

Document Fragment Subdomain

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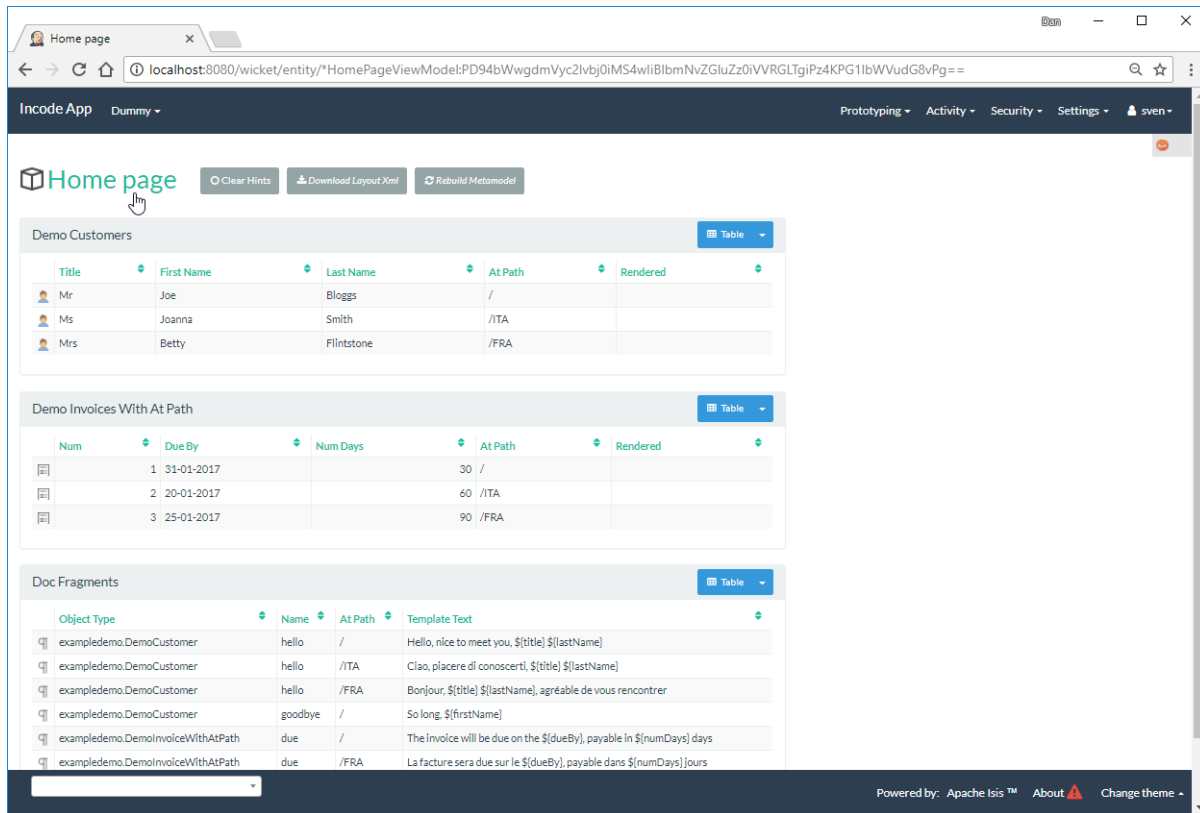
This module (`incode-module-docfragment`) is a simple wrapper around the `Freemarker library` module to interpolate fragments of text with respect to a domain object.

