

# Build a web application within 40 minutes with Apache OFBiz.

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Create an app to  
manage Care Bears  
feelings



# Prérequis

- Java JDK 1.7+
- Your favorite IDE
- Fresh OFBiz checkout



## Creating a new component

- Create Carebear component
  - `./ant create-component`
- Load demo data and start OFBiz
  - `./ant load-demo start`
  - <https://localhost:8443/carebear>



# Modeling the data

- Data Model Setup





# Modeling the data

- Data Model Setup



CareBear
<i>net.apachecon.demo.carebear</i>
<b>careBearId : id-ng</b>
name : name
color : name



# Modeling the data

- Data Model Setup



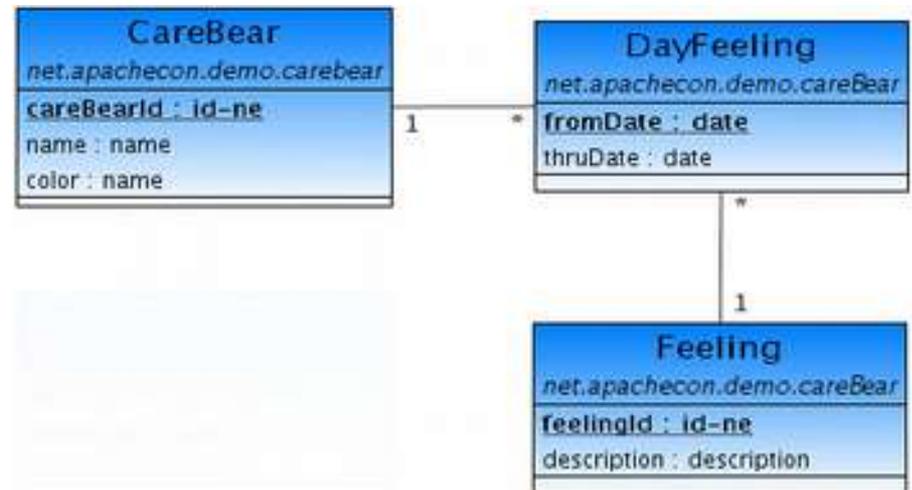
CareBear
<i>net.apachecon.demo.carebear</i>
<b>careBearId</b> : id-ne
name : name
color : name

Feeling
<i>net.apachecon.demo.careBear</i>
<b>feelingId</b> : id-ne
description : description



