

Document Fragment Subdomain

# Table of Contents

Screenshots .....	2
Domain Model.....	7
API .....	9
SPI .....	10
How to configure/use .....	11
Classpath .....	11
Bootstrapping.....	11
Known issues .....	12
Dependencies .....	13

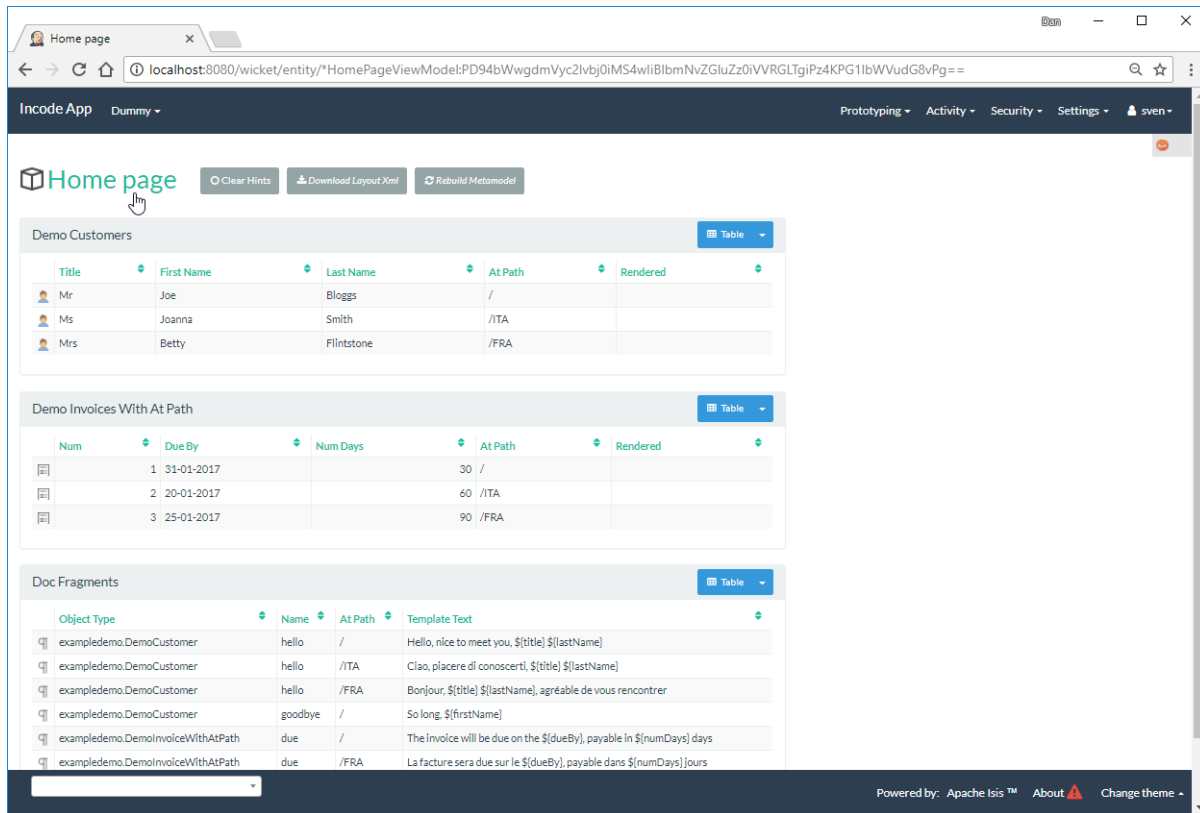
This module (`incode-module-docfragment`) is a simple wrapper around the `Freemarker library` module to interpolate fragments of text with respect to a domain object.

The module defines only a single entity - `DocFragment` - which holds the template text. The result of the interpolation is a simple string; normally the calling object will then persist this somewhere (eg for use when rendering a `Document` as provided by the `Document subdomain` module).

# Screenshots

The module's functionality can be explored by running the [quickstart with example usage](#) using the `org.incode.domainapp.example.app.modules.ExampleDomDomDocFragmentAppManifest`.

