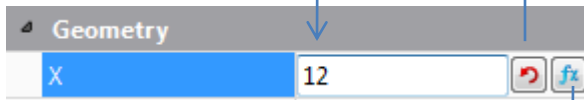# FORMATTING REPORT OBJECTS AND THE REPORT LAYOUT

Using Genero Report Writer

GRS 3.00

At the end of this instruction, you will be able to:

- Position report objects on a report

- Identify object properties that are common to all objects
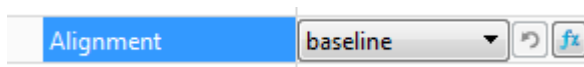
- Provide, edit, and reset property values

Enter into text field   Reset to default value

Geometry

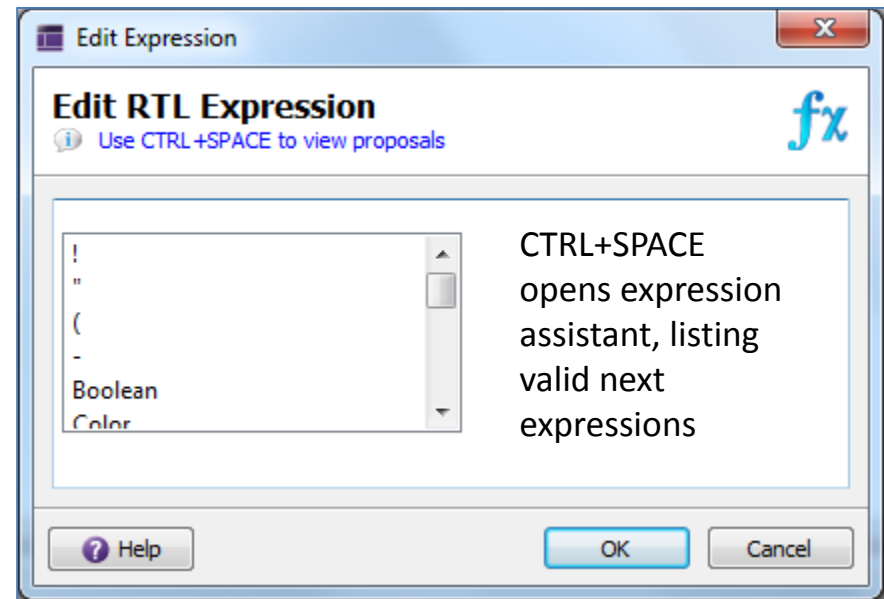X   12

Launch the Expression Editor

Anchor X   0,000

Use widget to find value

Alignment   baseline

Select from combobox

Bold   ☑

Check for TRUE, Uncheck for FALSE

Edit Expression

Edit RTL Expression
ⓘ Use CTRL+SPACE to view proposals   *fx*

!
"
(
-
Boolean
Color

CTRL+SPACE opens expression assistant, listing valid next expressions

❓ Help   OK   Cancel

- How do I position something so that it is…
  - In the center of its parent

Geometry	
X	max/2
Y	max/2
X-Size	
Y-Size	
Anchor X	0,5
Anchor Y	0,5

  - In the bottom right of its parent

Geometry	
X	max
Y	max
X-Size	
Y-Size	
Anchor X	1
Anchor Y	1

TIP: Contextual menu lets you solidify the position by setting X and Y coordinates
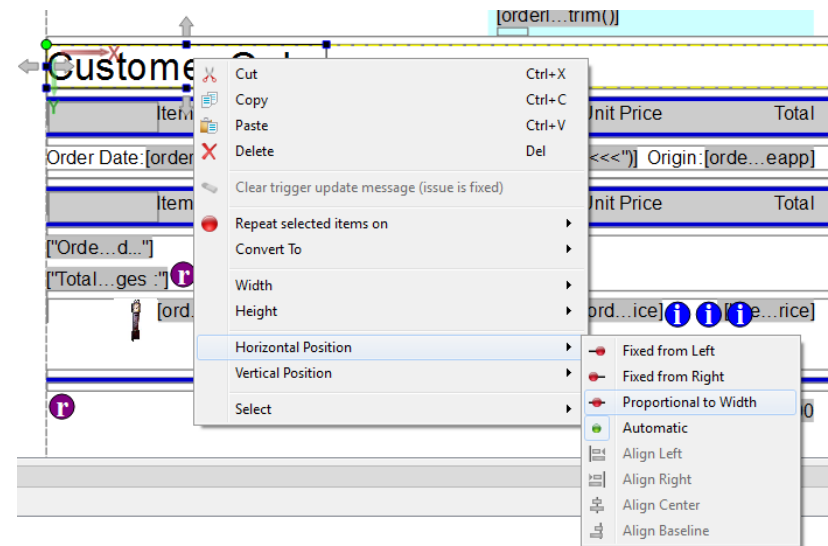
- An object's absolute position can be measured in three ways
  - From the top
    - 2cm
  - From the bottom
    - max-3cm
  - Relative to height
    - max*0.4