# Modeling the data

- Data Model Setup

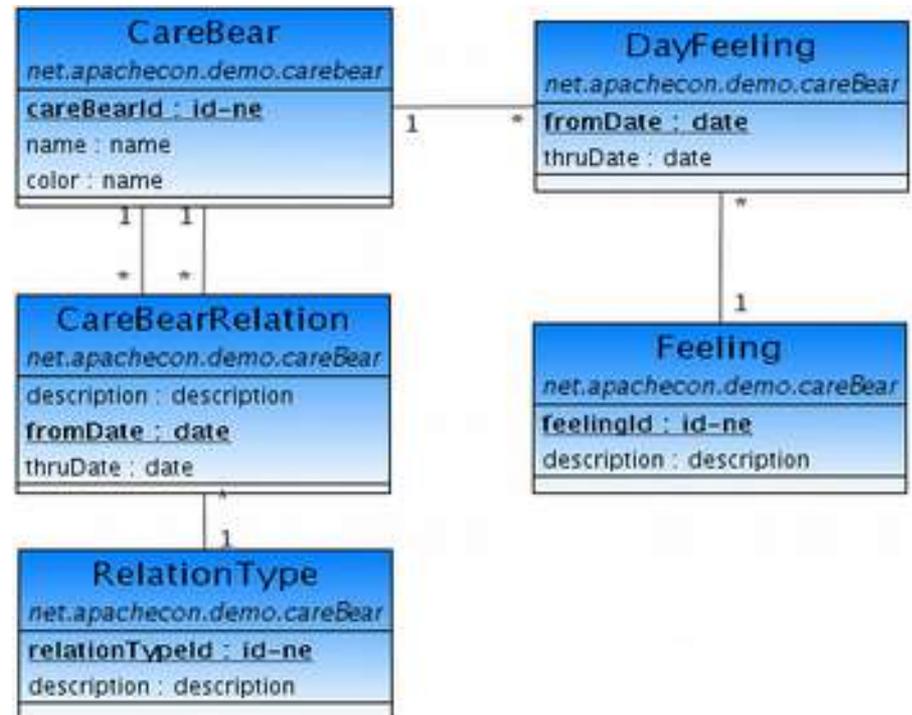






# Modeling the data

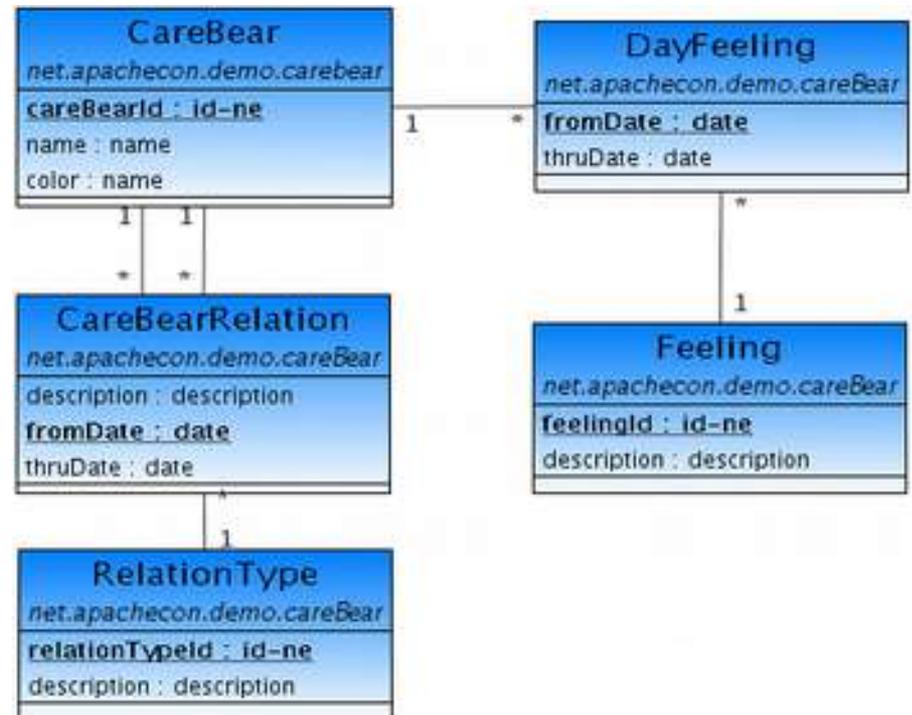
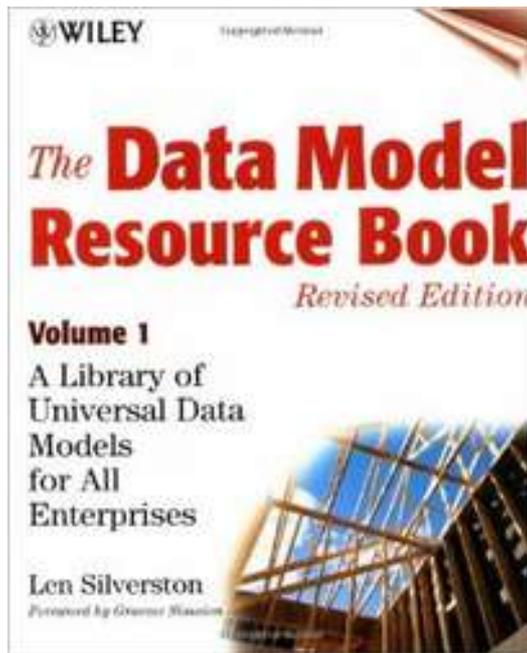
- Data Model Setup





