year
- `size_t getDays () const`
getDays() Gets number of days since beginning of year

5.5.1 Detailed Description

The [DateEntity](#) class represents a single date object for use in [DateTimeUtils](#) and [DateUtils](#).

5.5.2 Constructor & Destructor Documentation

5.5.2.1 `cbtek::common::utility::DateEntity::DateEntity (const size_t & month, const size_t & day, const size_t & year)`
[inline]

[DateEntity](#) (Constructor) Send in integer components for month, day and year.

Parameters

<i>month</i>	The month to set
<i>day</i>	The day to set
<i>year</i>	The year to set

5.5.2.2 `cbtek::common::utility::DateEntity::DateEntity (const size_t & dateInteger)` [inline]

[DateEntity](#) (Constructor) Send in integer containing date components in form of YYYYMMDD.

Parameters

<i>dateInteger</i>	The date components to set
--------------------	----------------------------

5.5.3 Member Function Documentation

5.5.3.1 `size_t cbtek::common::utility::DateEntity::getDay () const` `[inline]`

getDay Gets the day value

Returns

Returns the day value

5.5.3.2 `size_t cbtek::common::utility::DateEntity::getDays () const` `[inline]`

[getDays\(\)](#) Gets number of days since beginning of year

Returns

Total number of days since beginning of year

5.5.3.3 `size_t cbtek::common::utility::DateEntity::getMonth () const` `[inline]`

getMonth Gets the month value

Returns

Returns the month value

5.5.3.4 `size_t cbtek::common::utility::DateEntity::getYear () const` `[inline]`

getYear Gets the year value

Returns

Returns the year value

5.5.3.5 `bool cbtek::common::utility::DateEntity::isLeapYear () const` `[inline]`

isLeapYear Determine if current year is leap year

Returns

Returns true if leap year, false otherwise

5.5.3.6 `bool cbtek::common::utility::DateEntity::operator!= (const DateEntity & date) const` `[inline]`

operator!= Checks if date is not equal to (*this)

Parameters

<i>date</i>	The date to compare against
-------------	-----------------------------

Returns

True if dates are not equal, false otherwise

5.5.3.7 `size_t cbtek::common::utility::DateEntity::operator- (const DateEntity & date) const` `[inline]`

operator- Get number of days between two dates

Parameters

<i>date</i>	The second date to subtract from
-------------	----------------------------------

Returns

Total number of days between this->m_day and date.getDay()

5.5.3.8 `bool cbtek::common::utility::DateEntity::operator< (const DateEntity & date) const` `[inline]`

operator< Checks if date is less than or equal to (*this)

Parameters

<i>date</i>	The date to compare against
-------------	-----------------------------

Returns

True if (*this) is less than date, false otherwise

5.5.3.9 `bool cbtek::common::utility::DateEntity::operator<= (const DateEntity & date) const` `[inline]`

operator<= Checks if date is less than or equal to (*this)

Parameters

<i>date</i>	The date to compare against
-------------	-----------------------------

Returns

True if (*this) is less than or equal to date, false otherwise

5.5.3.10 `bool cbtek::common::utility::DateEntity::operator==(const DateEntity & date) const` `[inline]`

`operator!=` Checks if date is equal to (*this)

Parameters

<i>date</i>	The date to compare against
-------------	-----------------------------

Returns

True if dates are equal, false otherwise

5.5.3.11 `bool cbtek::common::utility::DateEntity::operator> (const DateEntity & date) const` `[inline]`

`operator>` Checks if date is greater than to (*this)

Parameters

<i>date</i>	The date to compare against
-------------	-----------------------------

Returns

True if (*this) is greater than to date, false otherwise

5.5.3.12 `bool cbtek::common::utility::DateEntity::operator>= (const DateEntity & date) const` `[inline]`

`operator>=` Checks if date is greater than or equal to (*this)

Parameters

<i>date</i>	The date to compare against
-------------	-----------------------------

Returns

True if (*this) is greater than or equal to date, false otherwise

5.5.3.13 `void cbtek::common::utility::DateEntity::setDay (const size_t & day)` `[inline]`

`setDay` Sets the day value

Parameters

<i>day</i>	The day to set
------------	----------------

5.5.3.14 `void cbtek::common::utility::DateEntity::setMonth (const size_t & month) [inline]`

setMonth Sets the month value

Parameters

<i>month</i>	The month to set
--------------	------------------

5.5.3.15 `void cbtek::common::utility::DateEntity::setYear (const size_t & year) [inline]`

setYear Sets the year value

Parameters

<i>year</i>	The year to set
-------------	-----------------

5.5.3.16 `size_t cbtek::common::utility::DateEntity::toDateInteger () const [inline]`

toDateInteger Converts date object into unique integer

Returns

Return date as integer YYYYMMDD

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

- common/utility/inc/DateTimeUtils.hpp

5.6 cbtek::common::utility::DateTimeUtils Class Reference

Static Public Member Functions

- static std::string [getDisplayTimeStamp](#) (const [DateEntity](#) &dateEntity, const [TimeEntity](#) &timeEntity)
getDisplayTimeStamp
- static std::string [getDisplayTimeStamp](#) ()
getDisplayTimeStamp
- static std::uint64_t [getTimeStampInteger](#) (const [DateEntity](#) &dateEntity=[DateUtils::getCurrentDate\(\)](#), const [TimeEntity](#) &timeEntity=[TimeUtils::getCurrentTime\(\)](#))
getTimeStampInteger
- static std::string [getTimeStamp](#) ()
getTimeStamp
- static std::string [getTimeStamp](#) (const [DateEntity](#) &dateEntity, const [TimeEntity](#) &timeEntity)
getTimeStamp

