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# Elixir Perspective Object Model

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# Introduction

This document describes the internal object model of Elixir Perspective. The object model consists of a number of classes that are all in the `com.elixirtech.perspective.model` package. The information is generated directly from the tool. While we endeavour to ensure this API will remain unchanged, it is possible that changes will be needed in future releases to correct errors or to add significant functionality.

All location and dimension values are in twips, where we assume 1 twip = 1/20 of a pixel and there are 72 pixels per inch (giving 1440 twips per inch). Font sizes are also measured in twips.

# Shorthand Notation

## Attributes

Where an object is shown to contain another object, for example every `Style` has a `String` called `Name`, this implies there are methods called `getName()` and `setName(String name)`. In JavaScript it is also allowable to access the property directly as `style.Name`, which is internally mapped into calls to the `get` or `set` method, depending on the context. The only exception to this pattern is `Boolean` values, where an attribute of type `Boolean` called `Enabled` is accessed by `isEnabled()` and `setEnabled(Boolean b)`. This is consistent with Java bean naming conventions.

## Collections

Many objects hold collections of other objects. In this object model these are `Lists` and `Maps`. Each `List` and `Map` is exposed through an API described here.

List collections are documented as in this example:

```
List: Item : List<CubeLevel>
```

This shorthand defines the following functions:

- `int getItemCount()`
- `void addItem(CubeLevel item)`
- `void addItem(int idx, CubeLevel item)`
- `void addAllItems(Collection collection)`
- `int indexOfItem(CubeLevel item)`
- `void removeItem(CubeLevel item)`
- `void removeAllItems(Collection collection)`
- `void removeAllItems()`
- `CubeLevel getItem(int idx)`
- `java.util.Iterator getItemIterator()`

Each shorthand can be trivially expanded into these ten functions, varying the name of the contents (`Item` in this case) and the type of the contents (`CubeLevel` in this case).

Map collections are documented as in this example:

```
Map: RenderDetails : Map<String,RenderDetails> key is value.getMimeType()
```

This shorthand defines the following functions:

- void addRenderDetails(RenderDetails renderDetails)
- void removeRenderDetails(RenderDetails renderDetails)
- RenderDetails getRenderDetails(String mimeType)
- java.util.Iterator getRenderDetailsIterator()
- int getRenderDetailsCount()

Each shorthand can be trivially expanded into these five functions, varying the name of the key type and value type (String and RenderDetails respectively in this case). The add method requires more explanation, the key is not passed in to the function, as with a typical Map.put(key,value) call, instead the key is derived by invoking a method on the value. In this example, the key is derived by calling the function getMimeType() on the RenderDetails, which returns a String to be used as the key. This is done inside the API, so you just have to add a RenderDetails and the key will be determined automatically.

## Elements

### Action

Implicit Style Name: action

- Enabled : Boolean
- Path : ActionPath (view ActionPath)

### ActionPath

Implicit Style Name: action-path

- View : String
- Content : String
- Event : String

### Alias

Implicit Style Name: alias

- Name : String
- NewName : String

### BasicTable

BasicTable extends Content (view Content)

Implicit Style Name: table

- ShowRowHeader : boolean

- ShowColumnTypes : boolean
- SingleSelect : boolean
- HeaderFont : Font (view Font)
- Font : Font (view Font)

## Card

Card extends SplitPanel (view SplitPanel)

Implicit Style Name: card

- BackgroundColor : String

## ChartContent

ChartContent extends Content (view Content)

Implicit Style Name: chart

- ChartName : String
- ChartDocument : com.elixirtech.org.jdom.Document

## Content

Implicit Style Name: content

- Name : String
- DataURL : String
- Title : String
- AutoRefresh : boolean
- BackgroundColor : String
- BorderName : String
- BorderTitle : String
- ToolTip : String
- PaddingLeft : int
- PaddingRight : int
- PaddingTop : int
- PaddingBottom : int
- MarginLeft : int
- MarginRight : int
- MarginTop : int

- MarginBottom : int
- Extract : String
- InitialSelection : InitialSelection (view InitialSelection)
- OnRenderBegin : Script (???)
- OnRenderEnd : Script (???)

List: Filter : List<Filter>

List: Discard : List<Discard>

List: Depend : List<Depends>

List: Parameter : List<Parameter>

List: GroupDefinition : List<GroupDefinition>

## CubeColumn

Implicit Style Name: column

List: Item : List<CubeLevel>

## CubeHierarchy

Implicit Style Name: hierarchy

- Name : String

List: Level : List<CubeLevel>

## CubeLevel

Implicit Style Name: level

- Name : String
- Sort : String
- GroupOn : String
- GroupData : String
- DerivedField : String
- HideTotals : boolean

## CubeMeasure

Implicit Style Name: measure

- Name : String
- Function : String
- Pattern : String

- TextAlignment : String
- IconAlignment : String
- ShowText : boolean
- ShowIcon : boolean
- Format : Format (???)