# Modeling the data

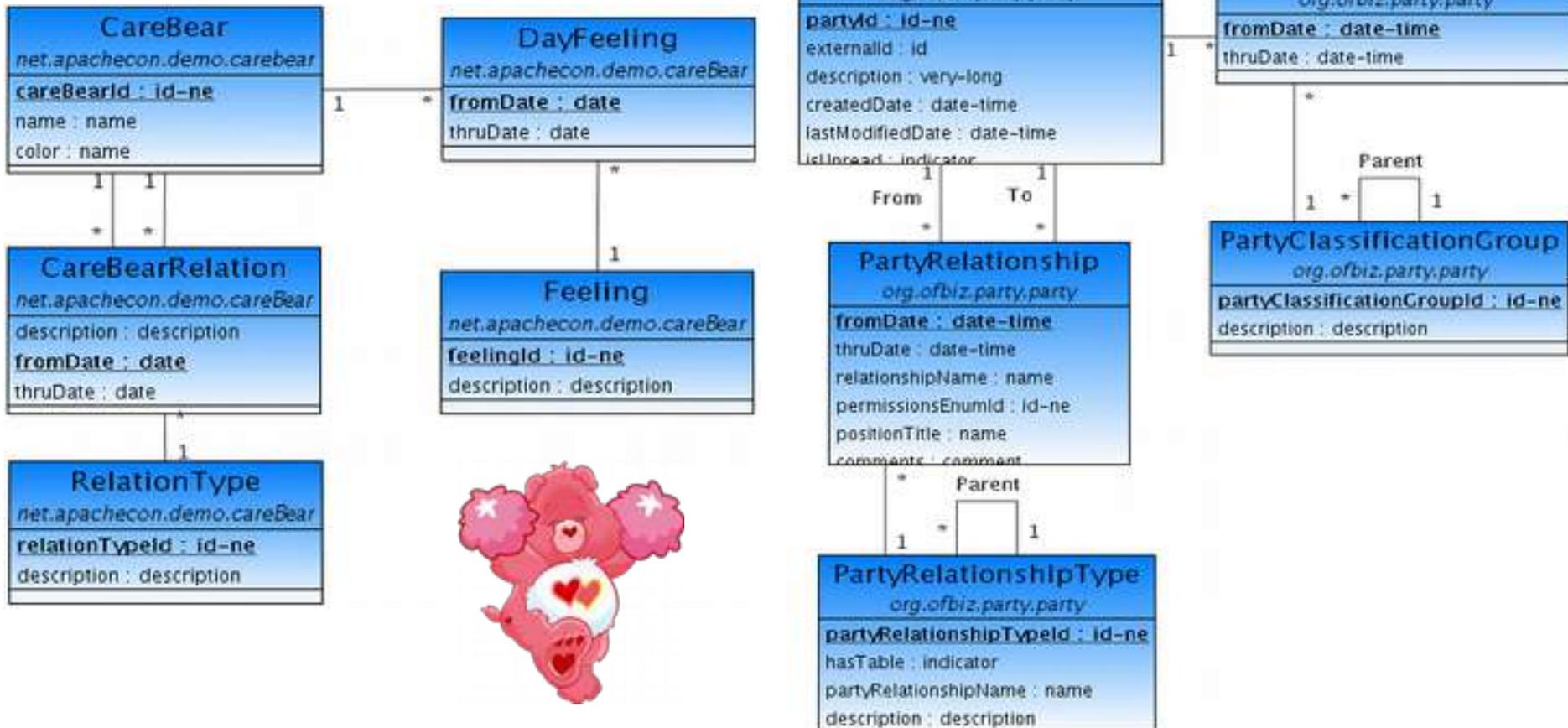
- Data Model Resource Book





# Modeling the data

- OFBiz Data Model





# The entitymodel definition

- EntityEngine and entitymodel.xml file



```
<entity entity-name="CareBear"  
        package-name="net.apachecon.demo.carebear"  
        title="Care Bears">  
  <field name="careBearId" type="id-ne"/>  
  <field name="name" type="name"/>  
  <field name="color" type="name"/>  
  <prim-key field="careBearId"/>  
</entity>
```

```
<entity entity-name="Feeling"  
        package-name="net.apachecon.demo.carebear"  
        title="The different feelings">  
  <field name="feelingId" type="id-ne"/>  
  <field name="description" type="description"/>  
  <prim-key field="feelingId"/>  
</entity>
```



# The entitymodel definition

```
<entity entity-name="DayFeeling"  
  package-name="net.apachecon.demo.carebear"  
  title="Day feelind of Bisounours">  
  <field name="careBearId" type="id-ne"/>  
  <field name="feelingId" type="id-ne"/>  
  <field name="fromDate" type="date"/>  
  <field name="thruDate" type="date"/>  
  <prim-key field="careBearId"/>  
  <prim-key field="feelingId"/>  
  <prim-key field="fromDate"/>  
  <relation type="one" fk-name="FEEL_CAREBEAR" rel-entity-name="CareBear">  
    <key-map field-name="careBearId"/>  
  </relation>  
  <relation type="one" fk-name="FEEL_FEEL" rel-entity-name="Feeling">  
    <key-map field-name="feelingId"/>  
  </relation>  
</entity>
```



# The entitymodel definition

```
<entity entity-name="CareBearRelation"
  package-name="net.apachecon.demo.carebear"
  title="Relations between Bisounours">
  <field name="careBearIdFrom" type="id-ne"/>