> Note:
> This discussion assumes the layout is top-to-bottom and the height of the parent object is 5 cm.

- Which method you choose depends where you want the object to be positioned when the parent is resized

- Properties can be inherited from the parent object
 - Define some properties on the PageRoot node
  - These will then default for the whole report
    - e.g. font, font-size
    - Define the font on the page root and then all objects on the report will use this font unless explicitly stated otherwise
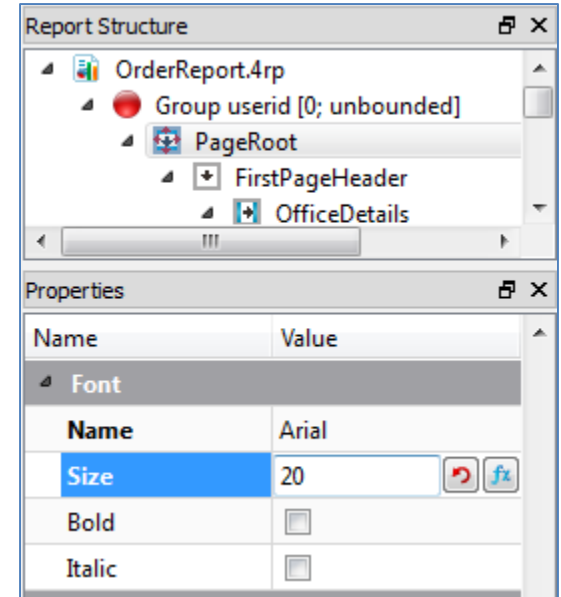
- ## If possible, group objects together within one parent
  - ### You can use inheritance and define the property once on the parent
  - ### Positions will be relative to parent. Drag the parent to move all the child objects
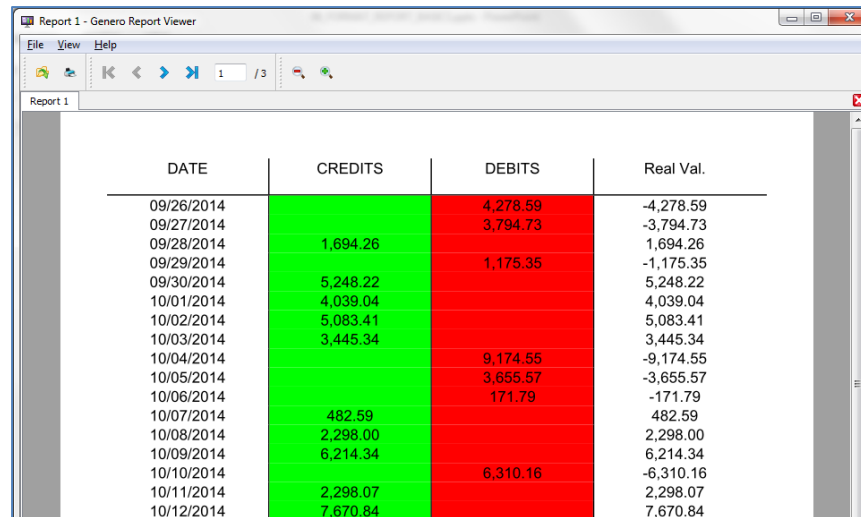 - ### Usage example
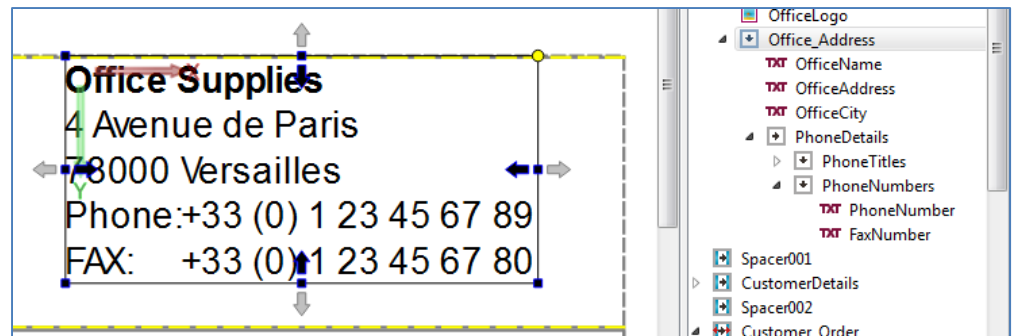
- To determine which object is which or to better view the space the object uses
  - Give it a background color
  - Give the other report objects different background colors
- Can be helpful in debugging
  - Remember to remove before going live
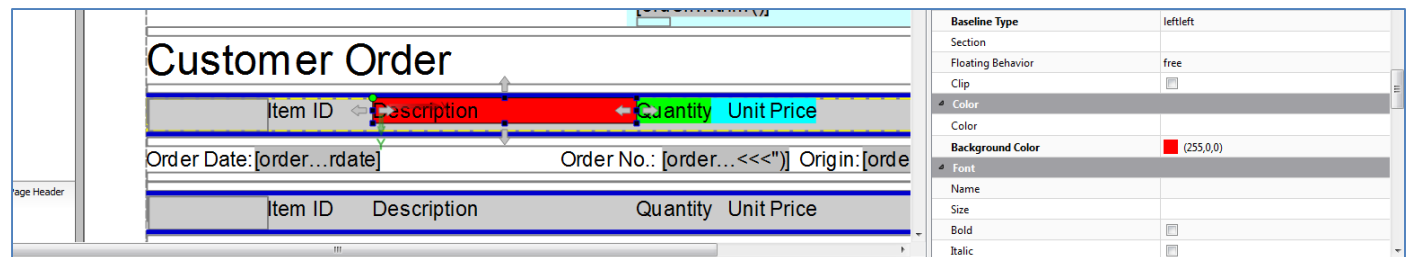
- Ctrl-Select the objects
  - The objects must have the property you wish to change in common