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**

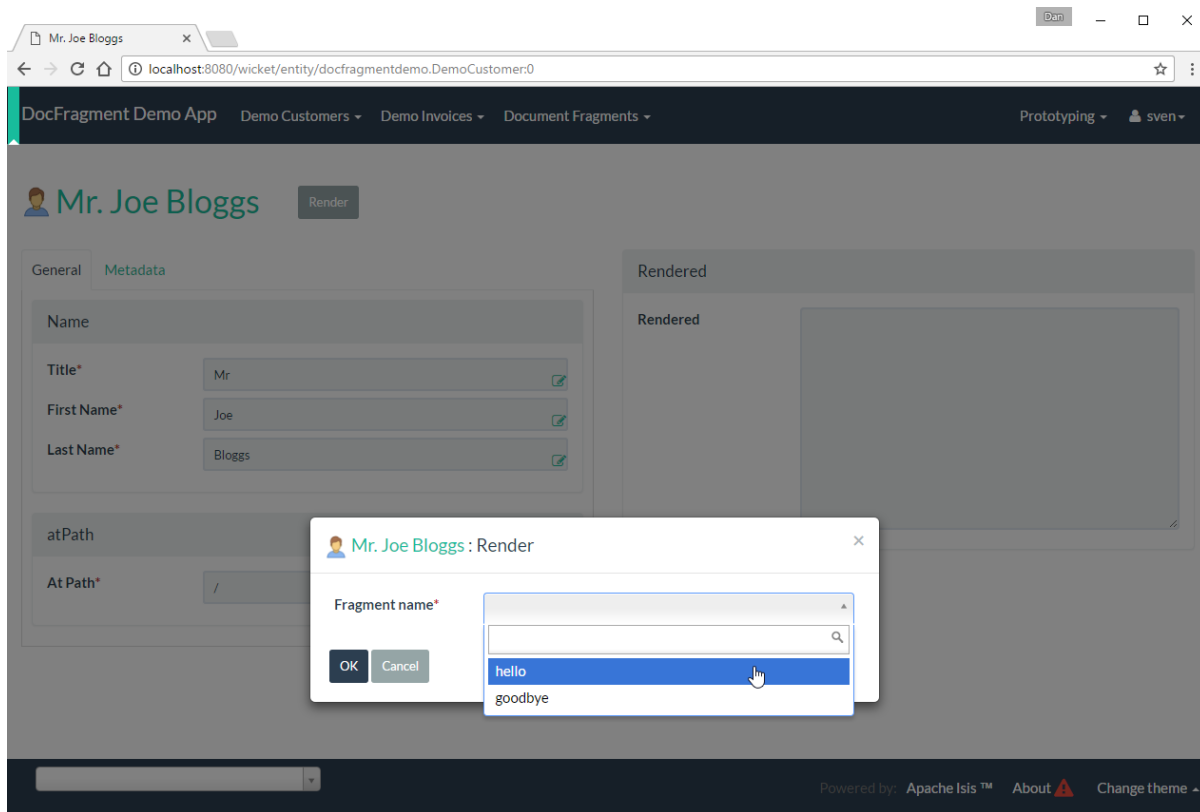
Object Type	Name	At Path	Template Text
exampledemo.DemoCustomer	hello	/	Hello, nice to meet you, \${title} \${lastName}
exampledemo.DemoCustomer	hello	/ITA	Ciao, piacere di conoscerti, \${title} \${lastName}
exampledemo.DemoCustomer	hello	/FRA	Bonjour, \${title} \${lastName}, agréable de vous rencontrer
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`.