  <field name="careBearIdTo" type="id-ne"/>
  <field name="relationTypeId" type="id-ne"/>
  <field name="description" type="description"/>
  <field name="fromDate" type="date"/>
  <field name="thruDate" type="date"/>
  <prim-key field="careBearIdFrom"/>
  <prim-key field="careBearIdTo"/>
  <prim-key field="relationTypeId"/>
  <prim-key field="fromDate"/>
  <relation type="one" fk-name="CAREBEAR_REL_CAREBEAR_FR" rel-entity-name="CareBear">
    <key-map field-name="careBearIdFrom" rel-field-name="careBearId"/>
  </relation>
  <relation type="one" fk-name="CAREBEAR_REL_CAREBEAR_TO" rel-entity-name="CareBear">
    <key-map field-name="careBearIdTo" rel-field-name="careBearId"/>
  </relation>
  <relation type="one" fk-name="CAREBEAR_REL_TYPE" rel-entity-name="RelationType">
    <key-map field-name="relationTypeId"/>
  </relation>
</entity>
```



# The entitymodel definition

```
<entity entity-name="RelationType"  
  package-name="net.apachecon.demo.carebear"  
  title="Relation types">  
  <field name="relationTypeId" type="id-ne"/>  
  <field name="description" type="description"/>  
  <prim-key field="relationTypeId"/>  
</entity>
```



# Type data definition

- hot-deploy/carebear/data/CareBearTypeData.xml

```
<RelationType relationTypeId="IL" description="In Love"/>  
<RelationType relationTypeId="FR" description="Friend"/>  
<RelationType relationTypeId="VLT" description="Voltage"/>  
<RelationType relationTypeId="ANG" description="Angry"/>  
<Feeling feelingId="HA" description="Happy"/>  
<Feeling feelingId="BL" description="Bliss"/>  
<Feeling feelingId="JL" description="Jealous"/>  
<Feeling feelingId="SA" description="Sad"/>
```