5.6.1 Member Function Documentation

5.6.1.1 `static std::string cbtek::common::utility::DateTimeUtils::getDisplayTimeStamp (const DateEntity & dateEntity, const TimeEntity & timeEntity) [inline], [static]`

getDisplayTimeStamp

Parameters

<i>dateEntity</i>	
<i>timeEntity</i>	

Returns

5.6.1.2 static std::string cbtek::common::utility::DateTimeUtils::getDisplayTimeStamp () [inline],[static]

getDisplayTimeStamp

Returns

5.6.1.3 static std::string cbtek::common::utility::DateTimeUtils::getTimeStamp () [inline],[static]

getTimeStamp

Returns

5.6.1.4 static std::string cbtek::common::utility::DateTimeUtils::getTimeStamp (const DateEntity & *dateEntity*, const TimeEntity & *timeEntity*) [inline],[static]

getTimeStamp

Parameters

<i>dateEntity</i>	
<i>timeEntity</i>	

Returns

5.6.1.5 static std::uint64_t cbtek::common::utility::DateTimeUtils::getTimeStampInteger (const DateEntity & *dateEntity* = DateUtils::getCurrentDate (), const TimeEntity & *timeEntity* = TimeUtils::getCurrentTime ()) [inline],[static]

getTimeStampInteger

Parameters

<i>dateEntity</i>	
<i>timeEntity</i>	

Returns

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

- common/utility/inc/DateTimeUtils.hpp

5.7 cbtek::common::utility::DateTimeUtils_EmbeddedUtils Class Reference

This embedded class contains utilities in support of [DateTimeUtils](#) Although the DRY is violated, this class can stay dependency free and be used freely without needing external support.

```
#include <DateTimeUtils.hpp>
```

Static Public Member Functions

- static void [toUpperInPlace](#) (std::string &str)
Converts string to upper-case.
- static std::string [toUpper](#) (const std::string &str)
Converts string to upper-case.
- static std::string [replace](#) (const std::string &inputString, const std::string &oldString, const std::string &newString, bool isCaseSensitive=c_DEFAULT_CASE_SENSITIVE)
Performs string replace (in-place)
- static bool [contains](#) (const std::string &srcStr, const std::string &subStr, bool caseSensitive=c_DEFAULT_CASE_SENSITIVE)
contains Checks to see if subStr exists within srcStr
- template<typename T >
static T [toNumber](#) (const std::string &value)
toNumber Converts string value to numeric type

5.7.1 Detailed Description

This embedded class contains utilities in support of [DateTimeUtils](#) Although the DRY is violated, this class can stay dependency free and be used freely without needing external support.

5.7.2 Member Function Documentation

5.7.2.1 static bool cbtek::common::utility::DateTimeUtils_EmbeddedUtils::contains (const std::string & srcStr, const std::string & subStr, bool caseSensitive = c_DEFAULT_CASE_SENSITIVE) [inline],[static]

contains Checks to see if subStr exists within srcStr

Parameters

<i>srcStr</i>	The original source string
<i>subStr</i>	The substring to look for
<i>caseSensitive</i>	

Returns

Return true if subStr exists within srcStr, false otherwise

```
5.7.2.2 static std::string cbtek::common::utility::DateTimeUtils_EmbeddedUtils::replace ( const std::string & inputString, const
std::string & oldString, const std::string & newString, bool isCaseSensitive = c_DEFAULT_CASE_SENSITIVE
) [inline],[static]
```

Performs string replace (in-place)

Parameters

<i>inputString</i>	The string that contains oldString to replace
<i>oldString</i>	The old string to replace
<i>newString</i>	The new string to insert
<i>isCaseSensitive</i>	Should oldString be caseSensitive within inputString?

Returns

inputString with the replaced oldString. If oldString is not found within inputString then inputString is returned unmodified.

```
5.7.2.3 template<typename T > static T cbtek::common::utility::DateTimeUtils_EmbeddedUtils::toNumber ( const std::string &
value ) [inline],[static]
```

toNumber Converts string value to numeric type

Parameters

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

Returns

Returns numeric type of conversion

```
5.7.2.4 static std::string cbtek::common::utility::DateTimeUtils_EmbeddedUtils::toUpper ( const std::string & str )
[inline],[static]
```

Converts string to upper-case.

Parameters

<i>The</i>	string to convert
------------	-------------------

Returns

The converted string

5.7.2.5 static void cbtek::common::utility::DateTimeUtils_EmbeddedUtils::toUpperInPlace (std::string &str) [inline],
[static]

Converts string to upper-case.

Parameters

<i>Reference</i>	to the string to convert
------------------	--------------------------

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

- common/utility/inc/DateTimeUtils.hpp

5.8 cbtek::common::utility::DateUtils Class Reference

The [DateUtils](#) class.

```
#include <DateTimeUtils.hpp>
```

Static Public Member Functions

- static std::string [toShortDateString](#) (const [DateEntity](#) &date, const std::string &format="mm-dd-yyyy")
toShortDateString
- static std::string [toLongDateString](#) (const [DateEntity](#) &date)
toLongDateString
- static [DateEntity](#) [getCurrentDate](#) ()
getCurrentDate
- static std::string [toCurrentLongDateString](#) ()
toCurrentLongDateString
- static std::string [toCurrentShortDateString](#) ()
toCurrentShortDateString

5.8.1 Detailed Description

The [DateUtils](#) class.

5.8.2 Member Function Documentation

5.8.2.1 static `DateEntity cbtek::common::utility::DateUtils::getCurrentDate ()` `[inline]`, `[static]`

`getCurrentDate`

Returns

5.8.2.2 static `std::string cbtek::common::utility::DateUtils::toCurrentLongDateString ()` `[inline]`, `[static]`

`toCurrentLongDateString`

Returns

5.8.2.3 static `std::string cbtek::common::utility::DateUtils::toCurrentShortDateString ()` `[inline]`, `[static]`

`toCurrentShortDateString`

Returns

5.8.2.4 static `std::string cbtek::common::utility::DateUtils::toLongDateString (const DateEntity & date)` `[inline]`, `[static]`

`toLongDateString`

Parameters

<i>date</i>	
-------------	--

Returns

5.8.2.5 static `std::string cbtek::common::utility::DateUtils::toShortDateString (const DateEntity & date, const std::string & format = "mm-dd-yyyy")` `[inline]`, `[static]`

