labo_02_carvalho_bruno_gallay_david

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Chapter 1

Class Index

1.1 Class List

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Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

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Chapter 3

Class Documentation

3.1 Date Class Reference

`#include <date.h>`

Public Member Functions

- Date (unsigned day, unsigned month, unsigned year)

  Create a Date.
- Date (unsigned day, std::string month, unsigned year)

  Create a Date.
- Date (unsigned day=1, Month month=Month::JANUARY, unsigned year=DEFAULT_YEAR)

  Create a Date.
- Date & setDay (unsigned day)

  Update day value.
- Date & setMonth (unsigned month)

  Update month value.
- Date & setMonth (Month month)

  Update month value.
- Date & setMonth (std::string month)

  Update month value.
- Date & setYear (unsigned year)

  Update year value.
- unsigned getDay () const

  get day value
- unsigned getMonthNo () const

  get month value
- std::string getMonthString () const

  get month value
- Month getMonthEnum () const

  get month value
- unsigned getYear () const

  get year value
- bool isValid () const

  get a bool indicating if Date values are valid

- operator std::string ()

  Convert month to string according to the define format.
- bool operator== (const Date &date) const

  Compare two dates.
- bool operator!= (const Date &date) const

  Compare two dates.
- bool operator< (const Date &date) const

  Compare two dates.
- bool operator<= (const Date &date) const

  Compare two dates.
- bool operator> (const Date &date) const

  Compare two dates.
- bool operator>= (const Date &date) const

  Compare two dates.
- Date & operator+= (unsigned days)

  Add X day to a date.
- Date & operator-= (unsigned days)

  Substract X day to a date.
- Date & operator+= (int days)

  Add X day to a date.
- Date & operator-= (int days)

  Substract X day to a date.
- int operator- (const Date &date) const

  Get the number of days between two dates.
- Date & operator= (const Date &date)

  Assign an object date to an other object date.
- Date & operator++ ()

  Pre-incrementation of an object date.
- Date operator++ (int)

  Post-incrementation of an object date.
- Date & operator-- ()

  Pre-decrementation of an object date.
- Date operator-- (int)

  Post-decrementation of an object date.
- std::ostream & display (std::ostream &os=std::cout) const

  Display date in a format DD.MM.YYYY.
- std::istream & receive (std::istream &is=std::cin)

  Receive date in a format DD.MM.YYYY.

Static Public Member Functions

- static bool isLeap (unsigned year)

  Indicate if the year is a leap year.
- static unsigned dayInMonth (unsigned month, unsigned year)

  Get the number of day in a month.

3.1.1 Constructor & Destructor Documentation

3.1.1.1 Date() [1/3]

```
Date::Date (
            unsigned day,
            unsigned month,
            unsigned year )
```

Create a Date.

Parameters

day	
month	
year	

3.1.1.2 Date() [2/3]

```
Date::Date (
            unsigned day,
            std::string month,
            unsigned year )
```

Create a Date.

Parameters

day	
month	
year	

3.1.1.3 Date() [3/3]

```
Date::Date (
            unsigned day = 1,
            Month month = Month::JANUARY,
            unsigned year = DEFAULT_YEAR )
```

Create a Date.

Parameters

day	
month	
year	

3.1.2 Member Function Documentation

3.1.2.1 dayInMonth()

```
static unsigned Date::dayInMonth (
            unsigned month,
            unsigned year )  [static]
```

Get the number of day in a month.

Returns

Number of day in the given month or unsigned max value

3.1.2.2 display()

```
std::ostream& Date::display (
            std::ostream & os = std::cout ) const
```

Display date in a format DD.MM.YYYY.

Parameters

os	

Returns

output stream "DD.MM.YYYY"

3.1.2.3 getDay()

```
unsigned Date::getDay ( ) const
```

get day value

Returns

unsigned

3.1.2.4 getMonthEnum()

```
Month Date::getMonthEnum ( ) const
```

get month value

Returns

Month enum

3.1.2.5 getMonthNo()

```
unsigned Date::getMonthNo ( ) const
```

get month value

Returns

unsigned

3.1.2.6 getMonthString()

```
std::string Date::getMonthString ( ) const
```

get month value

Returns

string

3.1.2.7 getYear()

```
unsigned Date::getYear ( ) const
```

get year value

Returns

unsigned

3.1.2.8 isLeap()

```
static bool Date::isLeap (
            unsigned year )  [static]
```

Indicate if the year is a leap year.

Returns

True if the year is leap, else return false

3.1.2.9 isValid()

```
bool Date::isValid ( ) const
```

get a bool indicating if Date values are valid

Returns

bool

3.1.2.10 operator std::string()

```
Date::operator std::string ( )
```

Convert month to string according to the define format.

Returns

Month converted into string

3.1.2.11 operator"!=()

```
bool Date::operator!= (
            const Date & date ) const
```

Compare two dates.

Parameters

date	

Returns

True if the two dates are inequal

3.1.2.12 operator++() [1/2]

```
Date& Date::operator++ ( )
```

Pre-incrementation of an object date.

Returns

The object date modified

3.1.2.13 operator++() [2/2]

```
Date Date::operator++ (
            int  )
```

Post-incrementation of an object date.

Returns

The object date before incrementation

3.1.2.14 operator+=() [1/2]

```
Date& Date::operator+= (
            unsigned days )
```

Add X day to a date.

Parameters

days	

Returns

The object date modified

3.1.2.15 operator+=() [2/2]

```
Date& Date::operator+= (
            int days )
```

Add X day to a date.