# Service definition

```
<service name="createCareBear" default-entity-name="CareBear" engine="entity-auto" invoke="create"
auth="true">
  <auto-attributes include="pk" mode="OUT" optional="false"/>
  <auto-attributes include="nonpk" mode="IN" optional="true"/>
</service>
```

```
<service name="updateCareBear" default-entity-name="CareBear" engine="entity-auto" invoke="update"
auth="true">
  <auto-attributes include="pk" mode="IN" optional="false"/>
  <auto-attributes include="nonpk" mode="IN" optional="true"/>
</service>
```

```
<service name="createDayFeeling" default-entity-name="DayFeeling" engine="entity-auto" invoke="create"
auth="true">
  <auto-attributes include="pk" mode="IN" optional="false"/>
  <auto-attributes include="nonpk" mode="IN" optional="true"/>
  <override name="fromDate" optional="true"/>
</service>
```





# Service definition

```
<service name="createCareBearRelation" default-entity-name="CareBearRelation" engine="entity-auto"
invoke="create" auth="true">
  <auto-attributes include="pk" mode="IN" optional="false"/>
  <auto-attributes include="nonpk" mode="IN" optional="true"/>
</service>
```

```
<service name="updateCareBearRelation" default-entity-name="CareBearRelation" engine="entity-auto"
invoke="update" auth="true">
  <auto-attributes include="pk" mode="IN" optional="false"/>
  <auto-attributes include="nonpk" mode="IN" optional="true"/>
</service>
```





# Data model creation

- Restart OFBiz loading the demo data
  - `./ant stop load-demo start-batch`
- Now every dev is live, no restart is required





# Controller.xml

- Define the requests

```
<request-map uri="ListCareBear">  
    <security https="true" auth="true"/><response name="success" type="view"  
value="ListCareBear"/>  
</request-map>  
<request-map uri="EditCareBear">  
    <security https="true" auth="true"/><response name="success" type="view"  
value="EditCareBear"/>  
</request-map>  
<request-map uri="CreateCareBear">  
    <security https="true" auth="true"/>  
    <event type="service" invoke="createCareBear"/>  
    <response name="success" type="view" value="ListCareBear"/>  
    <response name="error" type="view" value="ListCareBear"/>  
</request-map>
```



# Controller.xml

- Define the views

```
<view-map name="EditCareBear" type="screen"  
page="component://carebear/widget/CareBearScreens.xml#EditCareBear"/>  
<view-map name="ListCareBear" type="screen"  
page="component://carebear/widget/CareBearScreens.xml#ListCareBear"/>
```





# CareBearScreens.xml

- Define the first screen :

```
<screen name="ListCareBear" >
  <section>
    <widgets>
      <decorator-screen name="CareBearCommonDecorator"
location="{parameters.mainDecoratorLocation}">
        <decorator-section name="body">
          <container style="button-bar"><link target="EditCareBear" link-type="ajax-window" height="140"
width="500" text="{uiLabelMap.CommonNew}" style="buttontext create"/></container>
          <include-form location="component://carebear/widget/CareBearForms.xml" name="ListCareBear"/>
        </decorator-section>
      </decorator-screen>
    </widgets>
  </section>
</screen>
```

```
<screen name="main">
  <section>
    <actions>
      <set field="headerItem" value="main"/>
    </actions>
    <widgets>
      <include-screen name="ListCareBear"/>
    </widgets>
  </section>
</screen>
```



# CareBearForms.xml

- And its Form :

```
<form name="ListCareBear" type="list" default-table-style="basic-table">  
  <actions>  
    <entity-condition entity-name="CareBear"/>  
  </actions>  
  <auto-fields-entity entity-name="CareBear" default-field-type="display"/>  
  <field name="careBearId">  
    <hyperlink description="{careBearId}" target="DetailsCareBear">  
      <parameter param-name="careBearId"/>  
    </hyperlink>  
  </field>  
</form>
```



- Let's test



# CareBear creation

- Create the screen and form :

```
<screen name="EditCareBear">
  <section>
    <actions>
      <property-map resource="CommonUiLabels" map-name="uiLabelMap" global="true"/>
    </actions>
    <widgets>
      <include-form name="EditCareBear"
location="component://carebear/widget/CareBearForms.xml"/>
    </widgets>
  </section>
</screen>

<form name="EditCareBear" type="single" target="CreateCareBear">
  <auto-fields-entity entity-name="CareBear"/>
  <field name="careBearId"><ignored/></field>
  <field name="createButton"><submit/></field>
</form>
```