`toShortDateString`

Parameters

<i>date</i>	
<i>format</i>	

Returns

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

- common/utility/inc/DateTimeUtils.hpp

5.9 cbtek::common::utility::Font Class Reference

Public Member Functions

- [Font](#) ()
Font.
- [Font](#) (std::string fontFamily, size_t pointSize=10, bool [isBold](#)=false, bool [isItalic](#)=false, bool [isUnderlined](#)=false)
Font.
- bool [operator==](#) (const [Font](#) &font)
operator ==
- void [setFontFamily](#) (const std::string &fontFamily)
setFontFamily
- void [setPointSize](#) (const size_t &pointSize)
setPointSize
- void [setBold](#) (const bool &enabled)
setBold
- void [setItalic](#) (const bool &enabled)
setItalic
- void [setUnderlined](#) (const bool &enabled)
setUnderlined
- bool [isBold](#) () const
isBold
- bool [isItalic](#) () const
isItalic
- bool [isUnderlined](#) () const
isUnderlined
- std::string [getFontFamily](#) () const
getFontFamily
- size_t [getPointSize](#) () const
getPointSize
- std::string [toString](#) () const
toString
- bool [hasDefaultChanged](#) () const
hasDefaultChanged
- void [setChanged](#) (bool flag)
setChanged

5.9.1 Constructor & Destructor Documentation

5.9.1.1 `cbtek::common::utility::Font::Font (std::string fontFamily, size_t pointSize = 10, bool isBold = false, bool isItalic = false, bool isUnderlined = false)`

Font.

Parameters

<i>fontFamily</i>	
<i>pointSize</i>	
<i>isBold</i>	
<i>isItalic</i>	
<i>isUnderlined</i>	

5.9.2 Member Function Documentation

5.9.2.1 `std::string cbtek::common::utility::Font::getFontFamily () const`

getFontFamily

Returns

5.9.2.2 `size_t cbtek::common::utility::Font::getPointSize () const`

getPointSize

Returns

5.9.2.3 `bool cbtek::common::utility::Font::hasDefaultChanged () const`

hasDefaultChanged

Returns

5.9.2.4 `bool cbtek::common::utility::Font::isBold () const`

isBold

Returns

5.9.2.5 `bool cbtek::common::utility::Font::isItalic () const`

isItalic

Returns

5.9.2.6 `bool cbtek::common::utility::Font::isUnderlined () const`

isUnderlined

Returns

5.9.2.7 `bool cbtek::common::utility::Font::operator== (const Font & font)`

operator ==

Parameters

<i>font</i>	
-------------	--

Returns

5.9.2.8 `void cbtek::common::utility::Font::setBold (const bool & enabled)`

setBold

Parameters

<i>enabled</i>	
----------------	--

5.9.2.9 `void cbtek::common::utility::Font::setChanged (bool flag)`

setChanged

Parameters

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

5.9.2.10 void cbtek::common::utility::Font::setFontFamily (const std::string & *fontFamily*)

setFontFamily

Parameters

<i>fontFamily</i>	
-------------------	--

5.9.2.11 void cbtek::common::utility::Font::setItalic (const bool & *enabled*)

setItalic

Parameters

<i>enabled</i>	
----------------	--

5.9.2.12 void cbtek::common::utility::Font::setPointSize (const size_t & *pointSize*)

setPointSize

Parameters

<i>pointSize</i>	
------------------	--

5.9.2.13 void cbtek::common::utility::Font::setUnderlined (const bool & *enabled*)

setUnderlined

Parameters

<i>enabled</i>	
----------------	--

5.9.2.14 std::string cbtek::common::utility::Font::toString () const

toString

Returns

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

- common/utility/inc/FontUtils.h
- common/utility/src/FontUtils.cpp

5.10 cbtek::common::utility::FontFactory Class Reference

Static Public Member Functions

- static [Font create](#) (const fontStyle::FontStyle &style)
create
- static [Font create](#) (const std::string &fontString)
create

5.10.1 Member Function Documentation

5.10.1.1 Font cbtek::common::utility::FontFactory::create (const fontStyle::FontStyle & style) [static]

create

Parameters

<i>style</i>	
--------------	--

Returns

5.10.1.2 Font cbtek::common::utility::FontFactory::create (const std::string & fontString) [static]

create

Parameters

<i>fontString</i>	
-------------------	--

Returns

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

- common/utility/inc/FontUtils.h
- common/utility/src/FontUtils.cpp

5.11 cbtek::common::utility::Random Class Reference

Public Member Functions

- [Random](#) (long seed=0xABCDEF)

Random.

- void **reseed** (long seed)
reseed
- double **random** ()
random
- int **next** (int min, int max)
next
- int **next** (int max)
next

5.11.1 Constructor & Destructor Documentation

5.11.1.1 cbtek::common::utility::Random::Random (long *seed* = 0xABCDEF)

Random.

Parameters

<i>seed</i>	
-------------	--

5.11.2 Member Function Documentation

5.11.2.1 int cbtek::common::utility::Random::next (int *min*, int *max*)

next

Parameters

<i>min</i>	
<i>max</i>	

Returns

5.11.2.2 int cbtek::common::utility::Random::next (int *max*)

next

Parameters

<i>max</i>	
------------	--

Returns

5.11.2.3 double cbtek::common::utility::Random::random ()

random

Returns

5.11.2.4 void cbtek::common::utility::Random::reseed (long seed)

reseed

Parameters

seed	
------	--

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

- common/utility/inc/Random.h
- common/utility/src/Random.cpp

5.12 cbtek::common::utility::TimeEntity Class Reference

The [TimeEntity](#) class represents a single time object for use in [DateTimeUtils](#) and [TimeUtils](#).

```
#include <DateTimeUtils.hpp>
```

Public Member Functions

- [TimeEntity](#) ()
TimeEntity (Constructor) Default.
- [TimeEntity](#) (const size_t &time)
TimeEntity (Constructor) Create time object with integer containing time components in the form of HHMMSS.
- [TimeEntity](#) (size_t hour, size_t minute, size_t second, size_t millisecond=0)
TimeEntity (Constructor) Creates TimeEntity object with hour, minute, second and optional millisecond components.
- bool [operator>](#) (const [TimeEntity](#) &time) const
*operator> Checks if the time object is greater than the (*this) object*
- bool [operator<](#) (const [TimeEntity](#) &time) const
*operator< Checks if the time object is less than the (*this) object*
- bool [operator<=](#) (const [TimeEntity](#) &time) const
*operator<= Checks if the time object is less than or equal to (*this) object*
- bool [operator>=](#) (const [TimeEntity](#) &time) const