The home page shows some sample `DocFragments`, along with some `DemoCustomer` and `DemoInvoice` domain objects that use the module:



The screenshot shows the Incode App interface. The top navigation bar includes 'Incode App', 'Dummy', and a menu with 'Prototyping', 'Activity', 'Security', 'Settings', and 'sven'. The main content area is titled 'Home page' and contains three tables:

**Demo Customers**

Title	First Name	Last Name	At Path	Rendered
Mr	Joe	Bloggs	/	
Ms	Joanna	Smith	/ITA	
Mrs	Betty	Flinstone	/FRA	

**Demo Invoices With At Path**

Num	Due By	Num Days	At Path	Rendered
1	31-01-2017	30	/	
2	20-01-2017	60	/ITA	
3	25-01-2017	90	/FRA	

**Doc Fragments**

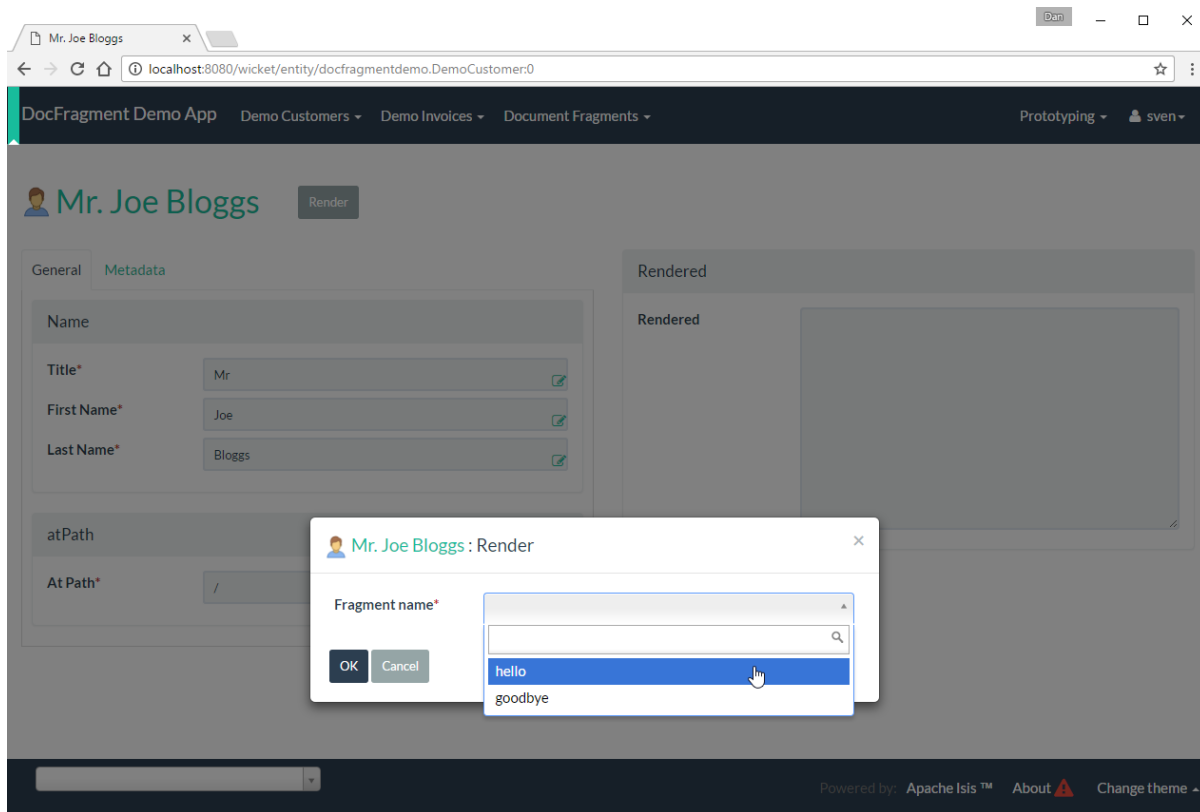
Object Type	Name	At Path	Template Text
exampledemo.DemoCustomer	hello	/	Hello, nice to meet you, \${title} \${lastName}
exampledemo.DemoCustomer	hello	/ITA	Ciao, piacere di conoscerti, \${title} \${lastName}
exampledemo.DemoCustomer	hello	/FRA	Bonjour, \${title} \${lastName}, agréable de vous rencontrer
exampledemo.DemoCustomer	goodbye	/	So long, \${firstName}
exampledemo.DemoInvoiceWithAtPath	due	/	The invoice will be due on the \${dueBy}, payable in \${numDays} days
exampledemo.DemoInvoiceWithAtPath	due	/FRA	La facture sera due sur le \${dueBy}, payable dans \${numDays} jours