Parameters

days	

Returns

The object date modified

3.1.2.16 operator-()

```
int Date::operator- (
            const Date & date ) const
```

Get the number of days between two dates.

Parameters

days	

Returns

days as int

3.1.2.17 operator--() [1/2]

```
Date& Date::operator-- ( )
```

Pre-decrementation of an object date.

Returns

The object date modified

3.1.2.18 operator--() [2/2]

```
Date Date::operator-- (
            int  )
```

Post-decrementation of an object date.

Returns

The object date before decrementation

3.1.2.19 operator-=() [1/2]

```
Date& Date::operator-= (
            unsigned days )
```

Substract X day to a date.

Parameters

days	

Returns

The object date modified

3.1.2.20 operator-=() [2/2]

```
Date& Date::operator-= (
            int days )
```

Substract X day to a date.

Parameters

days	

Returns

The object date modified

3.1.2.21 operator<()

```
bool Date::operator< (
            const Date & date ) const
```

Compare two dates.

Parameters

date	

Returns

True if the date tested is lower than the param date

3.1.2.22 operator<=()

```
bool Date::operator<= (
            const Date & date ) const
```

Compare two dates.

Parameters

date	

Returns

True if the date tested is lower or equal to the param date

3.1.2.23 operator=()

```
Date& Date::operator= (
            const Date & date )
```

Assign an object date to an other object date.

Parameters

date	

Returns

The object date modified

3.1.2.24 operator==()

```
bool Date::operator== (
            const Date & date ) const
```

Compare two dates.

Parameters

date	

Returns

True if the two dates are equal

3.1.2.25 operator>()

```
bool Date::operator> (
            const Date & date ) const
```

Compare two dates.

Parameters

date	

Returns

True if the date tested is higher than the param date

3.1.2.26 operator>=()

```
bool Date::operator>= (
            const Date & date ) const
```

Compare two dates.

Parameters

date	

Returns

True if the date tested is higher or equal to the param date

3.1.2.27 receive()

```
std::istream& Date::receive (
            std::istream & is = std::cin )
```

Receive date in a format DD.MM.YYYY.

Parameters

is	

Returns

input stream "DD.MM.YYYY"

3.1.2.28 setDay()

```
Date& Date::setDay (
            unsigned day )
```

Update day value.

Parameters

day	

Returns

Reference on this

3.1.2.29 setMonth() [1/3]

```
Date& Date::setMonth (
            unsigned month )
```

Update month value.

Parameters

month	

Returns

Reference on this

3.1.2.30 setMonth() [2/3]

```
Date& Date::setMonth (
            Month month )
```

Update month value.

Parameters

month	

Returns

Reference on this

3.1.2.31 setMonth() [3/3]

```
Date& Date::setMonth (
            std::string month )
```

Update month value.

Parameters

month	

Returns

Reference on this

3.1.2.32 setYear()

```
Date& Date::setYear (
            unsigned year )
```

Update year value.

Parameters

year	

Returns

Reference on this

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

- date.h

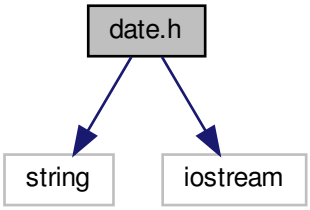
Chapter 4

File Documentation

4.1 date.h File Reference

```
#include <string>
#include <iostream>
```

Include dependency graph for date.h:



Classes

- class Date

Enumerations

- enum Month {
  Month::JANUARY = 1, Month::FEBRUARY, Month::MARCH, Month::APRIL,
  Month::MAY, Month::JUNE, Month::JULY, Month::AUGUST,
  Month::SEPTEMBER, Month::OCTOBER, Month::NOVEMBER, Month::DECEMBER }

Functions

- std::ostream & operator<< (std::ostream &os, const Date &date)
- std::istream & operator>> (std::istream &is, Date &date)
- Date operator+ (Date date, unsigned days)
- Date operator+ (unsigned days, const Date date)
- Date operator- (Date date, unsigned days)
- Date operator+ (Date date, int days)
- Date operator+ (int days, const Date &date)
- Date operator- (Date date, int days)

Variables

- const unsigned DEFAULT_YEAR = 1970

4.1.1 Enumeration Type Documentation

4.1.1.1 Month

```
enum Month  [strong]
```

Enumerator

JANUARY	
FEBRUARY	
MARCH	
APRIL	
MAY	
JUNE	
JULY	
AUGUST	
SEPTEMBER	
OCTOBER	
NOVEMBER	
DECEMBER	

4.1.2 Function Documentation

4.1.2.1 operator+() [1/4]

```
Date operator+ (
            Date date,
            unsigned days )
```

4.1.2.2 operator+() [2/4]

```
Date operator+ (
            unsigned days,
            const Date date )
```

4.1.2.3 operator+() [3/4]

```
Date operator+ (
            Date date,
            int days )
```

4.1.2.4 operator+() [4/4]

```
Date operator+ (
            int days,
            const Date & date )
```

4.1.2.5 operator-() [1/2]

```
Date operator- (
            Date date,
            unsigned days )
```

4.1.2.6 operator-() [2/2]

```
Date operator- (
            Date date,
            int days )
```

4.1.2.7 operator<<()

```
std::ostream& operator<< (
            std::ostream & os,
            const Date & date )
```

4.1.2.8 operator>>()

```
std::istream& operator>> (
             std::istream & is,
             Date & date )
```

4.1.3 Variable Documentation

4.1.3.1 DEFAULT_YEAR

```
const unsigned DEFAULT_YEAR = 1970
```

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