- operator>=* Checks if the time object is greater than or equal to (*this) object
- bool **operator==** (const **TimeEntity** &time) const
operator== Checks if the time object is equal to (*this) object
- void **setHour** (const size_t &hour)
setHour Sets the hour value
- void **setMinute** (const size_t &minute)
setMinute Sets the minute value
- void **setSecond** (const size_t &second)
setSecond Sets the second value
- void **setMillisecond** (const size_t &millisecond)
setMillisecond Sets the millisecond value
- size_t **getHour** () const
getHour Get the hour value
- size_t **getMinute** () const
getMinute Get the minute value
- size_t **getSecond** () const
getSecond Get the second value
- size_t **getMillisecond** () const
getMillisecond Get the millisecond value
- size_t **toTimeInteger** () const
toTimeInteger Returns integer of (*this) time value in form of HHMMSS integer
- size_t **getAsMinutes** () const
getAsMinutes Get total number of minutes
- size_t **getAsSeconds** () const
getAsSeconds Get total number of seconds
- size_t **getAsMilliseconds** () const
getAsMilliseconds Get total number of milliseconds
- size_t **getAsMicroseconds** () const
getAsMicroseconds Get total number of microseconds

5.12.1 Detailed Description

The **TimeEntity** class represents a single time object for use in **DateTimeUtils** and **TimeUtils**.

5.12.2 Constructor & Destructor Documentation

5.12.2.1 **cbtek::common::utility::TimeEntity::TimeEntity** (const size_t & *time*) `[inline]`

TimeEntity (Constructor) Create time object with integer containing time components in the form of HHMMSS.

Parameters

<i>time</i>	Integer containing HHMMSS components
-------------	--------------------------------------

5.12.2.2 `cbtek::common::utility::TimeEntity::TimeEntity (size_t hour, size_t minute, size_t second, size_t millisecond = 0)`
`[inline]`

[TimeEntity](#) (Constructor) Creates [TimeEntity](#) object with hour, minute, second and optional millisecond components.

Parameters

<i>hour</i>	The hour to set
<i>minute</i>	The minute to set
<i>second</i>	The second to set
<i>millisecond</i>	The millisecond to set

5.12.3 Member Function Documentation

5.12.3.1 `size_t cbtek::common::utility::TimeEntity::getAsMicroseconds () const` `[inline]`

`getAsMicroseconds` Get total number of microseconds

Returns

Return integer of total number of microseconds

5.12.3.2 `size_t cbtek::common::utility::TimeEntity::getAsMilliseconds () const` `[inline]`

`getAsMilliseconds` Get total number of milliseconds

Returns

Return integer of total number of milliseconds

5.12.3.3 `size_t cbtek::common::utility::TimeEntity::getAsMinutes () const` `[inline]`

`getAsMinutes` Get total number of minutes

Returns

Return integer of total number of minutes

5.12.3.4 `size_t cbtek::common::utility::TimeEntity::getAsSeconds () const` `[inline]`

`getAsSeconds` Get total number of seconds

Returns

Return integer of total number of seconds

5.12.3.5 `size_t cbtek::common::utility::TimeEntity::getHour () const` `[inline]`

getHour Get the hour value

Returns

Value of m_hour

5.12.3.6 `size_t cbtek::common::utility::TimeEntity::getMillisecond () const` `[inline]`

getMillisecond Get the millisecond value

Returns

Value of m_millisecond

5.12.3.7 `size_t cbtek::common::utility::TimeEntity::getMinute () const` `[inline]`

getMinute Get the minute value

Returns

Value of m_minute

5.12.3.8 `size_t cbtek::common::utility::TimeEntity::getSecond () const` `[inline]`

getSecond Get the second value

Returns

Value of m_second

5.12.3.9 `bool cbtek::common::utility::TimeEntity::operator< (const TimeEntity & time) const` `[inline]`

operator< Checks if the time object is less than the (*this) object

Parameters

<i>time</i>	The time object to compare against
-------------	------------------------------------

Returns

True if (*this) is less than time, false otherwise

5.12.3.10 `bool cbtek::common::utility::TimeEntity::operator<= (const TimeEntity & time) const` `[inline]`

`operator<=` Checks if the time object is less than or equal to (**this*) object

Parameters

<i>time</i>	The time object to compare against
-------------	------------------------------------

Returns

True if (**this*) is less than or equal to *time*, false otherwise

5.12.3.11 `bool cbtek::common::utility::TimeEntity::operator== (const TimeEntity & time) const` `[inline]`

`operator==` Checks if the time object is equal to (**this*) object

Parameters

<i>time</i>	The time object to compare against
-------------	------------------------------------

Returns

True if (**this*) is equal to *time*, false otherwise

5.12.3.12 `bool cbtek::common::utility::TimeEntity::operator> (const TimeEntity & time) const` `[inline]`

`operator>` Checks if the time object is greater than the (**this*) object

Parameters

<i>time</i>	The time object to compare against
-------------	------------------------------------

Returns

True if (**this*) is greater than *time*, false otherwise

5.12.3.13 `bool cbtek::common::utility::TimeEntity::operator>= (const TimeEntity & time) const` `[inline]`

`operator>=` Checks if the time object is greater than or equal to (**this*) object

Parameters

<i>time</i>	The time object to compare against
-------------	------------------------------------

Returns

True if (*this) is greater than or equal to time, false otherwise

5.12.3.14 `void cbtek::common::utility::TimeEntity::setHour (const size_t & hour) [inline]`

setHour Sets the hour value

Parameters

<i>hour</i>	The hour to set
-------------	-----------------

5.12.3.15 `void cbtek::common::utility::TimeEntity::setMillisecond (const size_t & millisecond) [inline]`

setMillisecond Sets the millisecond value

Parameters

<i>millisecond</i>	The millisecond to set
--------------------	------------------------