There are four `DocFragments` for `DemoCustomer`, with different `names` and `atPaths`, and some `DocFragments` for `DemoInvoice` with different `atPaths`.

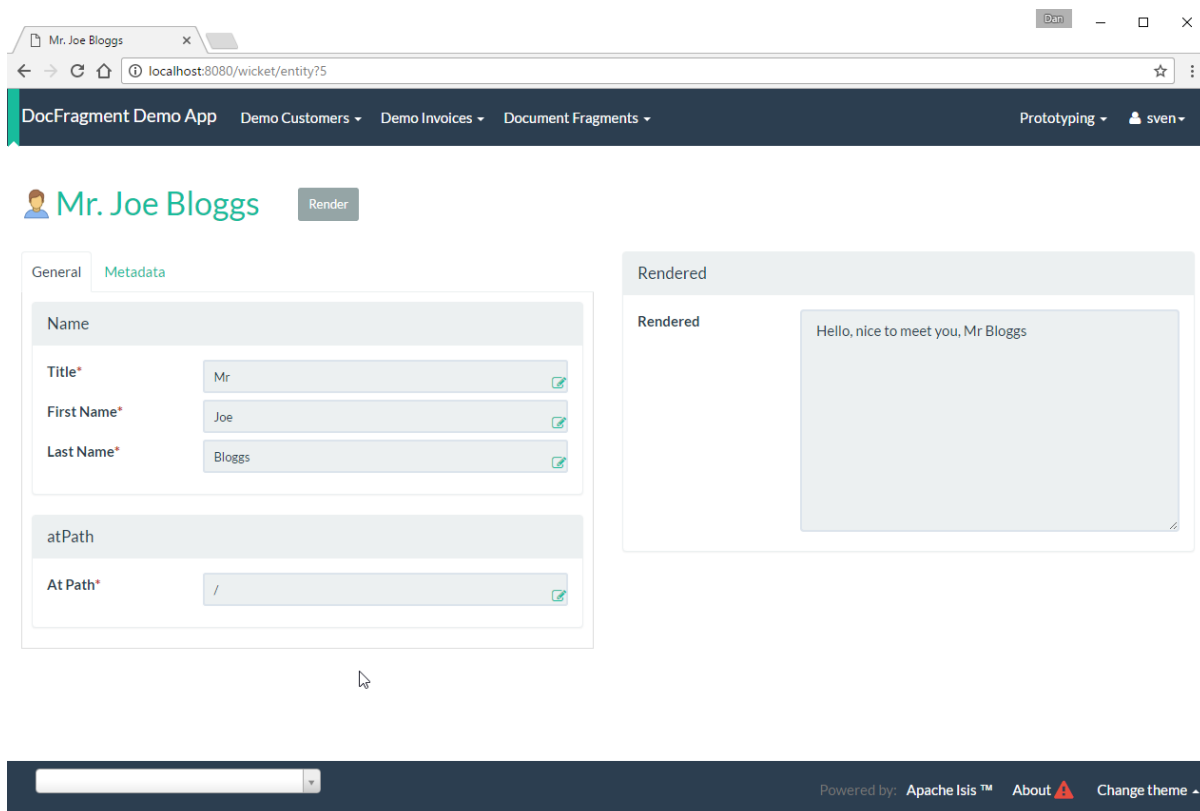


The remaining screenshots below **do** demonstrate the functionality of this module, but are out of date in that they are taken from the original `isisaddons/incodehq` module (prior to being amalgamated into the `incode-platform`).