- Change the property value once
  - Changes for all objects
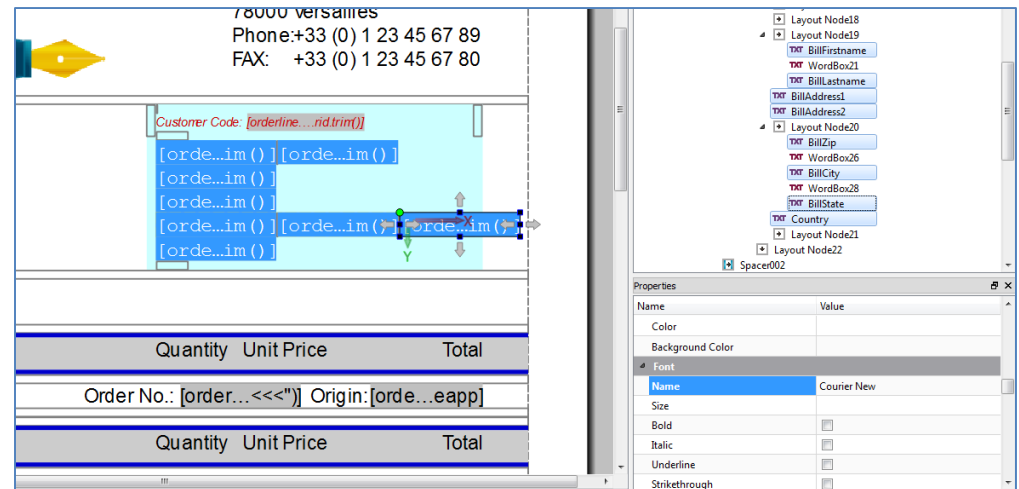
- Debits and Credits problem characterized by
  - Two adjacent columns to display the same variable
  - Display positive values in first column, leave second column blank
  - Display negative values in second column as positive, leave first column blank

