

# Gauge with thermometer style display- Javabeans for Oracle Forms 9i-10g

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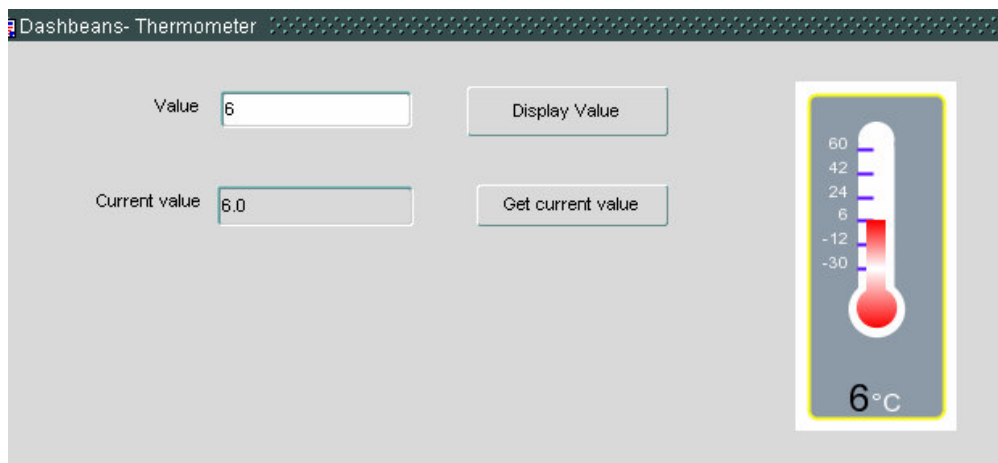
## I. Introduction

Increasingly, power users are requiring more and more info in a manageable form. This is the case with dashboards and financial screens.

There are already a number of javabeans that can be quickly deployed with Oracle Forms 10g. The Bgraph bean is one of them and provides a number of charts.

While there are other visual display beans designed with the JAVA community in mind, only a few are available for Oracle Forms users.

In attempt to alleviate this problem, we propose a basic bean that is styled like a thermometer. While it can be used for this specific purpose, it can be used in other areas as well.