5.12.3.16 `void cbtek::common::utility::TimeEntity::setMinute (const size_t & minute) [inline]`

setMinute Sets the minute value

Parameters

<i>minute</i>	The minute to set
---------------	-------------------

5.12.3.17 `void cbtek::common::utility::TimeEntity::setSecond (const size_t & second) [inline]`

setSecond Sets the second value

Parameters

<i>second</i>	The second to set
---------------	-------------------

5.12.3.18 `size_t cbtek::common::utility::TimeEntity::toTimeInteger () const [inline]`

toTimeInteger Returns integer of (*this) time value in form of HHMMSS integer

Returns

Return integer of current time components

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

- common/utility/inc/DateTimeUtils.hpp

5.13 cbtek::common::utility::TimeUtils Class Reference

The [TimeUtils](#) class contains useful functions for dealing the [TimeEntity](#) class.

```
#include <DateTimeUtils.hpp>
```

Static Public Member Functions

- `template<typename T >`
`static std::string toString (T value)`
`toString`
- `static uint64_t getSecondsNow ()`
`getSecondsNow`
- `static double getNanosecondsNow ()`
`getNanosecondsNow`
- `static double getMicrosecondsNow ()`
`getMicrosecondsNow`
- `static std::uint64_t getCurrentMilliseconds ()`
`getCurrentMilliseconds`
- `static double getMillisecondsNow ()`
`getMillisecondsNow`
- `static std::string toTimeString (const TimeEntity &time)`
`toTimeString`
- `static std::string to12HourTimeString (const TimeEntity &time)`
`to12HourTimeString`
- `static TimeEntity getCurrentTime ()`
`getCurrentTime`
- `static TimeEntity getTimeFromSeconds (const uint64_t &secs)`
`getTimeFromSeconds`
- `static TimeEntity getTimeFromMilliseconds (const uint64_t &ms)`
`getTimeFromMilliseconds`
- `static std::string toCurrentTimeString ()`
`toCurrentTimeString`
- `static std::string toCurrent12HourTimeString ()`
`toCurrent12HourTimeString`

5.13.1 Detailed Description

The [TimeUtils](#) class contains useful functions for dealing the [TimeEntity](#) class.

5.13.2 Member Function Documentation

5.13.2.1 `static std::uint64_t cbtek::common::utility::TimeUtils::getCurrentMilliseconds ()` `[inline], [static]`

`getCurrentMilliseconds`

Returns

5.13.2.2 **static TimeEntity cbtek::common::utility::TimeUtils::getCurrentTime ()** [inline],[static]

getCurrentTime

Returns

5.13.2.3 **static double cbtek::common::utility::TimeUtils::getMicrosecondsNow ()** [inline],[static]

getMicrosecondsNow

Returns

5.13.2.4 **static double cbtek::common::utility::TimeUtils::getMillisecondsNow ()** [inline],[static]

getMillisecondsNow

Returns

5.13.2.5 **static double cbtek::common::utility::TimeUtils::getNanosecondsNow ()** [inline],[static]

getNanosecondsNow

Returns

5.13.2.6 **static uint64_t cbtek::common::utility::TimeUtils::getSecondsNow ()** [inline],[static]

getSecondsNow

Returns

5.13.2.7 **static TimeEntity cbtek::common::utility::TimeUtils::getTimeFromMilliseconds (const uint64_t & ms)**
[inline],[static]

getTimeFromMilliseconds

Parameters

<i>ms</i>	
-----------	--

Returns

5.13.2.8 static `TimeEntity` `cbtek::common::utility::TimeUtils::getTimeFromSeconds (const uint64_t & secs)` `[inline]`, `[static]`

`getTimeFromSeconds`

Parameters

<i>secs</i>	
-------------	--

Returns

5.13.2.9 static `std::string` `cbtek::common::utility::TimeUtils::to12HourTimeString (const TimeEntity & time)` `[inline]`, `[static]`

`to12HourTimeString`

Parameters

<i>time</i>	
-------------	--

Returns

5.13.2.10 static `std::string` `cbtek::common::utility::TimeUtils::toCurrent12HourTimeString ()` `[inline]`, `[static]`

`toCurrent12HourTimeString`

Returns

5.13.2.11 static `std::string` `cbtek::common::utility::TimeUtils::toCurrentTimeString ()` `[inline]`, `[static]`

`toCurrentTimeString`

Returns

5.13.2.12 `template<typename T > static std::string cbtek::common::utility::TimeUtils::toString (T value)` `[inline]`,
`[static]`

toString

Parameters

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

Returns

5.13.2.13 `static std::string cbtek::common::utility::TimeUtils::toTimeString (const TimeEntity & time)` `[inline]`,
`[static]`

toTimeString

Parameters

<i>time</i>	
-------------	--

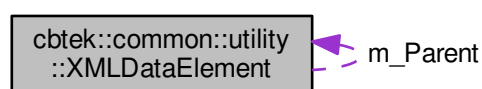
Returns

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

- common/utility/inc/DateTimeUtils.hpp

5.14 cbtek::common::utility::XMLDataElement Class Reference

Collaboration diagram for cbtek::common::utility::XMLDataElement:



Public Member Functions

- [XMLDataElement](#) ()
XMLDataElement.
- [XMLDataElement](#) (const [XMLDataElement](#) &element)
XMLDataElement.
- [~XMLDataElement](#) ()
XMLDataElement.
- const AttributeVector & [getAttributes](#) () const
getAttributes
- const ChildElementVector & [getChildren](#) () const
getChildren
- const std::string & [getElementName](#) () const
getElementName
- std::string [getElementData](#) (bool trimmed=false) const
getElementData
- std::int64_t [getElementDataAsInteger](#) () const
getElementDataAsInteger
- double [getElementDataAsFloat](#) () const
getElementDataAsFloat
- std::string [getAttributeValue](#) (const std::string &attributeName, bool caseSensitive=false) const
getAttributeValue
- std::string [getAttributeName](#) (size_t index) const
getAttributeName
- std::string [getAttributeValue](#) (size_t index) const
getAttributeValue
- [XMLDataElement](#) * [getParent](#) () const
getParent
- [XMLDataElement](#) * [getNextSibling](#) () const
getNextSibling
- [XMLDataElement](#) * [getChildAt](#) (size_t index) const
getChildAt
- [XMLDataElement](#) * [getChild](#) (const std::string &name) const
getChild
- std::string [getChildElementData](#) (const std::string &name) const
getChildElementData
- bool [attributeExists](#) (const std::string &attributeName, bool caseSensitive=false) const
attributeExists
- bool [hasChildren](#) () const
hasChildren
- bool [childExists](#) (size_t index)
childExists
- bool [childExists](#) (const std::string &name, bool caseSensitive=false)
childExists
- size_t [getNumChildren](#) () const
getNumChildren
- size_t [getNumAttributes](#) () const
getNumAttributes
- size_t [getLocalIndex](#) () const
getLocalIndex
- size_t [getChildIndex](#) (const [XMLDataElement](#) *child) const

- getChildIndex*
- void [setElementData](#) (const std::string &data)
 - setElementData*
- void [setElementName](#) (const std::string &name)
 - setElementName*
- void [addAttribute](#) (const std::string &attributeName, const std::string &attributeValue)
 - addAttribute*
- void [addChild](#) ([XMLDataElement](#) *child)
 - addChild*
- void [setParent](#) ([XMLDataElement](#) *parent)
 - setParent*
- void [setLocalIndex](#) (size_t index)
 - setLocalIndex*
- [XMLDataElement](#) * [find](#) (const std::string &name, const bool &caseSensitive=false)
 - find*
- const [XMLDataElement](#) * [find](#) (const std::string &name, const bool &caseSensitive=false) const
 - find*
- void [addAttribute](#) (const std::string &attributeName, const float &attributeValue)
 - addAttribute*
- void [addAttribute](#) (const std::string &attributeName, const double &attributeValue)
 - addAttribute*
- template<typename T >
 - void [addAttribute](#) (const std::string &attributeName, const T &attributeValue)
 - addAttribute*
- template<typename Number >
 - Number [getAttributeValueAsType](#) (const std::string &attributeName) const
 - getAttributeValueAsType*
- template<typename Number >
 - Number [getChildElementDataAsType](#) (const std::string &name) const
 - getChildElementDataAsType*
- bool [getAttributeValueAsBool](#) (const std::string &attributeName) const
 - getAttributeValueAsBool*

Protected Member Functions

- [XMLDataElement](#) * [findInSubTree](#) (const std::string &name, const [XMLDataElement](#) *element, const bool &caseSensitive)
 - findInSubTree*
- const [XMLDataElement](#) * [findInSubTree](#) (const std::string &name, const [XMLDataElement](#) *element, const bool &caseSensitive) const
 - findInSubTree*

Protected Attributes

- size_t **m_LocalIndex**
- std::string **m_Name**
- std::string **m_Data**
- std::string **m_Temp**
- AttributeVector **m_Attributes**
- ChildElementVector **m_ChildElementVector**
- [XMLDataElement](#) * **m_Parent**

5.14.1 Constructor & Destructor Documentation

5.14.1.1 `cbtek::common::utility::XMLDataElement::XMLDataElement (const XMLDataElement & element)`

[XMLDataElement](#).

Parameters

<i>element</i>	
----------------	--

5.14.2 Member Function Documentation

5.14.2.1 `void cbtek::common::utility::XMLDataElement::addAttribute (const std::string & attributeName, const std::string & attributeValue)`

addAttribute

Parameters

<i>attributeName</i>	
<i>attributeValue</i>	

5.14.2.2 `void cbtek::common::utility::XMLDataElement::addAttribute (const std::string & attributeName, const float & attributeValue)`

addAttribute

Parameters

<i>attributeName</i>	
<i>attributeValue</i>	

5.14.2.3 `void cbtek::common::utility::XMLDataElement::addAttribute (const std::string & attributeName, const double & attributeValue)`

addAttribute

Parameters

<i>attributeName</i>	
<i>attributeValue</i>	

5.14.2.4 `template<typename T> void cbtek::common::utility::XMLDataElement::addAttribute (const std::string & attributeName, const T & attributeValue) [inline]`

addAttribute

Parameters

<i>attributeName</i>	
<i>attributeValue</i>	

5.14.2.5 `void cbtek::common::utility::XMLDataElement::addChild (XMLDataElement * child)`

addChild

Parameters

<i>child</i>	
--------------	--

5.14.2.6 `bool cbtek::common::utility::XMLDataElement::attributeExists (const std::string & attributeName, bool caseSensitive = false) const`

attributeExists

Parameters

<i>attributeName</i>	
<i>caseSensitive</i>	

Returns

5.14.2.7 `bool cbtek::common::utility::XMLDataElement::childExists (size_t index)`

childExists

Parameters

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

Returns

5.14.2.8 `bool cbtek::common::utility::XMLDataElement::childExists (const std::string & name, bool caseSensitive = false)`

childExists

Parameters

<i>name</i>	
<i>caseSensitive</i>	

Returns

5.14.2.9 **XMLDataElement** * cbtek::common::utility::XMLDataElement::find (const std::string & *name*, const bool & *caseSensitive* = false)

find

Parameters

<i>name</i>	
<i>caseSensitive</i>	

Returns

5.14.2.10 **const XMLDataElement** * cbtek::common::utility::XMLDataElement::find (const std::string & *name*, const bool & *caseSensitive* = false) **const**

find

Parameters

<i>name</i>	
<i>caseSensitive</i>	

Returns

5.14.2.11 **XMLDataElement** * cbtek::common::utility::XMLDataElement::findInSubTree (const std::string & *name*, const **XMLDataElement** * *element*, const bool & *caseSensitive*) [protected]

findInSubTree

Parameters

<i>name</i>	
<i>element</i>	
<i>caseSensitive</i>	

Returns

5.14.2.12 `const XMLDataElement * cbtek::common::utility::XMLDataElement::findInSubTree (const std::string & name,
const XMLDataElement * element, const bool & caseSensitive) const` [protected]