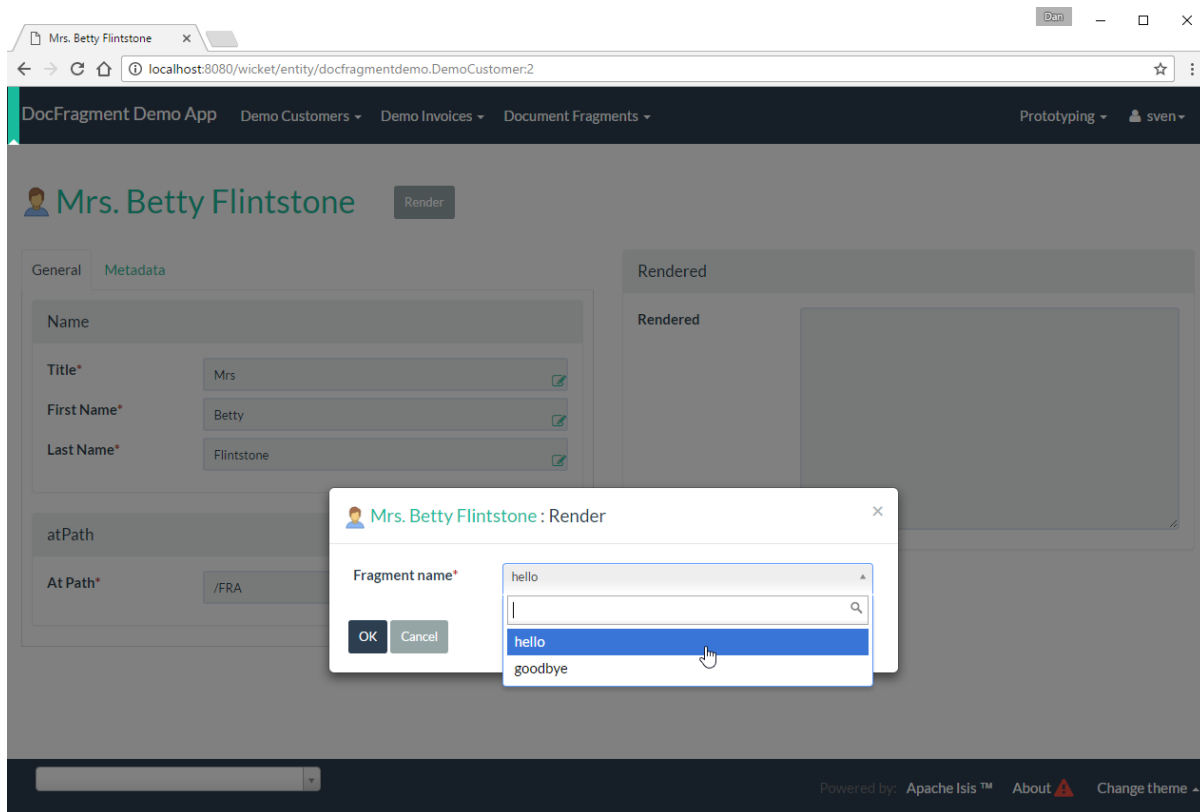
For a `DemoCustomer` (with a global `"/` `atPath`) we can invoke the "render" action:



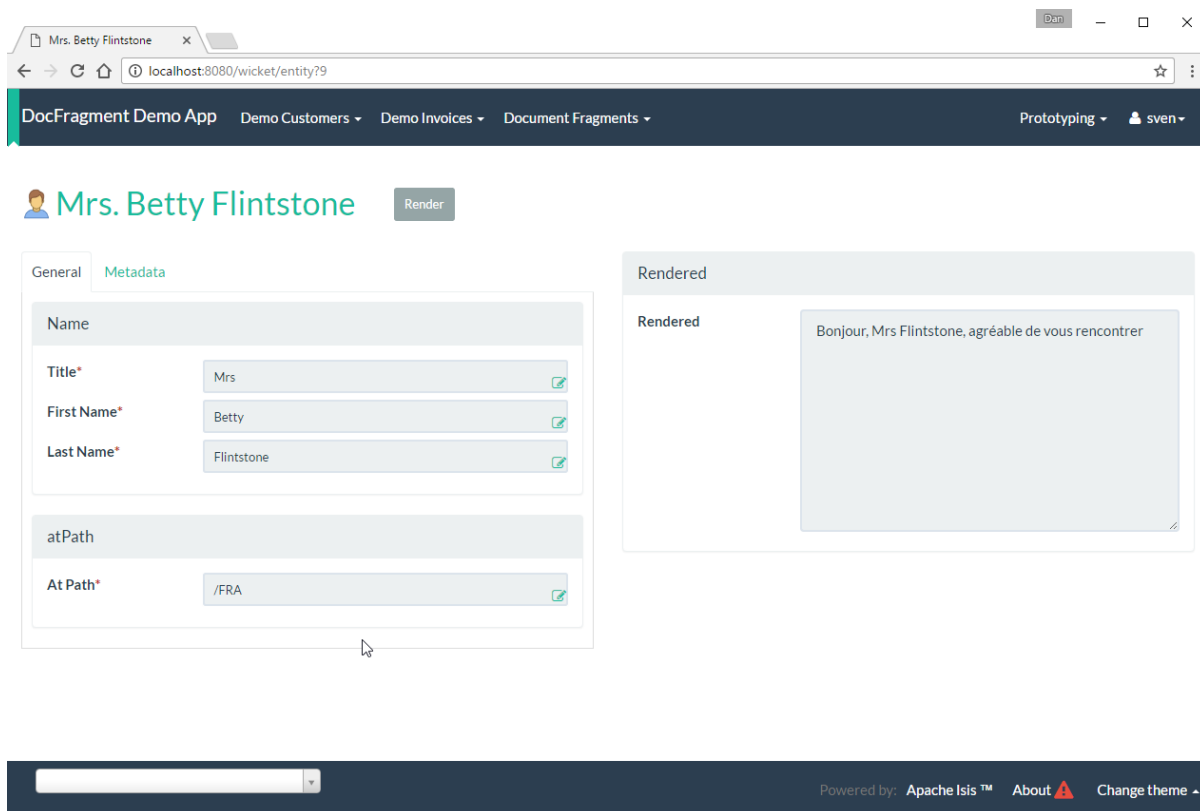
This updates the "rendered" property, interpolating the state from the `DemoCustomer` domain object:



For a different `DemoCustomer` with a different ("/FRA") `atPath`, we can do likewise:



This looks up a different **DocFragment** (for the **"/FRA" atPath**), resulting in a different rendering:



For the **DemoInvoice**, one of the instances is for an **atPath** (**"/ITA"**) where there is only a global **DocFragment**:

The screenshot shows the 'DocFragment Demo App' interface. At the top, there's a navigation bar with 'Demo Customers', 'Demo Invoices', and 'Document Fragments'. The main content area displays three tables:

Object Type	Name	At Path	Template Text
docfragmentdemo.DemoCustomer	hello	/	Hello, nice to meet you, \${title} \${lastName}
docfragmentdemo.DemoCustomer	hello	/ITA	Ciao, piacere di conoscerti, \${title} \${lastName}
docfragmentdemo.DemoCustomer	hello	/FRA	Bonjour, \${title} \${lastName}, agréable de vous rencontrer
docfragmentdemo.DemoCustomer	goodbye	/	So long, \${firstName}
docfragmentdemo.DemoInvoice	due	/	The invoice will be due on the \${dueBy}, payable in \${numDays} days
docfragmentdemo.DemoInvoice	due	/FRA	La facture sera due sur le \${dueBy}, payable dans \${numDays} jours

Title	First Name	Last Name	At Path	Rendered
Mr	Joe	Bloggs	/	Hello, nice to meet you, Mr Bloggs
Ms	Joanna	Smith	/ITA	Bonjour, Mrs Flintstone, agréable de vous rencontrer
Mrs	Betty	Flintstone	/FRA	

Num	Due By	Num Days	At Path	Rendered
1	31-01-2017	30	/	
2	20-01-2017	60	/ITA	
3	25-01-2017	90	/FRA	

The footer of the app shows 'Powered by: Apache Isis™' and links for 'About' and 'Change theme'.