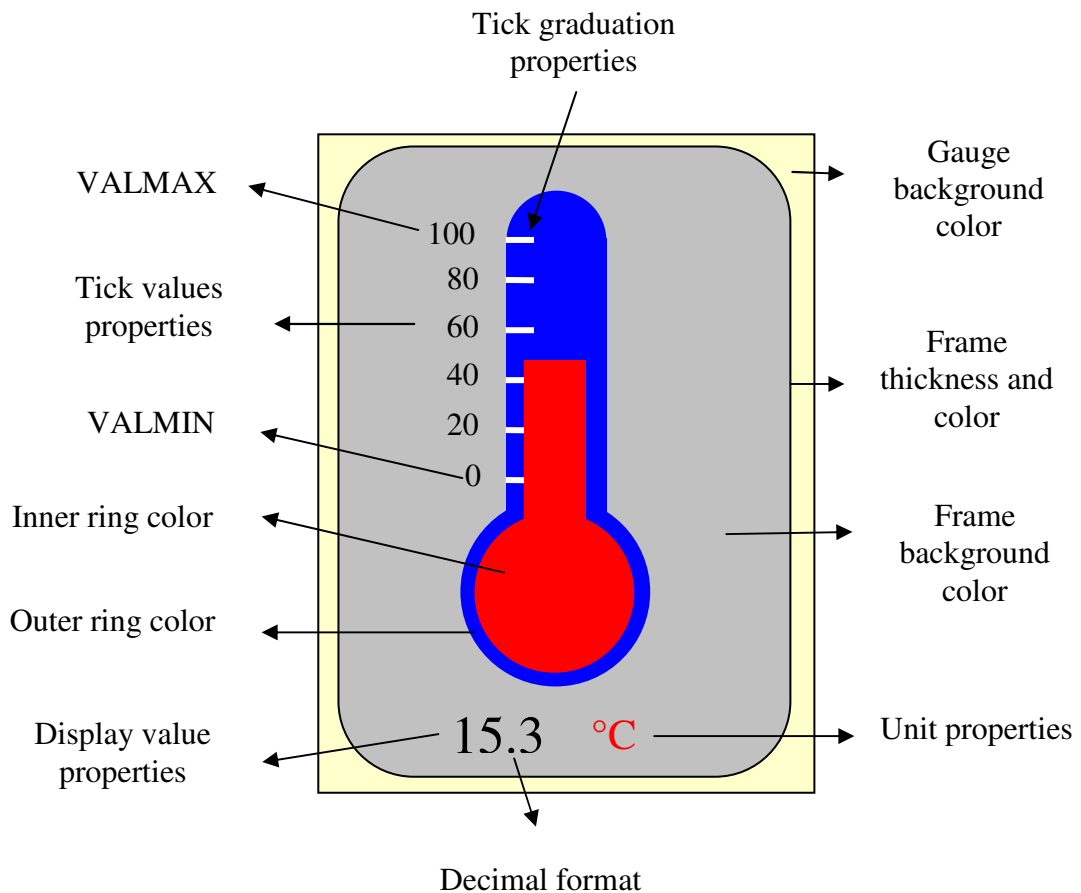


The screenshot above shows the bean with the value that is set from the Forms canvas. This can also be fetched from a table and triggered by the Timer bean.

The current value displayed by the bean can be retrieved using the Forms custom item built-in.

A number of properties have been included with this bean in order to allow specific customization to be carried out by developers. Future versions will include other properties that will enhance the graphic aesthetics.

## II. Gauge Design



### Bean size

Recommended height: it should be greater or equal to 100 pixels.

Height can not be less than 70 pixels and height should be greater or equal to width.

## III. Properties

Based on the design constraints we highlighted in the preceding section, properties were designed and take either String or Integer values.

### 3.1 Set Properties

There are a number of properties that can be set.

Property	Description	Type
<b>Gauge</b>		
VALMIN	Minimum value	Varchar2
VALMAX	Maximum value	Varchar2
GAUGE_NAME	Item name	Varchar2
GAUGE_BACKGROUND_COLOR	Item background color	Varchar2
DECIMAL_FORMAT	Decimal Format	Number (0 or 1)
GAUGE_VAL	Gauge current value	Varchar2

### **Frame**

FRAME_COLOR	Enclosing frame	Varchar2
FRAME_BACKGROUND_COLOR	Frame color	Varchar2
FRAME_THICKNESS	Frame thickness	Number

### **Display value**

DISP_VALUE_COLOR	Current value color	Varchar2
DISP_VALUE_SIZE	Current value size	Number
DISP_VALUE_FONT	Current value font	Varchar2

### **Unit**

GAUGE_UNIT	Current value unit	Varchar2
GAUGE_UNIT_COLOR	Current value unit color	Varchar2
GAUGE_UNIT_SIZE	Current value unit size	Number
GAUGE_UNIT_FONT	Current value unit font	Varchar2

### **Tick Values**

TICK_VALUE_COLOR	Gauge graduation value color	Varchar2
TICK_VALUE_SIZE	Gauge graduation value size	Number
TICK_VALUE_FONT	Gauge graduation value font	Varchar2

### **Shapes**

INNER_RING_COLOR	Inner shape color	Varchar2
OUTER_RING_COLOR	Outer shape color	Varchar2

### **Tick graduations**

TICK_DASH_COLOR	Gauge tick color	Varchar2
TICK_DASH_THICKNESS	Gauge tick thickness	Number

### **Setting properties**

A property can be set using the custom item built-in **set\_custom\_property**. Assuming the bean is referenced by *BL1.BGAUGEBEAN* and in order to set the current value for this bean, we will use the following statement:

```
Set_Custom_Property( 'BL1.BGAUGEBEAN', 1, 'GAUGE_VAL',:BL1.GAUGE ) ;
```

Where *:BL1. GAUGE* is a form module item.

## **3.2 Get Properties**

There are two properties that can be read.