findInSubTree

Parameters

<i>name</i>	
<i>element</i>	
<i>caseSensitive</i>	

Returns

5.14.2.13 `std::string cbtek::common::utility::XMLDataElement::getAttributeName (size_t index) const`

getAttributeName

Parameters

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

Returns

5.14.2.14 `const AttributeVector & cbtek::common::utility::XMLDataElement::getAttributes () const`

getAttributes

Returns

5.14.2.15 `std::string cbtek::common::utility::XMLDataElement::getAttributeValue (const std::string & attributeName, bool
caseSensitive = false) const`

getAttributeValue

Parameters

<i>attributeName</i>	
<i>caseSensitive</i>	

Returns

5.14.2.16 `std::string cbtek::common::utility::XMLDataElement::getAttributeValue (size_t index) const`

getAttributeValue

Parameters

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

Returns

5.14.2.17 `bool cbtek::common::utility::XMLDataElement::getAttributeValueAsBool (const std::string & attributeName) const`

getAttributeValueAsBool

Parameters

<i>attributeName</i>	
----------------------	--

Returns

5.14.2.18 `template<typename Number > Number cbtek::common::utility::XMLDataElement::getAttributeValueAsType (const std::string & attributeName) const [inline]`

getAttributeValueAsType

Parameters

<i>attributeName</i>	
----------------------	--

Returns

5.14.2.19 XMLDataElement * cbtek::common::utility::XMLDataElement::getChild (const std::string & *name*) const

getChild

Parameters

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

Returns

5.14.2.20 XMLDataElement * cbtek::common::utility::XMLDataElement::getChildAt (size_t *index*) const

getChildAt

Parameters

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

Returns

5.14.2.21 std::string cbtek::common::utility::XMLDataElement::getChildElementData (const std::string & *name*) const

getChildElementData

Parameters

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

Returns

5.14.2.22 template<typename Number > Number cbtek::common::utility::XMLDataElement::getChildElementDataAsType (const std::string & *name*) const [inline]

getChildElementDataAsType

Parameters

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

Returns

5.14.2.23 `size_t cbtek::common::utility::XMLDataElement::getChildIndex (const XMLDataElement * child) const`

getChildIndex

Parameters

<i>child</i>	
--------------	--

Returns

5.14.2.24 `const ChildElementVector & cbtek::common::utility::XMLDataElement::getChildren () const`

getChildren

Returns

5.14.2.25 `std::string cbtek::common::utility::XMLDataElement::getElementData (bool trimmed = false) const`

getElementData

Parameters

<i>trimmed</i>	
----------------	--

Returns

5.14.2.26 `double cbtek::common::utility::XMLDataElement::getElementDataAsFloat () const`

getElementDataAsFloat

Returns

5.14.2.27 `int64_t cbtek::common::utility::XMLDataElement::getElementDataAsInteger () const`

`getElementDataAsInteger`

Returns

5.14.2.28 `const std::string & cbtek::common::utility::XMLDataElement::getElementName () const`

`getElementName`

Returns

5.14.2.29 `size_t cbtek::common::utility::XMLDataElement::getLocalIndex () const`

`getLocalIndex`

Returns

5.14.2.30 `XMLDataElement * cbtek::common::utility::XMLDataElement::getNextSibling () const`

`getNextSibling`

Returns

5.14.2.31 `size_t cbtek::common::utility::XMLDataElement::getNumAttributes () const`

`getNumAttributes`

Returns

5.14.2.32 `size_t cbtek::common::utility::XMLDataElement::getNumChildren () const`

`getNumChildren`

Returns

5.14.2.33 **XMLDataElement * cbtek::common::utility::XMLDataElement::getParent () const**

getParent

Returns

5.14.2.34 **bool cbtek::common::utility::XMLDataElement::hasChildren () const**

hasChildren

Returns

5.14.2.35 **void cbtek::common::utility::XMLDataElement::setElementData (const std::string & *data*)**

setElementData

Parameters

<i>data</i>	
-------------	--

5.14.2.36 **void cbtek::common::utility::XMLDataElement::setElementName (const std::string & *name*)**

setElementName

Parameters

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

5.14.2.37 **void cbtek::common::utility::XMLDataElement::setLocalIndex (size_t *index*)**

setLocalIndex

Parameters

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

5.14.2.38 **void cbtek::common::utility::XMLDataElement::setParent (XMLDataElement * *parent*)**

setParent

Parameters

<i>parent</i>	
---------------	--

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

- common/utility/inc/XMLUtils.h
- common/utility/src/XMLUtils.cpp

5.15 cbtek::common::utility::XMLReader Class Reference

Public Member Functions

- bool [load](#) (const std::string &filename)
load
- bool [loadFromString](#) (const std::string &data)
loadFromString
- [XMLDataElement](#) * [getElement](#) (const std::string &tagName, const bool &caseSensitive=false)
getElement
- [XMLDataElement](#) * [find](#) (const std::string &name, const bool &caseSensitive=false)
find
- size_t [getNumElements](#) (const std::string &tagName, const bool &caseSensitive=false)
getNumElements
- bool [exists](#) (const std::string &tagName, const bool &caseSensitive=false)
exists
- std::string [toString](#) () const
toString
- [XMLDataElement](#) * [getRoot](#) ()
getRoot
- const [XMLDataElement](#) * [getRoot](#) () const
getRoot
- bool [isValid](#) () const
isValid
- size_t [getDepth](#) () const
getDepth
- size_t [getNumLines](#) () const
getNumLines
- void [reset](#) ()
reset
- void [clear](#) ()
clear
- [XMLDataElement](#) * [getFirstElement](#) ()
getFirstElement

