PACKAGE CLASS USE TREE DEPRECATED INDEX HELP

PREV CLASS NEXT CLASS FRAMES NO FRAMES ALL CLASSES

SUMMARY: NESTED | FIELD | CONSTR | METHOD DETAIL: FIELD | CONSTR | METHOD

Class Temperature

java.lang.Object
    Temperature

```
public class Temperature
extends java.lang.Object
```

Constructor Summary

Constructors

Constructor and Description
`Temperature()` Constructs a Temperature with the value of 0 C (freezing point)
`Temperature(double value, char unit)` Constructs a Temperature with the given value in the given unit If the unit is not either 'F', 'C', or 'K' the unit will be celsius

Method Summary

All Methods **Instance Methods** **Concrete Methods**

Modifier and Type	Method and Description
`boolean`	`aboveBoiling()` Checks if the temperature is above the boiling point of water
`boolean`	`aboveFreezing()` Checks if the temperature is above freezing
`double`	`celsiusValue()` Returns the temperature value in celsius
`boolean`	`equals(java.lang.Object other)` Checks if this temperature is has the same value as other
`double`	`fahrenheitValue()` Returns the temperature value in fahrenheit
`double`	`kelvinValue()` Returns the temperature value in kelvin

boolean	**lowerTemperature**(double value, char unit) Lowers the temperature by the given value in the given unit and returns true if lowering the temperature does not make the new temperature less than absolute zero, otherwise returns false.
void	**raiseTemperature**(double value, char unit) Raises the temperature by the given value in the given unit
java.lang.String	**toString**() Returns a String in the form: 0 C, 32 F, 273.15 K

Methods inherited from class java.lang.Object

getClass, hashCode, notify, notifyAll, wait, wait, wait

Constructor Detail

Temperature

```
public Temperature()
```

Constructs a Temperature with the value of 0 C (freezing point)

Temperature

```
public Temperature(double value,
                   char unit)
```

Constructs a Temperature with the given value in the given unit If the unit is not either 'F', 'C', or 'K' the unit will be celsius

Parameters:

value - number of degrees

unit - the temperature unit. Must be either 'F', 'C', or 'K'

Method Detail

celsiusValue

```
public double celsiusValue()
```

Returns the temperature value in celsius

Returns:

temperature value in celsius

fahrenheitValue

```
public double fahrenheitValue()
```

Returns the temperature value in fahrenheit

Returns:

`temperature value in fahrenheit`

kelvinValue

```
public double kelvinValue()
```

Returns the temperature value in kelvin

Returns:

`temperature value in kelvin`

aboveFreezing

```
public boolean aboveFreezing()
```

Checks if the temperature is above freezing

Returns:

`true if the temperature is above the freezing point of water`

aboveBoiling

```
public boolean aboveBoiling()
```

Checks if the temperature is above the boiling point of water

Returns:

`true if the temperature is above the boiling point of water`

raiseTemperature

```
public void raiseTemperature(double value,
                             char unit)
```

Raises the temperature by the given value in the given unit

Parameters:

`value - the amount to raise the temperature` unit - the unit the amount is in

lowerTemperature

```
public boolean lowerTemperature(double value,
                                char unit)
```

Lowers the temperature by the given value in the given unit and returns true if lowering the temperature does not make the new temperature less than absolute zero, otherwise returns false.

Parameters:

value - the amount to raise the temperature

unit - the unit the amount is in

Returns:

true if if lowering the temperature does not make the new temperature less than absolute zero, false otherwise

toString

```
public java.lang.String toString()
```

Returns a String in the form: 0 C, 32 F, 273.15 K

Overrides:

toString in class java.lang.Object

Returns:

a String in the form: 0 C, 32 F, 273.15 K

equals

```
public boolean equals(java.lang.Object other)
```

Checks if this temperature is has the same value as other

Overrides:

equals in class java.lang.Object

Returns:

true if this temperature is equal to other, false otherwise

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