<b>Property</b>	<b>Description</b>	<b>Type</b>
<b>Gauge</b>		
GAUGE_NAME	Item name	Varchar2
GAUGE_VAL	Gauge current value	Varchar2

### **Reading properties**

The property can be read using the custom item built-in **get\_custom\_property**. Assuming the bean is referenced by *BL1.BGAUGEBEAN* and in order to get the current displayed value, we will use the following statement:

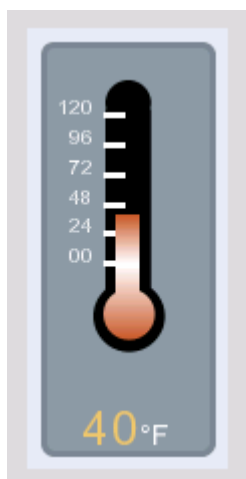
```
:bl1.readgauge := get_custom_property('BL1.BGAUGEBEAN',1,'GAUGE_VAL');
```

Where `:BL1.READGAUGE` is a form module item.

## IV. Examples

In this section, we present a number of designs based on values set on the bean properties.

**Example 1:** Bean with size: 100x220



Property	Value
<b>Gauge</b>	
VALMIN	0
VALMAX	100
GAUGE_NAME	'TEMP_GAUGE1'
GAUGE_BACKGROUND_COLOR	'R224G234B246'
DECIMAL_FORMAT	0
<b>Frame</b>	
FRAME_COLOR	'R122G135B144'
FRAME_BACKGROUND_COLOR	'R140G154B167'
FRAME_THICKNESS	3
<b>Display value</b>	
DISP_VALUE_COLOR	'R233G196B111'
DISP_VALUE_SIZE	24
DISP_VALUE_FONT	'Arial'
<b>Unit</b>	
GAUGE_UNIT	'°F'
GAUGE_UNIT_COLOR	'R255G255B255'
GAUGE_UNIT_SIZE	14
GAUGE_UNIT_FONT	'Arial'
<b>Tick Values</b>	
TICK_VALUE_COLOR	'R255G255B255'
TICK_VALUE_SIZE	10

TICK\_VALUE\_FONT

'Arial'

### **Shapes**

INNER\_RING\_COLOR

'R198G90B44'

OUTER\_RING\_COLOR

'R0G0B0'

### **Tick graduations**

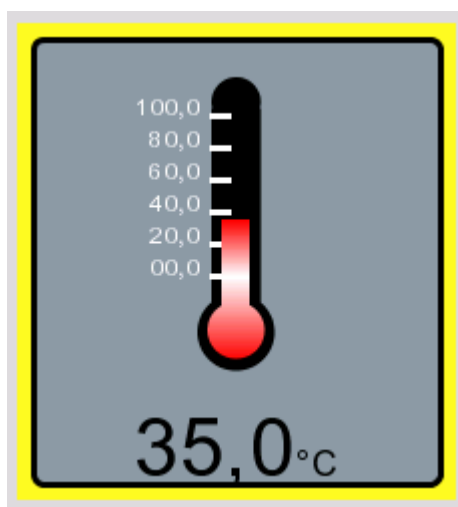
TICK\_DASH\_COLOR

'R255G255B255'

TICK\_DASH\_THICKNESS

2

## **Example 2:** Bean with size 219x238



Property	Value
<b>Gauge</b>	
VALMIN	0
VALMAX	100
GAUGE_NAME	'TEMP_GAUGE2'
GAUGE_BACKGROUND_COLOR	'R248G248B35'
DECIMAL_FORMAT	1
<b>Frame</b>	
FRAME_COLOR	'R0G0B0'
FRAME_BACKGROUND_COLOR	'R140G154B167'
FRAME_THICKNESS	3
<b>Display value</b>	
DISP_VALUE_COLOR	'R0G0B0'
DISP_VALUE_SIZE	40
DISP_VALUE_FONT	'Arial'
<b>Unit</b>	
GAUGE_UNIT	'°C'
GAUGE_UNIT_COLOR	'R255G255B255'
GAUGE_UNIT_SIZE	18
GAUGE_UNIT_FONT	'Arial'