List: CellRender : List<CellRender>

## CubeRow

Implicit Style Name: row

List: Item : List<CubeLevel>

## CubeTable

CubeTable extends Content (view Content)

Implicit Style Name: cube

- CollapseRows : boolean
- CollapseColumns : boolean
- KeepRowTotals : boolean
- KeepColumnTotals : boolean
- ShowColumnTotalsAfterDetails : boolean
- ShowRowTotalsAfterDetails : boolean
- ShowRowParents : boolean
- ShowColumnParents : boolean
- RowTitle : String
- ColumnTitle : String
- SingleSelect : boolean
- ColHeaderBackground2 : String
- RowHeaderBackground2 : String
- MeasureBackground : String
- DataFont : Font (view Font)
- ColFont : Font (view Font)
- RowFont : Font (view Font)
- Column : CubeColumn (view CubeColumn)
- Row : CubeRow (view CubeRow)

List: Hierarchy : List<CubeHierarchy>

List: Measure : List<CubeMeasure>

## Depends

Implicit Style Name: depends

- View : String

## Discard

Implicit Style Name: discard

- Name : String

## ExcelCubeAction

ExcelCubeAction extends Action (view Action)

Implicit Style Name: excel-cube

- Content : String

## Filter

Implicit Style Name: filter

- Name : String
- Type : String
- LegacyCondition : String

## Font

Implicit Style Name:

- Name : String
- Size : int
- Bold : boolean
- Italic : boolean
- Foreground : String
- Background : String
- SelectionForeground : String
- SelectionBackground : String

## FormCombo

FormCombo extends FormItem (view FormItem)

Implicit Style Name: form-combo

- Field : String
- Label : String
- Depends : String

## FormContent

FormContent extends Content (view Content)

Implicit Style Name: form

- Direction : String

List: FormItem : List<FormItem>

## FormItem

Implicit Style Name: form-item

- Name : String
- Width : int

## GlintContent

GlintContent extends Content (view Content)

Implicit Style Name: glint

## GridContent

GridContent extends Content (view Content)

Implicit Style Name: grid

- Length : int
- Direction : String
- Field : String
- Sort : boolean
- SingleSelect : boolean
- Toggle : boolean
- ShowAsCombo : boolean
- ComboLabel : String
- Font : Font (view Font)

## Holder

Implicit Style Name: holder

List: Content : List<Object>

## ImageContent

ImageContent extends Content (view Content)

Implicit Style Name: image

- XPosition : String
- YPosition : String
- Script : Script (???)

## InitialSelection

Implicit Style Name: initial-selection

- Type : String
- ValueField : String

List: Values : List<String>

## JavaScriptAction

JavaScriptAction extends Action (view Action)

Implicit Style Name: javascript

- Script : Script (???)

## MapContent

MapContent extends Content (view Content)

Implicit Style Name: map

- MapURL : String
- DataKey : String
- DataColumn : String
- ToolTipColumn : String

## MaximizeAction

MaximizeAction extends Action (view Action)

Implicit Style Name: maximize

- Type : String
- Target : String

## Metadata

Metadata is held by the tools to track information such as which version of the designer was used to edit the template.

Implicit Style Name: metadata

- Version : int
- Location : String

## Panel

Implicit Style Name: panel

- Name : String
- Weight : int
- State : String

## Perspective

Perspective extends SplitPanel (view SplitPanel)

Implicit Style Name: perspective

- Refresh : int
- Width : int
- Height : int
- OnRenderBegin : Script (???)
- Metadata : Metadata (view Metadata)
- Security : Security (???)

List: Content : List<Content>

List: Action : List<Action>

List: Parameter : List<Parameter>

## RefreshAction

RefreshAction extends Action (view Action)

Implicit Style Name: refresh

- Target : String

## ReportContent

ReportContent extends Content (view Content)

Implicit Style Name: report

- Report : String

Map: Alias : Map<String, Alias>key is value.getName()

## ResetAction

ResetAction extends Action (view Action)

Implicit Style Name: reset

## ShowAction

ShowAction extends Action (view Action)

Implicit Style Name: show

- Content : String
- Target : String

## ShowCardAction

ShowCardAction extends Action (view Action)

Implicit Style Name: show-card

- Perspective : String
- Card : String

## SplitPanel

SplitPanel extends Panel (view Panel)

Implicit Style Name: split

- Direction : String

List: Panel : List<Panel>

## ViewPanel

ViewPanel extends Panel (view Panel)

Implicit Style Name: view

- InitialContent : String