Proposal for a new field type for OpenERP/Odoo

Abstract

These paper intents to propose a new ORM type field. The type field to be proposed is XML type. This field will contain fields described in a XML structure.

Problem

Let's assume **T** represents a table, **T** has ***n*** **columns** represented by **Tc1**, **Tc2**, ..., **Tc*n***. Let assume **t1**, **t2** e **t3** are tuples for table **T**. Now let assume that we have a client that needs for different type of **t** for **T** to have different property fields.

For **t1** we have **tcp11**, **tcp12** and **tcp13**, and **t2** have **tcp21**, **tcp22**, **tcp23** and **t3**, **tcp31**, **tcp32**, **tcp33**, where **cp** denotes client property.

To implement this requirement in actual Odoo ORM API would require, adding a field per each tuple property. For our example for **t1**, **t2** and **t3**, that has all 3 different properties, in total of 9 fields. In terms of table structure, that would mean that would add 9 columns to the table. Also in terms of view would require showing and hiding field's base on data record.

Example:

A client, has a store, where he sells steel in different form and shapes. For each type of steel shapes, we have different proprieties, like length, diameter. Other steel product is metal alloy and has length, width, height, aluminum concentration, iron concentration, max temperature.

For this example we would have in total for our table, length, width, height, Al conc, Fe conc, Max temp .

Now, if the client have a new product and need to add a new property, it would require adding a new field to the table.

Proposal for a XML type field

The XML type field would serve to implement the requirement described above. The definition of XML field would be such as:

'field_name' : fields.xml(string="string", encoding="", required="True|False", readonly="True|False")

- The encoding would be for texts.
- This field is always treated as text
- This field cannot be used for any operation, like add, sub etc.
- The ORM is responsable for writing the structure in the table. The user doesn't have control the way data is stored.

Database XML internal structure

Element: data

Attributes: none

Child Element: fields*

Element: field

~~Attributes: type="INT|FLOAT,PRECISION|DATE,FORMAT|~~ CHAR,SIZE" ; name="string"

Child Element: Value

Ex;

```
<data>
        <field name="length" ~~type="int~~">111</field>
        <field name="width" ~~type="int~~">222</field>
        <field name="height" ~~type="int~~">333</field>
</data>
```

Field type XML view

The XML field can only be presented in view type form. The presentation of the view is the same as presentation of the field one2many. The view is a table with 2 columns, one with field name and another with value. ~~Only the~~

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~~value field is writable.~~ The user add the field name and it's value

-The end user will not necessarily know the field as a "field name", It can be called in the view "Property" or "Características", depending on the string definition for the field.

View validation

~~The only validation that is made is based on field type to validate the value type.~~

No validation is made to associated value since it's a string

~~Specification~~Restriction

1. XML Fields cannot be in another view than Form view
2. Doesn't allow related field.

Search

This field allow search, and the search is based on searching the field name and Value.

Report

For reporting, since this it's actually a pair (field name, value), assuming that for each tuple, one can have no metadata, one can have N. This field will be only available for loops (repeatIn).

To allow control on where to put field names and values the following sintaxe is proposed.

Object.xml_field_name.fieldName

object.xml_field_name.fieldValue

Allows to control where to put this data.

Indexing is not allowed, since for each tuple it not known it's max size. Then if there is data, it will print all, inside a loop.

Ex: Imagine we have a car as a product with it's Specification, and also a car part with it's completly different specification. Both exist in the same table, but have different fields value pair and different sizes.

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