- Let's test a CareBear creation





# CareBear management

- Define the requests

```
<request-map uri="DetailsCareBear"><security https="true" auth="true"/><response name="success"
type="view" value="DetailsCareBear"/></request-map>
<request-map uri="CreateCareBearFeeling">
  <security https="true" auth="true"/>
  <event type="service" invoke="createDayFeeling"/>
  <response name="success" type="view" value="DetailsCareBear"/>
  <response name="error" type="view" value="DetailsCareBear"/>
</request-map>

<request-map uri="AddCareBearRelation"><security https="true" auth="true"/><response name="success"
type="view" value="AddCareBearRelation"/></request-map>
<request-map uri="CreateCareBearRelation">
  <security https="true" auth="true"/>
  <event type="service" invoke="createCareBearRelation"/>
  <response name="success" type="view" value="DetailsCareBear"/>
  <response name="error" type="view" value="DetailsCareBear"/>
</request-map>
<request-map uri="LargeViewCareBear"><security https="true" auth="true"/><response name="success"
type="view" value="LargeViewCareBear"/></request-map>
```



# CareBear management

- Define the views

```
<view-map name="DetailsCareBear" type="screen"  
page="component://carebear/widget/CareBearScreens.xml#DetailsCareBear"/>  
  <view-map name="LargeViewCareBear" type="screen"  
page="component://carebear/widget/CareBearScreens.xml#LargeViewCareBear"/>
```



# CareBear management

- Create the screen :

```
<screen name="DetailsCareBear" >
  <section>
    <actions>
      <set field="careBearId" from-field="parameters.careBearId"
default-value="{parameters.careBearIdFrom}"/>
      <entity-one value-field="carebear" entity-name="CareBear"/>
    </actions>
    <widgets>
      <decorator-screen name="main-decorator" location="{parameters.mainDecoratorLocation}">
        <decorator-section name="pre-body">
          <label style="h2" text="CareBear {carebear.name}"/>
        </decorator-section>
        <decorator-section name="left-column">
          <include-form location="component://carebear/widget/CareBearForms.xml"
name="ListCareBearFeeling"/>
          <horizontal-separator/>
          <include-form location="component://carebear/widget/CareBearForms.xml"
name="EditCareBearFeeling"/>
        </decorator-section>
      </decorator-screen>
    </widgets>
  </section>
</screen>
```

[...]



# CareBear management

- Create the screen :

```
<decorator-section name="body">
  <include-form location="component://carebear/widget/CareBearForms.xml"
name="ListCareBearRelation"/>
  <horizontal-separator/>
  <include-form location="component://carebear/widget/CareBearForms.xml"
name="EditCareBearRelation"/>
</decorator-section>
</decorator-screen>
</widgets>
</section>
</screen>
```





# CareBear management

- And then the forms :

```
<form name="ListCareBearFeeling" type="list" default-table-style="basic-table">
  <actions>
    <entity-condition entity-name="DayFeeling">
      <condition-expr field-name="careBearId" from-field="careBearId"/>
      <order-by field-name="fromDate"/>
    </entity-condition>
  </actions>
  <auto-fields-entity entity-name="DayFeeling" default-field-type="display"/>
  <field name="feelingId">
    <display-entity entity-name="Feeling" description="[${feelingId}] ${description}"/>
  </field>
</form>
<form name="EditCareBearFeeling" type="single" target="CreateCareBearFeeling">
  <field name="careBearId"><hidden/></field>
  <field name="fromDate" required-field="true"><date-time type="date"/></field>
  <field name="feelingId" required-field="true">
    <drop-down allow-empty="false">
      <entity-options entity-name="Feeling"/>
    </drop-down>
  </field>
  <field name="addButton"><submit/></field>
</form>
```