- Use expressions for **format** and **value** properties
  - Column 1: value=rec.value>0?rec.value:0
  - Column 1: format = rec.value>0?"###,##&.&&":"#"
  - Column 2: value = rec.value<0?-1*rec.value:0
 - Column 2: format = rec.value<0?"###,##&.&&":"#"
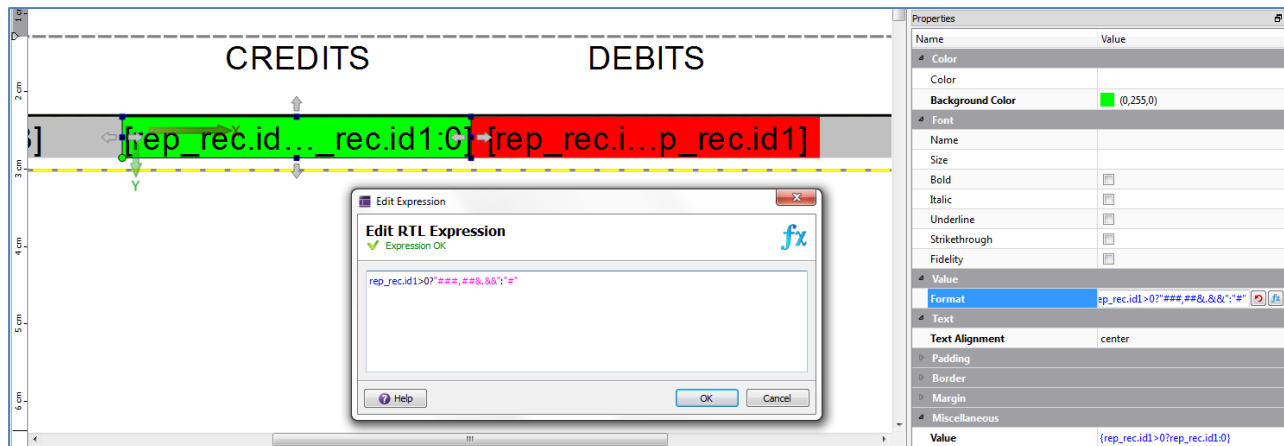
- # Name
  - ## Unique identifier
    - ### Cannot be an expression

- # Type
  - ## The type of object (e.g. WordBox)
    - ### Cannot be an expression
    - ### Select 'Convert To' to modify the type

- # Visibility Condition
  - ## Boolean that indicates if object is printed

- # Class
  - ## Specify one or more classes for an object
    - ### Predefined classes with prefix 'grw'

Object	
Name	Country
Type	WordBox
Visibility Condition	
Class	

Geometry	
X	0
Y	max-1cm
X-Size	3cm
Y-Size	min
Anchor X	0,5
Anchor Y	1
Alignment	baseline
Scale X	1
Scale Y	1
X-Size Adjustment	expandToParent
Y-Size Adjustment	

- X,Y
  - Position of attachment point relative to parent object
- X-Size, Y-Size
  - Height, width of object
- Anchor X,Y
  - Position of attachment point within object
    - (0,0) = top-left corner
    - (0.5, 0.5) = center
    - (1,1) = bottom-right corner

Properties	
Name	Value
X	40
Y	70
X-Size	
Y-Size	
Anchor X	0,3
Anchor Y	0,2
Alignment	near
Scale X	1
Scale Y	1
X-Size Adjustment	
Y-Size Adjustment	

