

JAVA.UTIL.GREGORIANCALENDAR CLASS

http://www.tutorialspoint.com/java/util/java_util_gregorianCalendar.htm

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Introduction

The **java.util.GregorianCalendar** class is a concrete subclass of **Calendar** and provides the standard calendar system used by most of the world. Following are the important points about **GregorianCalendar**:

- It is a hybrid calendar that supports both the Julian and Gregorian calendar systems with the support of a single discontinuity, which corresponds by default to the Gregorian date when the Gregorian calendar was instituted.
- The Julian calendar specifies leap years every four years, whereas the Gregorian calendar omits century years which are not divisible by 400.

Class declaration

Following is the declaration for **java.util.GregorianCalendar** class:

```
public class GregorianCalendar
    extends Calendar
```

Field

Following are the fields for **java.util.GregorianCalendar** class:

- **static int AD** -- This is the value of the ERA field indicating the common era *AnnoDomini*, also known as CE.
- **static int BC** -- This is the value of the ERA field indicating the period before the common era *beforeChrist*, also known as BCE.

Class constructors

S.N.	Constructor & Description
1	GregorianCalendar This constructs a default GregorianCalendar using the current time in the default time zone with the default locale.
2	GregorianCalendar <i>intyear, intmonth, intdayOfMonth</i> This constructs a GregorianCalendar with the given date set in the default time zone with the default locale.
3	GregorianCalendar <i>intyear, intmonth, intdayOfMonth, inthourOfDay, intminute</i> This constructs a GregorianCalendar with the given date and time set for the default time zone with the default locale.
4	GregorianCalendar <i>intyear, intmonth, intdayOfMonth, inthourOfDay, intminute, intsecond</i> This constructs a GregorianCalendar with the given date and time set for the default time zone with the default locale.

- 5 **GregorianCalendar***LocaleaLocale*
 This constructs a GregorianCalendar based on the current time in the default time zone with the given locale.
- 6 **GregorianCalendar***TimeZonezone*
 This constructs a GregorianCalendar based on the current time in the given time zone with the default locale.
- 7 **GregorianCalendar***TimeZonezone, LocaleaLocale*
 This constructs a GregorianCalendar based on the current time in the given time zone with the given locale.

Class methods

S.N.	Method & Description
1	<u>void add(int field, int amount)</u> This method adds the specified <i>signed</i> amount of time to the given calendar field, based on the calendar's rules.
2	<u>Object clone</u> This method creates and returns a copy of this object.
3	<u>protected void computeFields</u> This method converts the time value <i>millisecondoffsetfromtheEpoch</i> to calendar field values.
4	<u>protected void computeTime</u> This method converts calendar field values to the time value <i>millisecondoffsetfromtheEpoch</i> .
5	<u>boolean equals(Object obj)</u> This method compares this GregorianCalendar to the specified Object.
6	<u>int getActualMaximum(int field)</u> This method returns the maximum value that this calendar field could have, taking into consideration the given time value and the current values of the <code>getFirstDayOfWeek</code> , <code>getMinimalDaysInFirstWeek</code> , <code>getGregorianChange</code> and <code>getTimeZone</code> methods.
7	<u>int getActualMinimum(int field)</u>

This method returns the minimum value that this calendar field could have, taking into consideration the given time value and the current values of the `getFirstDayOfWeek`, `getMinimalDaysInFirstWeek`, `getGregorianChange` and `getTimeZone` methods.

8

[`int getGreatestMinimum\(int field\)`](#)

This method returns the highest minimum value for the given calendar field of this `GregorianCalendar` instance.

9

[`Date getGregorianChange`](#)

This method gets the Gregorian Calendar change date.

10

[`int getLeastMaximum\(int field\)`](#)

This method returns the lowest maximum value for the given calendar field of this `GregorianCalendar` instance.

11

[`int getMaximum\(int field\)`](#)

This method returns the maximum value for the given calendar field of this `GregorianCalendar` instance.

12

[`int getMinimum\(int field\)`](#)

This method returns the minimum value for the given calendar field of this `GregorianCalendar` instance.

13

[`TimeZone getTimeZone`](#)

This method gets the time zone.

14

[`int hashCode`](#)

This method generates the hash code for this `GregorianCalendar` object.

15

[`boolean isLeapYear\(int year\)`](#)

This method determines if the given year is a leap year.

16

[`void roll\(int field, boolean up\)`](#)

This method adds or subtracts *up/down* a single unit of time on the given time field without changing larger fields.

17

[`void roll\(int field, int amount\)`](#)

This method adds a signed amount to the specified calendar field without changing larger fields.

18

[void setGregorianChangeDate](#)

This method sets the GregorianCalendar change date.

19

[setTimeZone](#)

This method sets the time zone with the given time zone value.

Methods inherited

This class inherits methods from the following classes:

- java.util.Calendar
- java.util.Object

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