DateUtils工具类

<https://www.cnblogs.com/java-class/p/4845962.html>

https://blog.csdn.net/yaomingyang/article/details/79138466

# 官网Javadoc文档及Maven依赖

官网：<http://commons.apache.org/proper/commons-lang/index.html>

JavaDoc官方介绍：

<http://commons.apache.org/proper/commons-lang/javadocs/api-release/index.html>

<https://mvnrepository.com/> 搜索commons-lang3:

<dependency>

<groupId>org.apache.commons</groupId>

<artifactId>commons-lang3</artifactId>

<version>3.8.1</version>

</dependency>

官网介绍：<http://commons.apache.org/proper/commons-lang/>

# DateUtils工具类提供的工具方法分类

## parseDate方法

功能：将时间字符串转换成Date对象，可以传入多个parsePatterns；

早版本的parseDate只能传递String[]；现在可以传递任意多个。

**static Date parseDate(String str, Locale locale, String... parsePatterns)**

Parses a string representing a date by trying a variety of different parsers, using the default date format symbols for the given locale.

**static Date parseDate(String str, String... parsePatterns)**

Parses a string representing a date by trying a variety of different parsers.

**static Date parseDateStrictly(String str, Locale locale, String... parsePatterns)**

Parses a string representing a date by trying a variety of different parsers, using the default date format symbols for the given locale..

**static Date parseDateStrictly(String str, String... parsePatterns)**

Parses a string representing a date by trying a variety of different parsers.

## addXxx方法

对**年、月、日、时、分、秒、毫秒**进行增加一定值，返回一个新的Date对象。

**DateUtils类**内部使用的就是Calendar，只不过这里提供的工具方法对**Calendar**进行了包装。

static Date **addDays**(Date date, int amount)

Adds a number of days to a date returning a new object.

static Date **addHours**(Date date, int amount)

Adds a number of hours to a date returning a new object.

static Date **addMilliseconds**(Date date, int amount)

Adds a number of milliseconds to a date returning a new object.

static Date **addMinutes**(Date date, int amount)

Adds a number of minutes to a date returning a new object.

static Date **addMonths**(Date date, int amount)

Adds a number of months to a date returning a new object.

static Date **addSeconds**(Date date, int amount)

Adds a number of seconds to a date returning a new object.

static Date **addWeeks**(Date date, int amount)

Adds a number of weeks to a date returning a new object.

static Date **addYears**(Date date, int amount)

Adds a number of years to a date returning a new object.

## getFramentInXxxs方法

**getFramentInXxxs方法**

static long getFragmentInDays(Calendar calendar, int fragment)

Returns the number of days within the fragment.

static long getFragmentInDays(Date date, int fragment)

Returns the number of days within the fragment.

static long getFragmentInHours(Calendar calendar, int fragment)

Returns the number of hours within the fragment.

static long getFragmentInHours(Date date, int fragment)

Returns the number of hours within the fragment.

static long getFragmentInMilliseconds(Calendar calendar, int fragment)

Returns the number of milliseconds within the fragment.

static long getFragmentInMilliseconds(Date date, int fragment)

Returns the number of milliseconds within the fragment.

static long getFragmentInMinutes(Calendar calendar, int fragment)

Returns the number of minutes within the fragment.

static long getFragmentInMinutes(Date date, int fragment)

Returns the number of minutes within the fragment.

static long getFragmentInSeconds(Calendar calendar, int fragment)

Returns the number of seconds within the fragment.

static long getFragmentInSeconds(Date date, int fragment)

Returns the number of seconds within the fragment.

## setXxx方法

7个类型：年月日、时分秒、毫秒。

static Date **setDays**(Date date, int amount)

Sets the day of month field to a date returning a new object.

static Date setHours(Date date, int amount)

Sets the hours field to a date returning a new object.

static Date setMilliseconds(Date date, int amount)

Sets the milliseconds field to a date returning a new object.

static Date setMinutes(Date date, int amount)

Sets the minute field to a date returning a new object.

static Date setMonths(Date date, int amount)

Sets the months field to a date returning a new object.

static Date setSeconds(Date date, int amount)

Sets the seconds field to a date returning a new object.

static Date setYears(Date date, int amount)

Sets the years field to a date returning a new object.

## Iterator

具体怎么使用，还不是很清楚。

static Iterator<Calendar> iterator(Calendar focus, int rangeStyle)

Constructs an Iterator over each day in a date range defined by a focus date and range style.

static Iterator<Calendar> iterator(Date focus, int rangeStyle)

Constructs an Iterator over each day in a date range defined by a focus date and range style.

static Iterator<?> iterator(Object focus, int rangeStyle)

Constructs an Iterator over each day in a date range defined by a focus date and range style.

## isSameDay与isSameInstant

static boolean **isSameDay**(Calendar cal1, Calendar cal2)

Checks if two calendar objects are on the same day ignoring time.

static boolean **isSameDay**(Date date1, Date date2)

Checks if two date objects are on the same day ignoring time.

static boolean **isSameInstant**(Calendar cal1, Calendar cal2)

Checks if two calendar objects represent the same instant in time.

static boolean **isSameInstant**(Date date1, Date date2)

Checks if two date objects represent the same instant in time.

## 获取最近相关时间如ceiling

### ceiling方法

**static Calendar ceiling(Calendar date, int field)**

Gets a date ceiling, leaving the field specified as the most significant field.

For example, if you had the date-time of 28 Mar 2002 13:45:01.231, if you passed with HOUR, it would return 28 Mar 2002 14:00:00.000. If this was passed with MONTH, it would return 1 Apr 2002 0:00:00.000.

**static Date ceiling(Date date, int field)**

Gets a date ceiling, leaving the field specified as the most significant field.

For example, if you had the date-time of 28 Mar 2002 13:45:01.231, if you passed with HOUR, it would return 28 Mar 2002 14:00:00.000. If this was passed with MONTH, it would return 1 Apr 2002 0:00:00.000.

**static Date ceiling(Object date, int field)**

Gets a date ceiling, leaving the field specified as the most significant field.

For instance, passing Thursday, July 4, 2002 and a RANGE\_MONTH\_SUNDAY will return an Iterator that starts with Sunday, June 30, 2002 and ends with Saturday, August 3, 2002, returning a Calendar instance for each intermediate day.

This method provides an iterator that returns Calendar objects. The days are progressed using Calendar.add(int, int).

### round工具方法(具体使用参考API)

static Calendar round(Calendar date, int field)

Rounds a date, leaving the field specified as the most significant field.

static Date round(Date date, int field)

Rounds a date, leaving the field specified as the most significant field.

static Date round(Object date, int field)

Rounds a date, leaving the field specified as the most significant field.