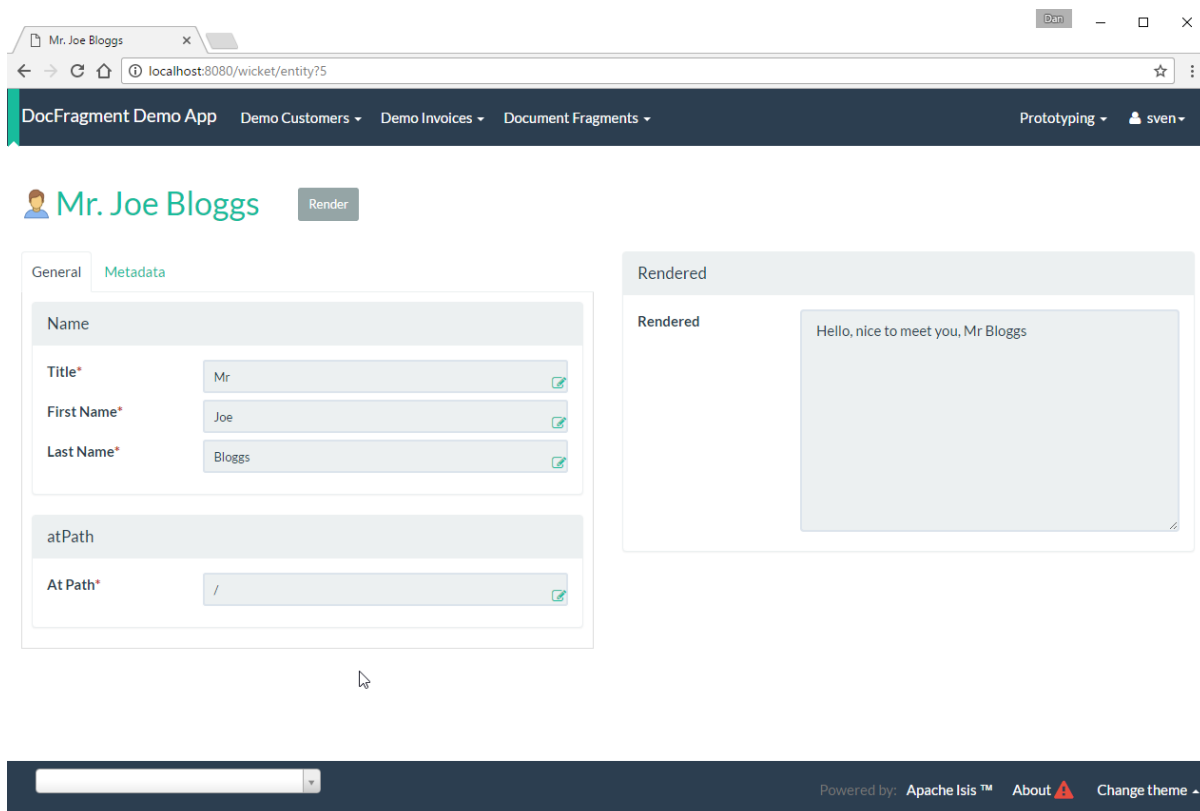


The remaining screenshots below **do** demonstrate the functionality of this module, but are out of date in that they are taken from the original `isisaddons/incodehq` module (prior to being amalgamated into the `incode-platform`).

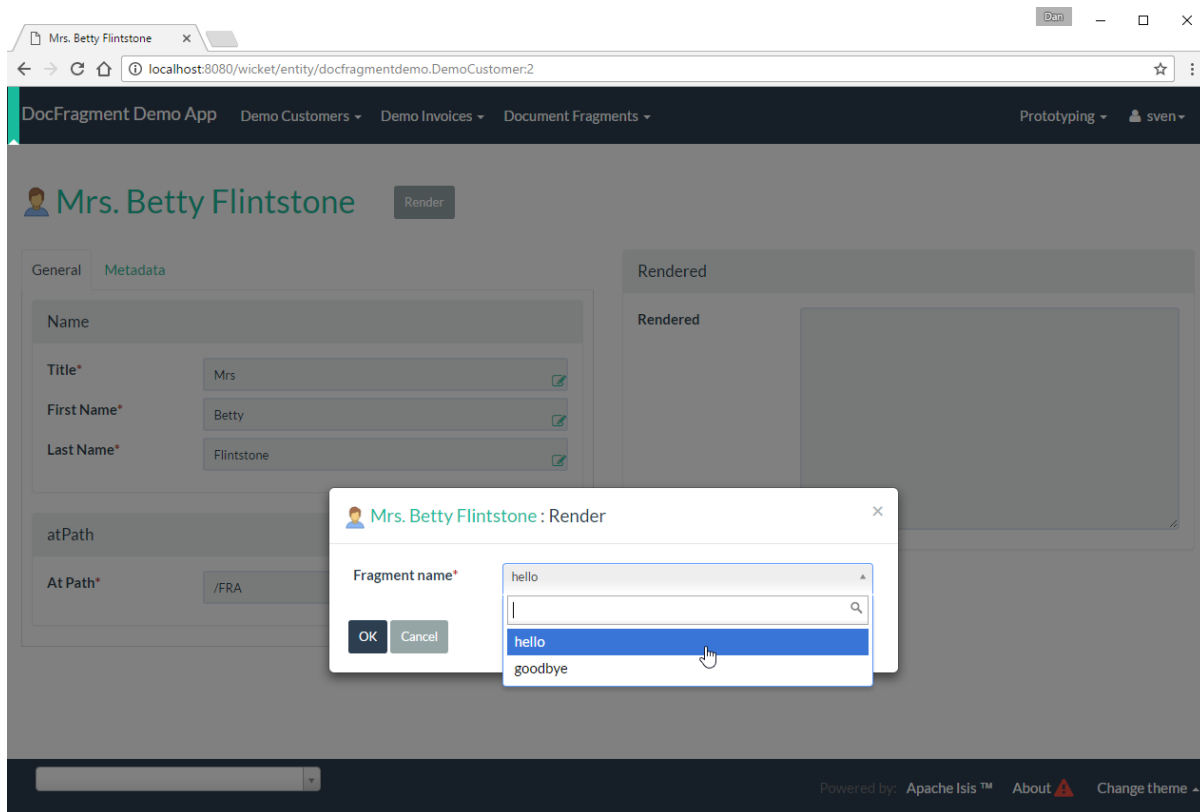
For a `DemoCustomer` (with a global `"/` `atPath`) we can invoke the "render" action:



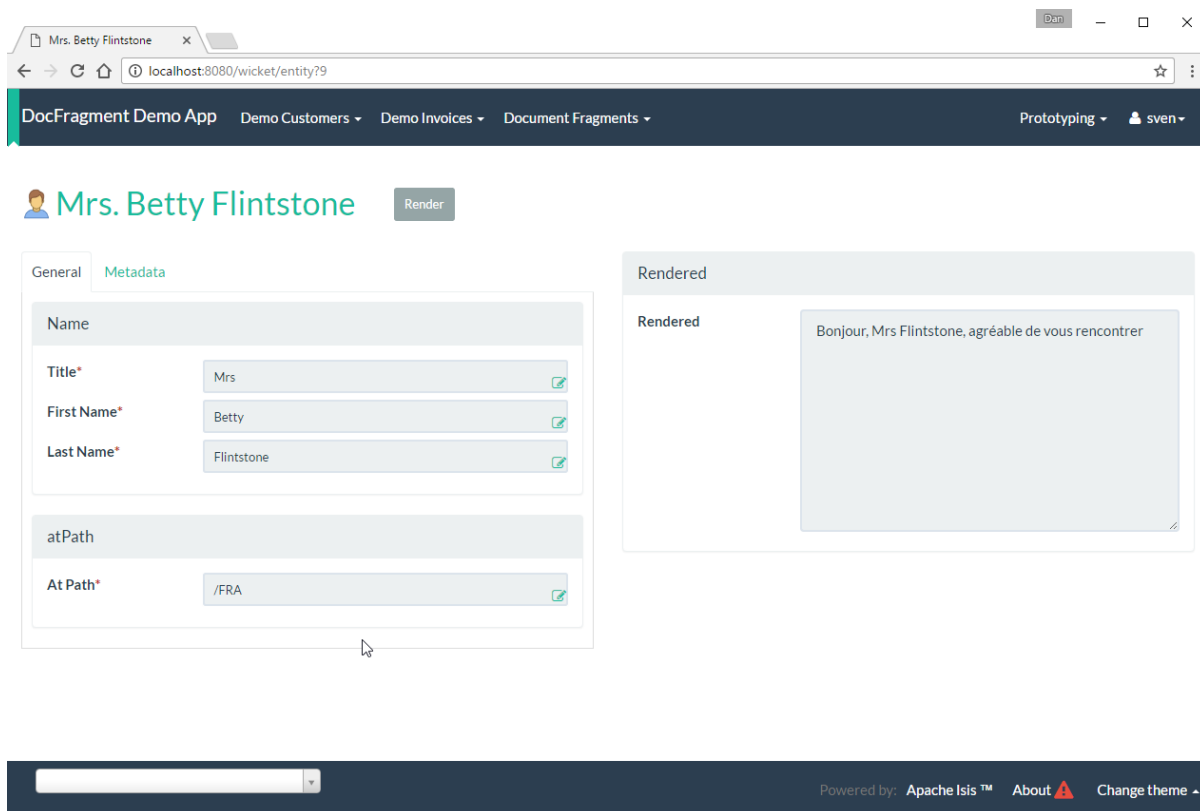
This updates the "rendered" property, interpolating the state from the `DemoCustomer` domain object:



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. The top navigation bar includes 'Demo Customers', 'Demo Invoices', and 'Document Fragments'. The main content area is titled 'Doc Fragment Objects' and contains a table with the following data:

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

Below this table are two smaller tables: 'Demo Customers' and 'Demo Invoice'.

**Demo Customers Table:**

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	

**Demo Invoice Table:**

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 'DocFragment Demo App' interface with the 'Invoice #2' entity selected. The 'Render' button is visible. The 'General' tab is active, showing the following fields:

- Name
- Num\*: 2
- Due By\*: 20-01-2017
- Num Days\*: 60
- atPath
- At Path\*: /ITA

The 'Rendered' tab is also visible, showing a large empty area for the rendered document. A modal dialog titled 'Invoice #2: Render' is open, with the 'Fragment name\*' field set to 'due'. The dialog has 'OK' and 'Cancel' buttons.