**Tick Values**

TICK_VALUE_COLOR	'R255G255B255'
TICK_VALUE_SIZE	12
TICK_VALUE_FONT	'Arial'

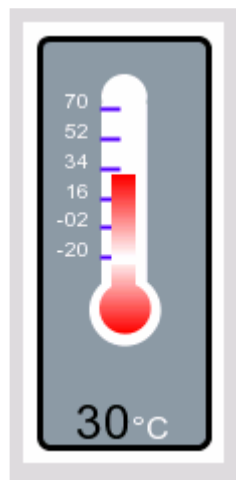
**Shapes**

INNER_RING_COLOR	'R255G0B0'
OUTER_RING_COLOR	'R0G0B0'

**Tick graduations**

TICK_DASH_COLOR	'R255G255B255'
TICK_DASH_THICKNESS	3

**Example 3:** Bean with size: 120x190



Property	Value
<b>Gauge</b>	
VALMIN	-20
VALMAX	70
GAUGE_NAME	'TEMP_GAUGE3'
GAUGE_BACKGROUND_COLOR	'R255G255B255'
DECIMAL_FORMAT	0
<b>Frame</b>	
FRAME_COLOR	'R0G0B0'
FRAME_BACKGROUND_COLOR	'R140G154B167'
FRAME_THICKNESS	3
<b>Display value</b>	
DISP_VALUE_COLOR	'R0G0B0'
DISP_VALUE_SIZE	24
DISP_VALUE_FONT	'Arial'
<b>Unit</b>	
GAUGE_UNIT	'°C'
GAUGE_UNIT_COLOR	'R255G255B255'
GAUGE_UNIT_SIZE	16
GAUGE_UNIT_FONT	'Arial'
<b>Tick Values</b>	
TICK_VALUE_COLOR	'R255G255B255'

TICK_VALUE_SIZE	10
TICK_VALUE_FONT	'Arial'

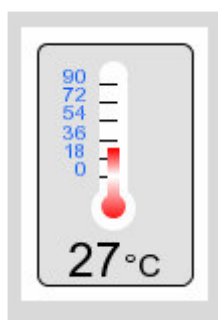
### Shapes

INNER_RING_COLOR	'R255G0B0'
OUTER_RING_COLOR	'R255G255B255'

### Tick graduations

TICK_DASH_COLOR	'R85G0B255'
TICK_DASH_THICKNESS	2

**Example 4:** Bean with size: 93x136



Property	Value
<b>Gauge</b>	
VALMIN	0
VALMAX	90
GAUGE_NAME	'TEMP_GAUGE4'
GAUGE_BACKGROUND_COLOR	'R255G255B255'
DECIMAL_FORMAT	0
<b>Frame</b>	
FRAME_COLOR	'R0G0B0'
FRAME_BACKGROUND_COLOR	'R225G225B225'
FRAME_THICKNESS	1
<b>Display value</b>	
DISP_VALUE_COLOR	'R0G0B0'
DISP_VALUE_SIZE	24
DISP_VALUE_FONT	'Arial'
<b>Unit</b>	
GAUGE_UNIT	'°C'
GAUGE_UNIT_COLOR	'R0G0B0'
GAUGE_UNIT_SIZE	16
GAUGE_UNIT_FONT	'Arial'
<b>Tick Values</b>	
TICK_VALUE_COLOR	'R0G85B255'
TICK_VALUE_SIZE	10
TICK_VALUE_FONT	'Arial'
<b>Shapes</b>	
INNER_RING_COLOR	'R255G0B0'
OUTER_RING_COLOR	'R255G255B255'