When this is rendered:

The screenshot shows the 'Invoice #2' form in the 'DocFragment Demo App'. The form has a 'Render' button. A modal dialog box titled 'Invoice #2: Render' is open, showing a 'Fragment name\*' field with the value 'due'. The background form shows fields for 'Num\*', 'Due By\*', 'Num Days\*', and 'At Path\*'. The 'Rendered' section is empty.

Then the rendering uses the "global" DocFragment:

Invoice #2

Render

General Metadata

Name

Num\* 2

Due By\* 20-01-2017

Num Days\* 60

atPath

At Path\* /ITA

Rendered

Rendered

The invoice will be due on the 20-Jan-2017, payable in 60 days

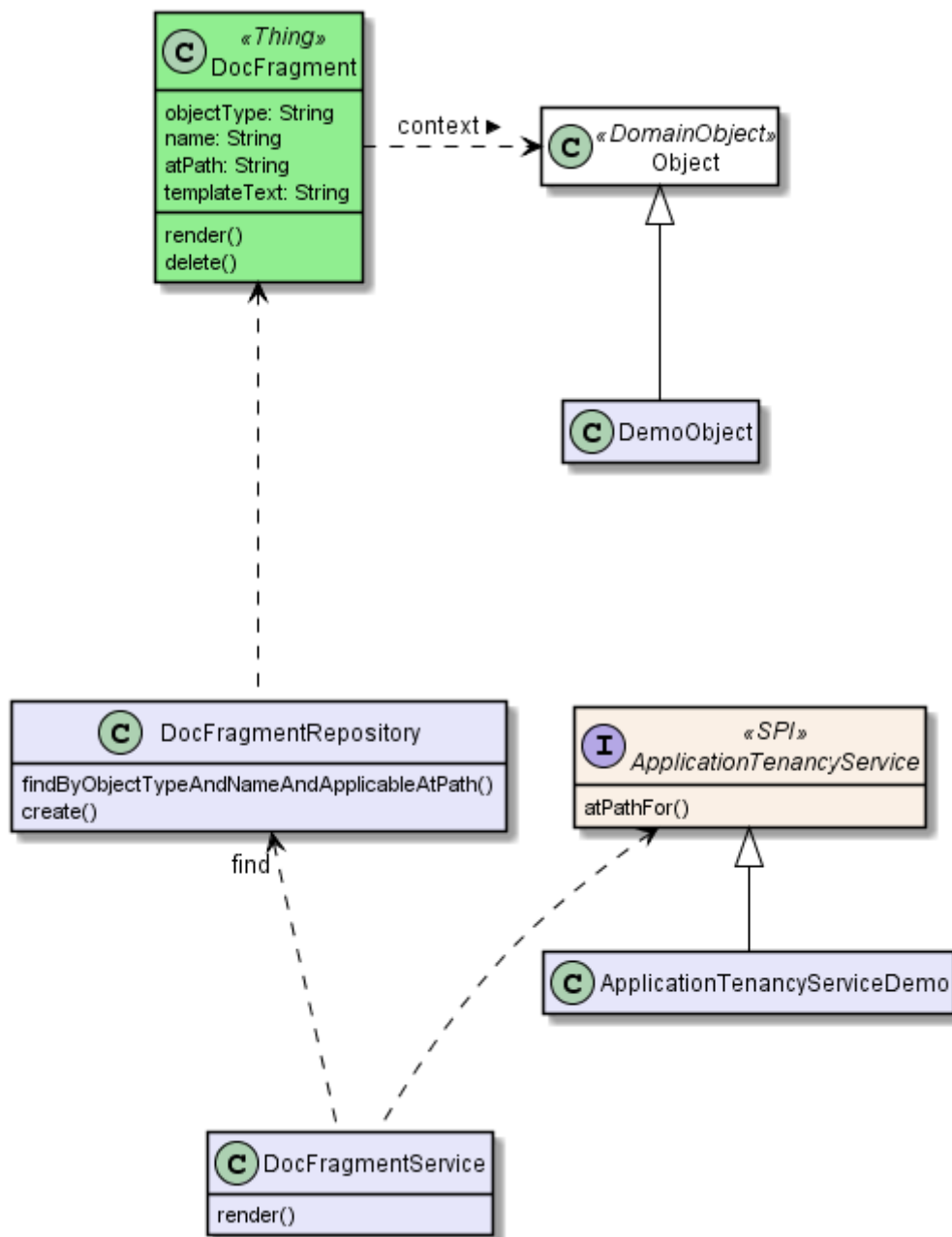
Powered by: Apache Isis™ About Change theme