| Geometry	
X	0
Y	max-1cm
X-Size	3cm
Y-Size	min
Anchor X	0,5
Anchor Y	1
Alignment	baseline
Scale X	1
Scale Y	1
X-Size Adjustment	expandToParent
Y-Size Adjustment	
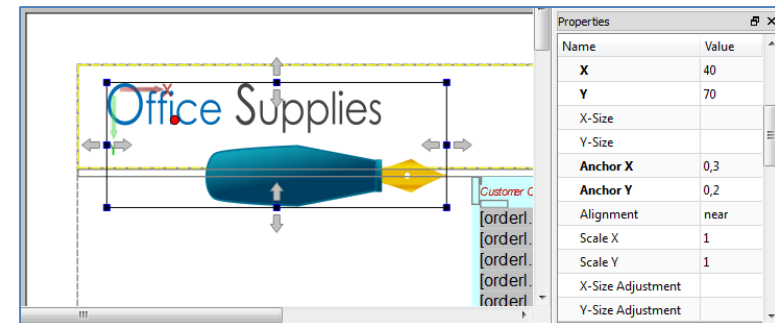
- Alignment
  - what end of parent object do we position object from
    - near, center, far, baseline
- Scale X/Y
  - Stretch or shrink object using specified ratio
- X/Y-Size Adjustment
  - Override X-Size and Y-Size and size object relative to children or parent objects
    - shrinkToChildren
    - expandToParent

- ## LayoutDirection
  - ### The direction of the Y axis
    - When child objects added, they are added in the direction of the Y-axis
    - Various values can mean the same thing

- ## SwapX
  - ### By default X-axis 90 degrees anti-clockwise of Y-axis
  - ### SwapX sets X-axis 90 degrees clockwise of Y-axis

Orientation	
Layout Direction	topToBottom
Swap X	☐
Transform transparently	☐
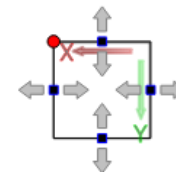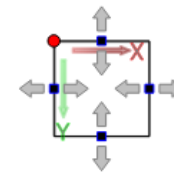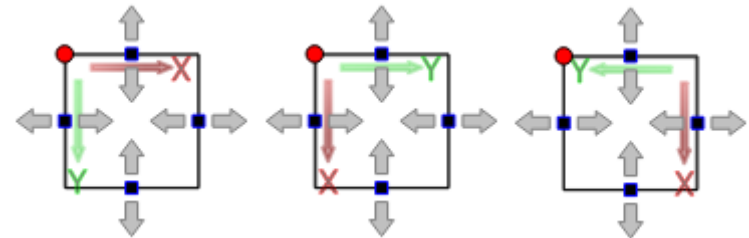
- Transform transparently

  – For rotation purposes

    - Changes the effect of the properties layoutDirection and swapX

    - The transformation extends to the entire fragment

Orientation	
Layout Direction	topToBottom
Swap X	☐
Transform transparently	☐

- Baseline Type
 - When aligning objects in a same parent, which edge of this node should be aligned with which edge of its elder sibling

- Section
  - Print an object at a specific location on a page
  - Useful to define headers and footers
  - Only for non-propagating containers

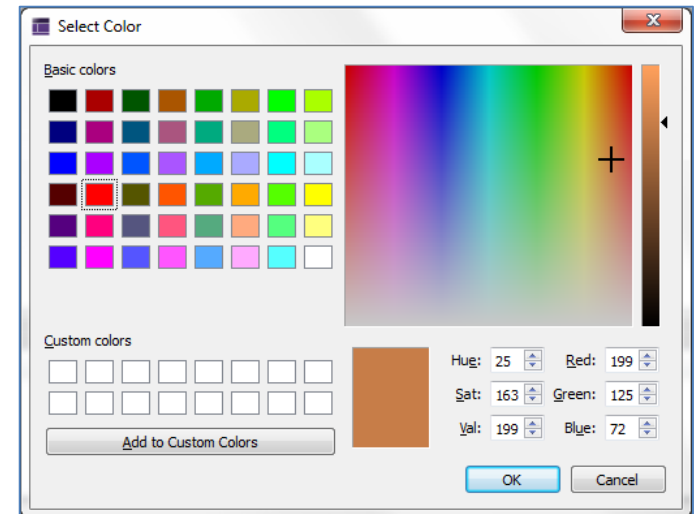- Floating Behaviour
  - Should the parent object ignore this object when sizing
    - enclosed (no)
    - free (yes)