5.15.1 Member Function Documentation

5.15.1.1 bool cbtek::common::utility::XMLReader::exists (const std::string & *tagName*, const bool & *caseSensitive* = false)

exists

Parameters

<i>tagName</i>	
<i>caseSensitive</i>	

Returns

5.15.1.2 **XMLDataElement** * cbtek::common::utility::XMLReader::find (const std::string & *name*, const bool & *caseSensitive* = false)

find

Parameters

<i>name</i>	
<i>caseSensitive</i>	

Returns

5.15.1.3 **size_t** cbtek::common::utility::XMLReader::getDepth () const

getDepth

Returns

5.15.1.4 **XMLDataElement** * cbtek::common::utility::XMLReader::getElement (const std::string & *tagName*, const bool & *caseSensitive* = false)

getElement

Parameters

<i>tagName</i>	
<i>caseSensitive</i>	

Returns

5.15.1.5 XMLDataElement * cbtek::common::utility::XMLReader::getFirstElement ()

getFirstElement

Returns

5.15.1.6 size_t cbtek::common::utility::XMLReader::getNumElements (const std::string & *tagName*, const bool & *caseSensitive* = false)

getNumElements

Parameters

<i>tagName</i>	
<i>caseSensitive</i>	

Returns

5.15.1.7 size_t cbtek::common::utility::XMLReader::getNumLines () const

getNumLines

Returns

5.15.1.8 XMLDataElement * cbtek::common::utility::XMLReader::getRoot ()

getRoot

Returns

5.15.1.9 const XMLDataElement * cbtek::common::utility::XMLReader::getRoot () const

getRoot

Returns

5.15.1.10 `bool cbtek::common::utility::XMLReader::isValid () const`

isValid

Returns

5.15.1.11 `bool cbtek::common::utility::XMLReader::load (const std::string & filename)`

load

Parameters

<i>filename</i>	
-----------------	--

Returns

5.15.1.12 `bool cbtek::common::utility::XMLReader::loadFromString (const std::string & data)`

loadFromString

Parameters

<i>data</i>	
-------------	--

Returns

5.15.1.13 `std::string cbtek::common::utility::XMLReader::toString () const`

toString

Returns

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

- common/utility/inc/XMLUtils.h
- common/utility/src/XMLUtils.cpp

5.16 cbtek::common::utility::XMLStreamWriter Class Reference

Public Member Functions

- [XMLStreamWriter](#) (std::ostream &out)
Constructor for XMLStreamWriter.
- void [writeStartDocument](#) (const std::string &version="1.0", bool flag=true)
writeStartDocument
- void [writeStartElementNoAttributes](#) (const std::string &tag)
writeStartElementNoAttributes
- void [writeStartElement](#) (const std::string &tag)
writeStartElement
- void [writeEndElement](#) ()
writeEndElement
- void [writeEndElement](#) (const std::string &tag)
writeEndElement
- void [writeTextElement](#) (const std::string &tag, const std::string &text)
writeTextElement
- template<typename ValueType >
void [writeLastAttribute](#) (const std::string &attributeName, const ValueType &attributeValue)
writeLastAttribute
- void [writeText](#) (const std::string &text)
writeText
- template<typename ValueType >
void [writeLastAttributeAndCloseTag](#) (const std::string &attributeName, const ValueType &attributeValue)
writeLastAttribute
- template<typename ValueType >
void [writeAttribute](#) (const std::string &attributeName, const ValueType &attributeValue)
writeAttribute
- [~XMLStreamWriter](#) ()
Destructor.

5.16.1 Member Function Documentation

- 5.16.1.1 template<typename ValueType > void cbtek::common::utility::XMLStreamWriter::writeAttribute (const std::string & *attributeName*, const ValueType & *attributeValue*) [inline]

writeAttribute

Parameters

<i>attributeName</i>	
<i>attributeValue</i>	

- 5.16.1.2 void cbtek::common::utility::XMLStreamWriter::writeEndElement (const std::string & *tag*)

writeEndElement

Parameters

<i>tag</i>	
------------	--

5.16.1.3 `template<typename ValueType > void cbtek::common::utility::XMLStreamWriter::writeLastAttribute (const std::string & attributeName, const ValueType & attributeValue) [inline]`

writeLastAttribute

Parameters

<i>attributeName</i>	
<i>attributeValue</i>	

5.16.1.4 `template<typename ValueType > void cbtek::common::utility::XMLStreamWriter::writeLastAttributeAndCloseTag (const std::string & attributeName, const ValueType & attributeValue) [inline]`

writeLastAttribute

Parameters

<i>attributeName</i>	
<i>attributeValue</i>	

5.16.1.5 `void cbtek::common::utility::XMLStreamWriter::writeStartDocument (const std::string & version = "1.0", bool flag = true)`

writeStartDocument

Parameters

<i>version</i>	
<i>flag</i>	

5.16.1.6 `void cbtek::common::utility::XMLStreamWriter::writeStartElement (const std::string & tag)`

writeStartElement

Parameters

<i>tag</i>	
------------	--

5.16.1.7 void cbtek::common::utility::XMLStreamWriter::writeStartElementNoAttributes (const std::string & *tag*)

writeStartElementNoAttributes

Parameters

<i>tag</i>	
------------	--

5.16.1.8 void cbtek::common::utility::XMLStreamWriter::writeText (const std::string & *text*)

writeText

Parameters

<i>text</i>	
-------------	--

5.16.1.9 void cbtek::common::utility::XMLStreamWriter::writeTextElement (const std::string & *tag*, const std::string & *text*)

writeTextElement

Parameters

<i>tag</i>	
<i>text</i>	

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

- common/utility/inc/XMLUtils.h
- common/utility/src/XMLUtils.cpp

5.17 cbtek::common::utility::XMLUtils Class Reference

Static Public Member Functions

- static std::string [getEncodedString](#) (const std::string &rawString)
getEncodedString
- static std::string [getDecodedString](#) (const std::string &xmlString)
getDecodedString

5.17.1 Member Function Documentation

5.17.1.1 std::string cbtek::common::utility::XMLUtils::getDecodedString (const std::string & *xmlString*) [static]

getDecodedString

Parameters

<i>xmlString</i>	
------------------	--

Returns

5.17.1.2 `std::string cbtek::common::utility::XMLUtils::getEncodedString (const std::string & rawString)` `[static]`

getEncodedString**Parameters**

<i>rawString</i>	
------------------	--

Returns

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

- common/utility/inc/XMLUtils.h
- common/utility/src/XMLUtils.cpp

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