Note also that the `DemoInvoice` has a JODA `LocalDate`. This is interpolated as a date, rather than as a generic Object.



# Domain Model

The following class diagram highlights the main concepts:



The central concept is **DocFragment**, which holds some Freemarker template text with placeholders to be interpolated by the state of a domain object. It is identified by an **objectType**, a **name** and an **atPath**:

- the **objectType** represents the type of object that this fragment is intended to interpolate. This is an alias for the type's concrete class, and is usually defined by `@DomainObject(objectType=...)`.
- the **name** distinguishes between potentially many fragments for a given object type. There are no restrictions as to its value; it might correspond to the name of a property of the object, or of an action, or anything else.
- the **atPath** (application tenancy path) allows multiple translations of the fragment. The module will attempt to match the most specific translation, eg `/ITA` (Italy) will take precedence over `/`

(Global) if both are present.

The domain object is used in two ways:

- its state is used when interpolating the template text
- (optionally but typically) it is used to infer the `atPath`, in other words which `DocFragment` translation to use.

The API and mandatory SPIs for the module are discussed below.

# API

The programmatic API to the module is `DocFragmentService`:

```
public class DocFragmentService {  
  
    public String render(  
        Object domainObject,           ①  
        String name)                   ②  
        throws IOException, TemplateException, RenderException { ... }  
    ...  
}  
  
public String render(  
    Object domainObject,           ③  
    String name,  
    String atPath)  
    throws IOException, TemplateException, RenderException { ... }  
}
```

- ① provides the state for the interpolation into the fragment's template text, and is also used to determine the `atPath` of the `DocFragment` to use to render
- ② corresponds to the `name` of the `DocFragment` to use to render.
- ③ overload that allows the `atPath` to be specified explicitly (rather than inferred from the supplied domain object)

The `render(...)` methods will always return the rendered text, else an exception. A `RenderException` is thrown if a `DocFragment` could not be located.

# SPI

The module defines a single (mandatory) SPI service, `ApplicationTenancyService`:

```
public interface ApplicationTenancyService {  
    String atPathFor(Object domainObject);  
}
```

① Used by `DocFragmentService` to determine the `atPath` of the domain object, so as to lookup the appropriate `DocFragment`.

# How to configure/use

## Classpath

Update your classpath by adding this dependency in your dom project's `pom.xml`:

```
<dependency>
  <groupId>org.incode.module.communications</groupId>
  <artifactId>incode-module-communications-dom</artifactId>
  <version>1.15.0</version>
</dependency>
```

Check for later releases by searching [Maven Central Repo](#).

For instructions on how to use the latest `-SNAPSHOT`, see the [contributors guide](#).

## Bootstrapping

In the `AppManifest`, update its `getModules()` method, eg:

```
@Override
public List<Class<?>> getModules() {
    return Arrays.asList(
        ...
        org.incode.module.docfragment.dom.DocFragmentModuleDomModule.class,
    );
}
```

# Known issues

None known at this time.

# Dependencies

Maven can report modules dependencies using:

```
mvn dependency:list -o -pl modules/dom/docfragment/impl -D excludeTransitive=true
```

which, excluding the Incode Platform and Apache Isis modules, returns no direct compile/runtime dependencies.

From the Incode Platform it uses:

- [base library](#) module
- [freemarker library](#) module

The module also uses icons from [icons8](#).