

# Fixture Support Library

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This module (`incodemodule-fixturesupport`) provides support for writing fixtures.

# How to configure/use

## Classpath

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

```
<dependency>
  <groupId>org.incode.module.fixturesupport</groupId>
  <artifactId>incode-module-fixturesupport-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](#).

# Utilities

## DemoData

The `DemoData` interface, and supporting `DemoData.Util` utility class, is intended to allow type-safe datasets to be set up. It is defined as:

```
public interface DemoData<D extends Enum<D>, T> {  
    T asDomainObject();  
    T persistUsing(ServiceRegistry2 serviceRegistry); ①  
    T findUsing(ServiceRegistry2 serviceRegistry);  
}
```

① From `ServiceRegistry` the class can either lookup the low-level `RepositoryService`, or can lookup a higher-level domain-specific service (eg `CustomerRepository`).

To use, assume we have a domain object such as:

```
public class DemoInvoice implements Comparable<DemoInvoice> {  
  
    @lombok.Builder ①  
    public DemoInvoice(  
        int num,  
        LocalDate dueBy,  
        int numDays,  
        String atPath) {  
        this.num = num;  
        this.dueBy = dueBy;  
        this.numDays = numDays;  
        this.atPath = atPath;  
    }  
  
    private int num; ②  
    private LocalDate dueBy;  
    private int numDay;  
    private String atPath;  
  
    ...  
}
```

① Lombok-generated builder

② corresponding fields (JDO annotations and Isis etc. not shown, for brevity)

We then define a corresponding "data" subclass as an enum, implementing `DemoData`. For example:

```

@lombok.AllArgsConstructor
@lombok.Getter
public enum DemoInvoiceData implements DemoData<DemoInvoiceData, DemoInvoice> {

    Invoice1(1, new LocalDate(2017,1,31), 30, "/"),
    Invoice2(2, new LocalDate(2017,1,20), 60, "/ITA"),
    Invoice3(3, new LocalDate(2017,1,25), 90, "/FRA"),
    ;

    private final int num;
    private final LocalDate dueBy;
    private final int numDay;
    private final String atPath;

    @Programmatic
    public DemoInvoice asDomainObject() {
        return DemoInvoice.builder()
            .num(num)
            .dueBy(dueBy)
            .numDays(numDay)
            .atPath(atPath)
            .build();

    @Programmatic
    public DemoInvoice persistUsing(ServiceRegistry2 serviceRegistry) {
        return Util.persist(this, serviceRegistry);
    }

    @Programmatic
    public DemoInvoice findUsing(ServiceRegistry2 serviceRegistry) {
        return Util.firstMatch(this, serviceRegistry);
    }
    ...
}

```

- ① the data sets to create
- ② mirror the fields in the domain object
- ③ using the `@Builder` provided by the domain object
- ④ delegates to `DemoData.Util` to create and persist an instance of the domain object
- ⑤ delegates to `DemoData.Util` to find an existing instance of the domain object

A fixture script can then be written by subclassing the supporting `DemoDataPersistAbstract` fixture script. We suggest this script is implemented as a nested static class, eg:

```

public enum DemoInvoiceData ... {
    public static class PersistScript
        extends DemoDataPersistAbstract<PersistScript, DemoInvoiceData,
DemoInvoice> {
        public PersistScript() {
            super(DemoInvoiceData.class);
        }
    }
}

```

The fixture script can now be used in the setup for tests, or used as within a larger composite fixture scripts:

```

final DemoInvoiceData.PersistScript fs = new DemoInvoiceData.PersistScript();
fixtureScripts.runFixtureScript(fs, null);

```

Optionally, the number of instances to create can be specified:

```

final DemoInvoiceData.PersistScript fs = new DemoInvoiceData.PersistScript().
setNumber(1);
fixtureScripts.runFixtureScript(fs, null);

```

Each data instance can also be used to find the corresponding domain object:

```

final DemoInvoice invoice1 = DemoInvoiceData.Invoice1.findUsing(serviceRegistry);
...

```

# Known issues

None known at this time.



# Dependencies

Maven can report modules dependencies using:

```
mvn dependency:list -o -pl modules/lib/fixturesupport/impl -D excludeTransitive=true
```

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

From the Incode Platform it uses:

- [base library](#) module