A newbie introduction to proteus

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1. What is proteus?
   - A python library
   - To access a tryton server
   - As a client

2. Use cases
   - Testing
   - Scripting
   - Development

3. Nifty features
   - Field types
   - Buttons
   - Wizards

4. Some drawbacks

5. A small demo of proteus

6. Summary
A python library

**proteus** is just like any another (good) python library

- pip installable
- usable in scripts, but also in the python shell, ipython, bpython, ...

But it is also a good starting point to get familiar with some advanced features of python like descriptors, metaclasses, context managers, ...
proteus can be used to access a local Tryton server.

Example

```python
>>> from proteus import config
>>> config = config.set_trytond(config_file='foo.cfg',
...                               user='admin', password='admin')
```

This command will import a local trytond module initialized with configuration specified in `foo.cfg` using the provided credentials.
But **proteus** can also be used to access a remote Tryton server.

**Example**

```python
>>> from proteus import config
>>> config = config.set_xmlrpc('http://admin:admin@localhost:8069/foo')
```

In this case, proteus will connect to the Trytond server listening for XML-RPC connections on port 8069 on localhost. The usual syntax is used to specify the credentials.
As a client

**proteus** is built to mimic the Tryton client.
- default values are set when creating new object
- **on_change, on_change_with** calls are triggered
- context on the fields is used and eventually **pyson-ly** evaluated
proteus can be used for automated testing

- 29 doctests files are included into the trytond and modules repositories.
- proteus mimics the client and allows to make functional testing through the use of scenarios
- We’re testing access rights, workflows, wizards, ...
proteus is used for automating tasks

- proteus is used to populate http://demo.tryton.org
- Importing data from a legacy database
- Generating timesheet reports
- ...
proteus can be used while developing

Tired of repeating the same action on the client while developing? **proteus** can help you

- enter the same data
- execute the same wizard
- click the same buttons

Just from your shell prompt or your favorite python interpreter!
The supported field types

Every tryton type is supported by proteus. All of them.
proteus can call buttons

It's just a matter of calling a class method.

Example

```python
sale = Sale()
sale.party = customer
sale.sale_date = sale_date
sale_line = sale.lines.new()
sale_line.product = product
sale_line.quantity = random.randint(1, 50)
sale.save()
Sale.quote([sale.id], config.context)
```
proteus can also execute wizards

```
Example

compny_config = Wizard('company.config')
company_config.execute('company')
company = company_config.form
party = Party(name='Michael Scott Paper Company')
party.save()
company.party = party
company.currency = usd
company_config.execute('add')
```

- Created with Wizard
- `.form` is used to access ModelViews
- Transitions are called with `execute`
Where proteus could be better

- Importation of bazillions of records: **proteus** is not ment for speed.
- The API could be better for the buttons
- **proteus** does not speak **JSON-RPC**
Let’s make a small demo
Proteus is cool

- It uses cool python features
- You can write tests and scripts with it
- Auto-completion in advanced python shells
- pip install proteus!