# CareBear management

- And then the forms :

```
<form name="ListCareBearRelation" type="list" default-table-style="basic-table">
  <actions>
    <entity-condition entity-name="CareBearRelation">
      <condition-expr field-name="careBearIdFrom" from-field="careBearId"/>
      <order-by field-name="fromDate"/>
    </entity-condition>
  </actions>
  <auto-fields-entity entity-name="CareBearRelation" default-field-type="display"/>
  <field name="careBearIdFrom"><hidden/></field>
  <field name="relationTypeId"><display-entity entity-name="RelationType"
    description="[${relationTypeId}] ${description}"/></field>
</form>
<form name="EditCareBearRelation" type="single" target="CreateCareBearRelation">
  <auto-fields-entity entity-name="CareBearRelation"/>
  <field name="careBearIdFrom"><hidden value="${careBearId}"/></field>
  <field name="relationTypeId">
    <drop-down allow-empty="false">
      <entity-options entity-name="RelationType"/>
    </drop-down>
  </field>
  <field name="addButton"><submit/></field>
</form>
```

Let's test !



# CareBear Report

- A new menu :

Add in CareBareMenus.xml :

```
<menu-item name="Report" title="Report"><link target="LargeViewCareBear"/></menu-item>
```





# CareBear Report

- A new screen :

```
<screen name="LargeViewCareBear">
  <section>
    <actions>
      <set field="headerItem" value="Etat"/>
    </actions>
    <widgets>
      <decorator-screen name="main-decorator" location="{parameters.mainDecoratorLocation}">
        <decorator-section name="pre-body">
          <include-form location="component://carebear/widget/CareBearForms.xml"
name="SearchCareBearDate"/>
        </decorator-section>
        <decorator-section name="body">
          <include-form location="component://carebear/widget/CareBearForms.xml"
name="ListDetailsCareBearDate"/>
        </decorator-section>
      </decorator-screen>
    </widgets>
  </section>
</screen>
```





# CareBear Report

- And its forms :

```
<form name="SearchCareBearDate" type="single" target="LargeViewCareBear">  
  <field name="date"><date-time type="date"/></field>  
  <field name="searchButton"><submit/></field>  
</form>
```



# CareBear Report

- And its forms :

```
<form name="ListDetailsCareBearDate" type="list" default-table-style="basic-table">
  <actions>
    <entity-condition entity-name="DayFeeling">
      <condition-list>
        <condition-expr field-name="fromDate" from-field="parameters.date"/>
      </condition-list>
    </entity-condition>
  </actions>
  <row-actions>
    <entity-condition entity-name="CareBearRelation" list="relations">
      <condition-list>
        <condition-expr field-name="careBearIdFrom" from-field="careBearId"/>
        <condition-expr field-name="fromDate" from-field="parameters.date"/>
      </condition-list>
    </entity-condition>
    <set field="relation" from-field="relations[0]"/>
  </row-actions>
</form>
```



# CareBear Report

- And its forms :

```
<alt-row-style style="Validate" use-when="&quot;HA&quot;.equals(feelingId)"/>
<alt-row-style style="Warn" use-when="&quot;JL&quot;.equals(feelingId)"/>
<alt-row-style style="disabled" use-when="&quot;SA&quot;.equals(feelingId)"/>
<alt-row-style style="alert" use-when="&quot;BL&quot;.equals(feelingId)"/>
<field name="careBearId"><display-entity entity-name="CareBear"
  description="[${careBearId}] ${name}"/></field>
<field name="feelingId"><display-entity entity-name="Feeling"
  description="[${feelingId}] ${description}"/></field>
<field name="description" map-name="relation"><display/></field>
<field name="relationTypeId" map-name="relation"><display-entity entity-name="RelationType"
description="[${relationTypeId}] ${description}"/></field>
  <field name="carebearIdTo" map-name="relation" entry-name="careBearIdTo"><display-entity entity-
name="CareBear" description="[${careBearId}] ${name}" key-field-name="careBearId"/></field>
</form>
```