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

Then the rendering uses the "global" DocFragment:

The screenshot shows a web browser window with the address bar at `localhost:8080/wicket/entity?14`. The application header is "DocFragment Demo App" with navigation links for "Demo Customers", "Demo Invoices", and "Document Fragments". A user profile "sven" is in the top right. The main content area is titled "Invoice #2" with a "Render" button. Below this are two tabs: "General" (active) and "Metadata". The "General" tab contains a form with the following fields:

- Name (empty)
- Num\* (value: 2)
- Due By\* (value: 20-01-2017, with a green checkmark icon)
- Num Days\* (value: 60, with a green checkmark icon)
- atPath (empty)
- At Path\* (value: /ITA)

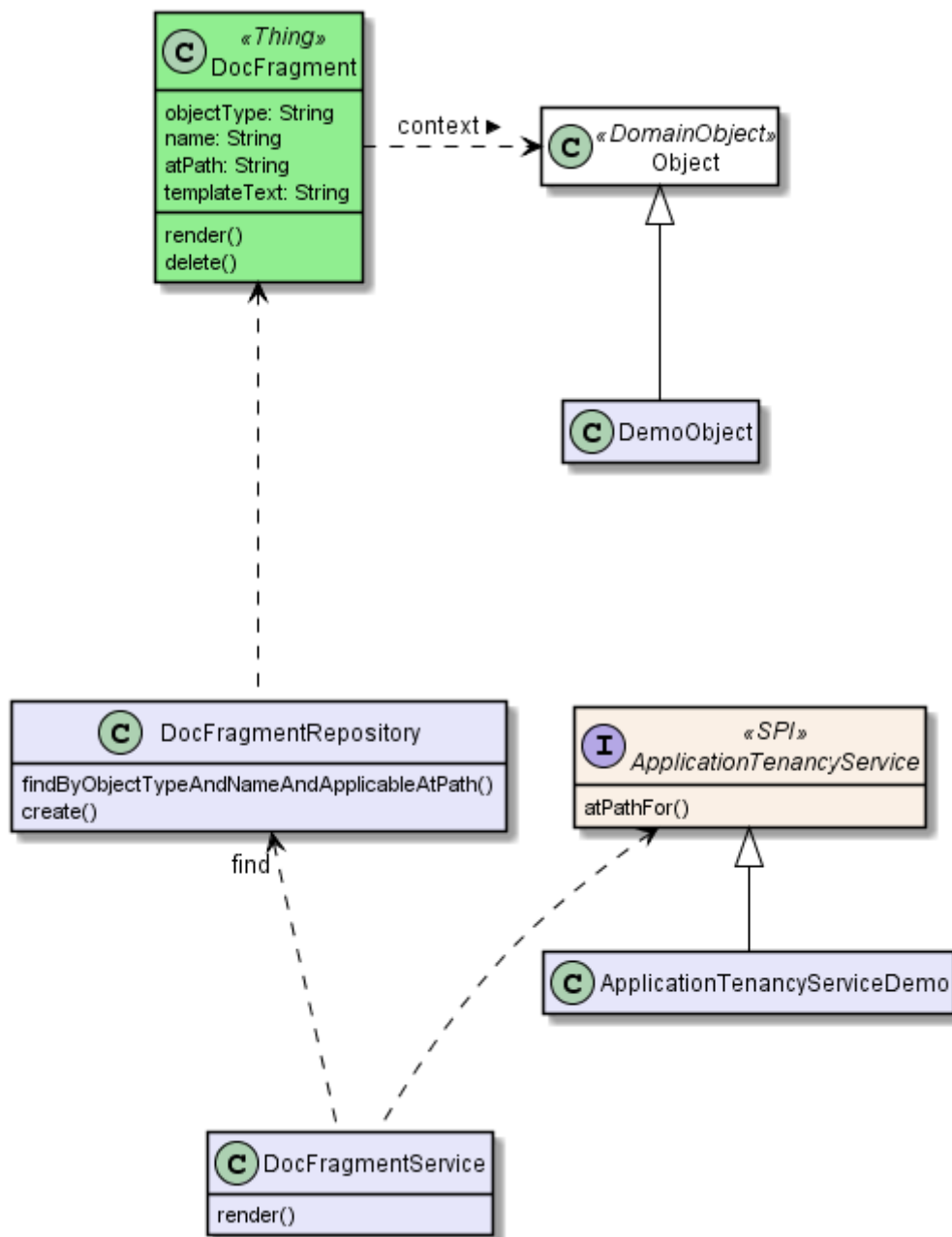
To the right of the form is a "Rendered" panel. It contains a "Rendered" label and a text box with the text: "The invoice will be due on the 20-Jan-2017, payable in 60 days". At the bottom of the application is a dark blue footer bar with a scrollbar on the left and text on the right: "Powered by: Apache 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](#).