ContactManagerApp

Prague 2018

1.   Instalation

To work with the project, need to download the libraries Seaside, Voyag and database MongoDB.

What is Seaside?

Seaside is computer software, a web framework to develop web applications in the programming language Smalltalk. It is distributed as free and open-source software under an MIT License.

Seaside provides a component architecture in which web pages are built as trees of individual, stateful components, each encapsulating a small part of a page.

Download your Seaside

```
[
        Metacello new
                repository:
'http://www.smalltalkhub.com/mc/Seaside/MetacelloConfigurations/main';
                configuration: 'Seaside3';
                version: #'release3.2';
                load: #('OneClick').
]
```

What is Voyage?

It is purely object-oriented and has as a goal to present a minimal API to most common development usages. Voyage is a common layer for different backends but currently it supports just two: an in-memory layer and a backend for the MongoDB database (http://mongodb.org1) and UnqLite

Install your document databases

To install Voyage, including support for the MongoDB database, go to the Configurations Browser (in the World Menu/Tools) and load ConfigurationOfVoyageMongo. Or alternatively execute in a workspace:

```
[
        Gofer it
                url: 'http://smalltalkhub.com/mc/estebanlm/Voyage/main';
                configurationOf: 'VoyageMongo';
                loadStable.
]
```

In case of incompatibility Pharo 6.1 and MongoDB

```
[
        Metacello new
                repository: 'github://pharo-nosql/voyage/mc';
                baseline: 'Voyage';
                load: 'mongo tests'.
]
```

This will load all that is needed to persist objects into a Mongo database.

What is MongoDB ?

MongoDB (from humongous) is a free and open-source cross-platform document-oriented database program. Classified as a NoSQLdatabase program, MongoDB uses JSON-like documents with schemas. MongoDB is developed by MongoDB Inc., and is published under a combination of the GNU Affero General Public License and the Apache License.

Download and install your document databases

Next is to install the MongoDB database. How to do this depends on the operating system, and is outside of the scope of this text. We refer to the MongoDB website2 for more information. Follow the link.

```
[

        https://www.mongodb.com/

]
```

Install project

Drag and drop **.st** file to the Playground or download from **gitlab.fit.cvut.cz**

2.   The basic architecture of solution

Three-Tier Architecture:

1) Client (Presentation) layer
2) Business layer
3) Data layer

Client layer

Web client which contains UI part of our application. Seaside is responsible for rendering of UI

Business layer

Web server Zinc (need to add ZnZincServerAdaptor)

Data layer

MongoDB (contacts/contact_tests)