- Clip
  - Clip the report object box and its content along the sides
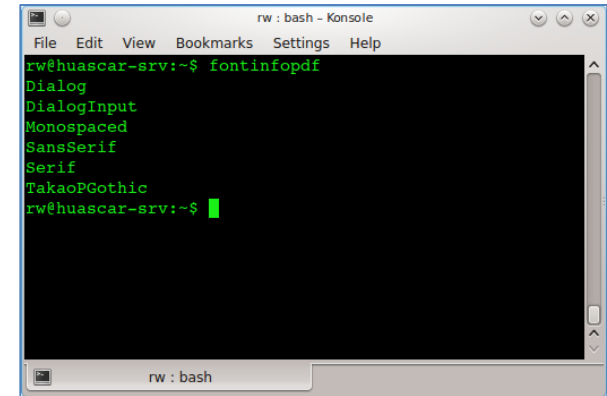
GRD – Common Object Properties
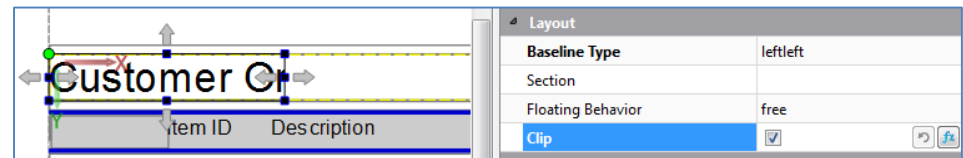
- Color
  - Most objects allow you to specify two colors
    - Wizard available that returns color as RGB
- Font
  - Name - select from list of fonts available (*)
  - Size
    - expressed as points e.g. 10,12
    - Expressed relative to default
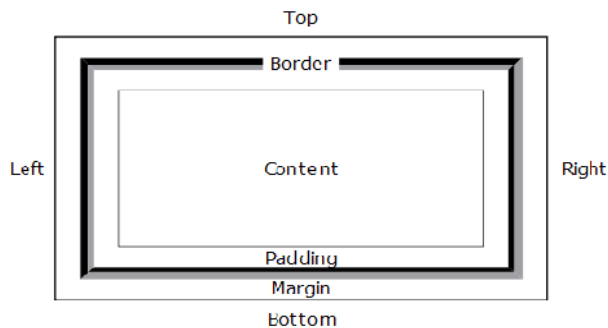   - fontSize*1.25, 125%,
      - fontSize*0.8, 80%

- Font
  - $GREDIR/bin/fontinfo
    - List of fonts available
  - $GREDIR/bin/fontinfopdf
    - List of fonts available that can be embedded in PDFs. Not all fonts can be embedded in PDF documents
  - Where font not available, a system of fallback fonts is used
  - Caution! List of fonts on *Unix* Server where report runs may be different than fonts located on *Windows* PC where report is designed

- ## Padding
  - Space between content and border

- ## Border

- ## Margin
  - Space between border and sibling and parent

Padding	
Width	0
Top Width	
Right Width	5
Bottom Width	
Left Width	5
Border	
Rounded Corners	☐
Width	2
Top Width	
Right Width	
Bottom Width	
Left Width	
Style	solid
Top Style	
Right Style	
Bottom Style	
Left Style	
Color	■ (255,0,0)
Top Color	
Right Color	
Bottom Color	
Left Color	
Margin	
Width	2
Top Width	
Right Width	
Bottom Width	
Left Width	

- ## href
  - – Define an hyperlink
  - – Pointing to
    - Resource on the Internet
    - Resource on the local disk
    - An anchor in the report document
- ## id
  - – Create an anchor in the report document
  - – Used as target of an hyperlink

QUESTIONS ?
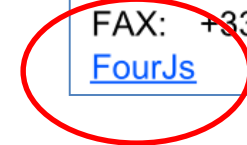
- Exercise 1
  - Open the **'Sales' project**
  - Open the 'SalesList.4rp' report design
  - Resize the columns of the list to more accurate values
  - Put all titles of the list in bold and change their font type and size
  - Set a text color on the second column (including the title)
  - Display the total in the following format at the bottom right of the list: "Total: <total_value>"
  - Position the total at the bottom right of the page
  - Change the font size of the second column to a big value; ensure that all items in each line stay properly aligned (keep baseline alignment)

- Exercise 2
  - Open the **'OrderReportJava' demo project**
  - Open 'OrderReport.4rp' demo report design
  - Put all details of the Office's Address in italic
  - Change the font type of the whole Office's Address
  - Add an hyperlink to your Web Site in the Office's Address
  - Draw a border all around the Office's Address
  - Run the report