### ***Tick graduations***

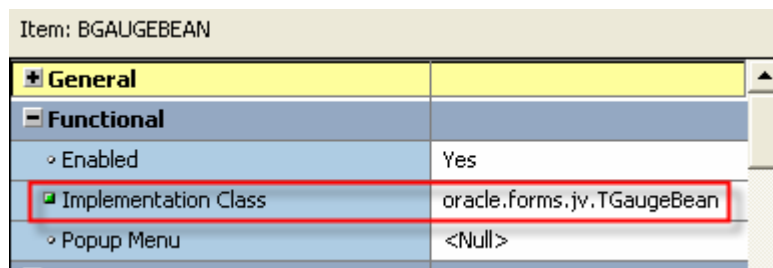
TICK\_DASH\_COLOR  
TICK\_DASH\_THICKNESS

'R0G0B0'  
1

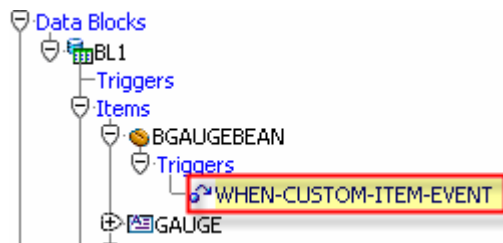
## **V. Using the thermometer style Bean in your module**

The implementation class to use for the Bean Item should be:

oracle.forms.jv.TGaugeBean



- Events raised by this bean: **INSTANCE** and **ERROR**



You can use the trigger WHEN-CUSTOM-ITEM-EVENT on the bean to add additional support.

In the accompanying FMB module, I used the events to show how you can alert the users for the various state returned by the bean.

## **Installing the JAR**

- Download the thermobean.zip file
- Unzip the files
- Copy the thermobean.jar file in the <ORACLE\_HOME>/forms/java directory
- Edit your /forms/server/formsweb.cfg file to add thermobean.jar
- Open the thermobean.fmb module (Oracle Forms 9i or 10g)
- Compile all and run the module.



## Comments and suggestions

please note that this Javabeans is provided without any warranty. It has been tested with JInitiator 1.3.1.22 and 1.3.1.29 and should work for SUN JRE configurations.

There are a number of improvements and checks that can be added. These will be added in future versions.

Please direct any comments or suggestions to Hafed Benteftifa at [info@degenio.com](mailto:info@degenio.com). Thanks.

## Annex

A Sample procedure for initializing the thermometer bean is given below.

```
PROCEDURE init_thermo IS
BEGIN
--gauge
Set_Custom_Property( 'BL1.bgaugebean', 1, 'VALMIN', -30 ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'VALMAX', 60 ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'GAUGE_NAME', 'AVGTEMP' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'GAUGE_BACKGROUND_COLOR','R255G255B255' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'DECIMAL_FORMAT',0 ) ;
--frame
Set_Custom_Property( 'BL1.bgaugebean', 1, 'FRAME_COLOR','R248G248B35' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'FRAME_BACKGROUND_COLOR','R140G154B167' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'FRAME_THICKNESS',2 ) ;

--display value
Set_Custom_Property( 'BL1.bgaugebean', 1, 'DISP_VALUE_COLOR','R0G0B0' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'DISP_VALUE_SIZE',24 ) ;--Current value size
Set_Custom_Property( 'BL1.bgaugebean', 1, 'DISP_VALUE_FONT','Arial' ) ;

--unit
Set_Custom_Property( 'BL1.bgaugebean', 1, 'GAUGE_UNIT','°C' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'GAUGE_UNIT_COLOR','R255G255B255' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'GAUGE_UNIT_SIZE',16 ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'GAUGE_UNIT_FONT','Arial' ) ;

--tick
Set_Custom_Property( 'BL1.bgaugebean', 1, 'TICK_VALUE_COLOR','R255G255B255' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'TICK_VALUE_SIZE',10 ) ;--percent value
Set_Custom_Property( 'BL1.bgaugebean', 1, 'TICK_VALUE_FONT','Arial' ) ;

--rings
Set_Custom_Property( 'BL1.bgaugebean', 1, 'INNER_RING_COLOR','R255G0B0' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'OUTER_RING_COLOR','R255G255B255' ) ;

--TEMP graduations
Set_Custom_Property( 'BL1.bgaugebean', 1, 'TICK_DASH_COLOR','R85G0B255' ) ;
Set_Custom_Property( 'BL1.bgaugebean', 1, 'TICK_DASH_THICKNESS',2 ) ;

END;
```