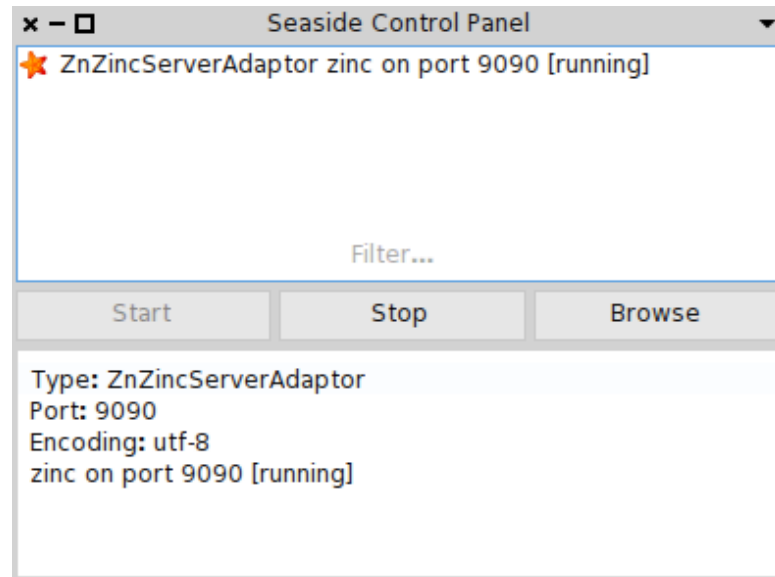- person, company, prospect

Architectural pattern

- Visitor

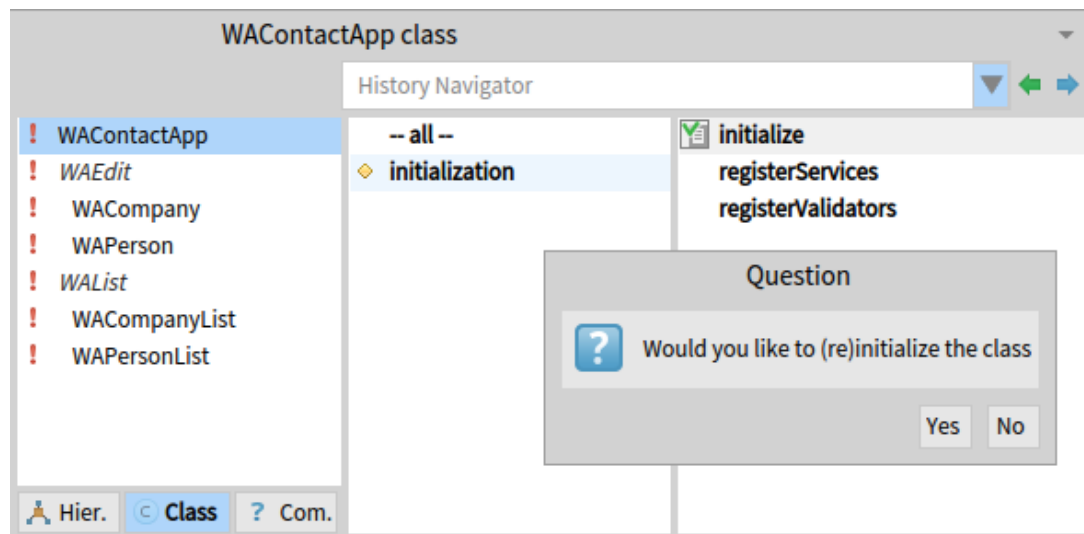- Hook & Template

- Singleton (only if applied correctly :))

Extra:
- IOC help for servis locator

3. A demonstration of use

1. Install new Server Adaptor on port 9090

2. Initialize WAContactApp

3. Go to the browser -> http://localhost:9090/contacts

3.1 Now our database is empty. Let's add a new company

Menu

Contacts

Persons

Prospect

Company list

Name	Country	Customer	Partner	Manager

New

3.2 Check the company entry field

Menu

Contacts

Persons

Prospect

New Company

Name*

Sony Corporation

☑ **Customer**

☐ **Partner**

Country*

United States ▾

Manager*

Winston Churchill ▾

Save Cancel

3.3 Now our new company is in database

Menu

Contacts

Persons

Prospect

Company list

Name	Country	Customer	Partner	Manager		
Sony Corporation	United States	true	false	Winston Churchill	Edit	Remove

New

4. Let's add a new person

Menu

Contacts

Persons

Prospect

Person list

Name	Surname	Email	PhoneNumber	Address	Position

New

4.1 Check the person entry field

Menu

Contacts

Persons

Prospect

New Person

Name*

testName

Surname*

testSurname

Email*

test@email.com

Phone Number

777

Address

Prague

Company*

Sony Corporation ▼

Position

Employee

Save Cancel

4.2 Now our new person is in database

Menu

Contacts

Persons

Prospect

Person list

Name	Surname	Email	PhoneNumber	Address	Position		
testName	testSurname	test@email.com	777	Prague		Edit	Remove

New

5. Check our new person in selected company

Menu

Contacts

Persons

Prospect

Edit Company

Name*

Sony Corporation

☑ **Customer**

☐ **Partner**

Country*

United States ▼

Manager*

Winston Churchill ▼

[Save] [Cancel]

Company person list

Name	Surname	Email	PhoneNumber	Address	Position		
testName	testSurname	test@email.com	777	Prague		Edit	Remove

[New]

5.1 Check that database works properly

5.1.1 Company

▦ Company 🕐 0.001 sec.

Key	Value
∨ 〈**›** (1) ObjectId("5a4d8474e195e8c81d1e4aed")	{ 8 fields }
☐ _id	ObjectId("5a4d8474e195e8c81d1e4aed")
☐ #instanceOf	Company
# #version	-551690350096941052
" " cname	Sony Corporation
# country	5
T/F isCustomer	true
T/F isPartner	false
# manager	5

5.1.2 Person

Person   🕐 0.001 sec.

Key	Value
(1) ObjectId("5a4da1d771b476106b1e4ccf")	{ 10 fields }
_id	ObjectId("5a4da1d771b476106b1e4ccf")
#instanceOf	Person
#version	-928584850838781950
address	Prague
company	ObjectId("5a4d8474e195e8c81d1e4aed")
email	{ 3 fields }
firstName	testName
lastName	testSurname
phoneNumber	777
position	Employee

4.　Architectural decisions

Architectural pattern

Model

Three(3) entities presents Person, Company and Prospect

View

WAComponents display data and route user commands to the presenter to act upon that data

Presenter

WAComponents help to retrieve data from repositories and format it for display in the view on html pages

Data layer

Voyage

Small persistence framework which has as a goal to present a minimal API to most common development usages. Used to work with MongoDB

MongoDB

Three(3) collections:

1. person
2. company
3. prospect

5. Links

Any source code with documentations you can find here:

[

https://gitlab.fit.cvut.cz/khomcvla/ContactManagerApp

]