# Data Loading

- The app is over ! Data Loading :

```
<CareBear careBearId="2200" name="Tenderheart Bear" color="Red"/> <CareBear careBearId="2201" name="Grumpy Bear" color="Blue"/>
<CareBear careBearId="2222" name="Love-A-Lot Bear" color="Deep Pink"/><CareBear careBearId="2206" name="Friend Bear" color="Light Orange"/>
<CareBear careBearId="2208" name="Bedtime Bear" color="Sky blue"/><CareBear careBearId="2278" name="Cheer Bear" color="Pink"/>
<CareBear careBearId="2788" name="Birthday Bear" color="Dark Orange"/><CareBear careBearId="2708" name="Funshine Bear" color="Yellow Citrus"/>
<CareBear careBearId="7088" name="Wish Bear" color="Blue-Green"/><CareBear careBearId="2877" name="Good Luck Bear" color="Green"/>

<CareBearRelation careBearIdFrom="2200" careBearIdTo="2222" fromDate="2015-09-30" description="In couple for the apacheCon !" relationTypeId="IL"/>
<CareBearRelation careBearIdFrom="2708" careBearIdTo="2206" fromDate="2015-09-30" description="Be friend at the apacheCon !" relationTypeId="FR"/>
<CareBearRelation careBearIdFrom="2708" careBearIdTo="2222" fromDate="2015-09-30" description="Meeting an old friend at the apacheCon !"
relationTypeId="FR"/>
<CareBearRelation careBearIdFrom="2708" careBearIdTo="2222" fromDate="2015-10-01" description="Loving old friend presentation, flirt is here !"
relationTypeId="IL"/>
<CareBearRelation careBearIdFrom="2200" careBearIdTo="2708" fromDate="2015-10-01" description="Do not go near my GF !" relationTypeId="VLT"/>
<CareBearRelation careBearIdFrom="2200" careBearIdTo="2222" fromDate="2015-10-01" description="Beware !" relationTypeId="VLT"/>
<CareBearRelation careBearIdFrom="2206" careBearIdTo="2708" fromDate="2015-10-01" description="Where is my friend ?" relationTypeId="VLT"/>
<CareBearRelation careBearIdFrom="2222" careBearIdTo="2708" fromDate="2015-10-02" description="No care about you" relationTypeId="ANG"/>
<CareBearRelation careBearIdFrom="2206" careBearIdTo="2708" fromDate="2015-10-02" description="You left me alone !" relationTypeId="VLT"/>
<CareBearRelation careBearIdFrom="2200" careBearIdTo="2222" fromDate="2015-10-02" description="We are a couple !" relationTypeId="IL"/>

<DayFeeling careBearId="2200" fromDate="2015-09-30" feelingId="HA"/><DayFeeling careBearId="2222" fromDate="2015-09-30" feelingId="HA"/>
<DayFeeling careBearId="2708" fromDate="2015-09-30" feelingId="HA"/><DayFeeling careBearId="2206" fromDate="2015-09-30" feelingId="HA"/>
<DayFeeling careBearId="2200" fromDate="2015-10-01" feelingId="JL"/><DayFeeling careBearId="2222" fromDate="2015-10-01" feelingId="BL"/>
<DayFeeling careBearId="2708" fromDate="2015-10-01" feelingId="BL"/><DayFeeling careBearId="2206" fromDate="2015-10-01" feelingId="HA"/>
<DayFeeling careBearId="2200" fromDate="2015-10-02" feelingId="HA"/><DayFeeling careBearId="2222" fromDate="2015-10-02" feelingId="HA"/>
<DayFeeling careBearId="2708" fromDate="2015-10-02" feelingId="SA"/><DayFeeling careBearId="2206" fromDate="2015-10-02" feelingId="JL"/>
```





Thanks