



LAB- Transformers- Using DataSense

In this lab, you will be working on **03-transforming-usingdatasense-start** project under **05-transformers** section

In this lab you will understand

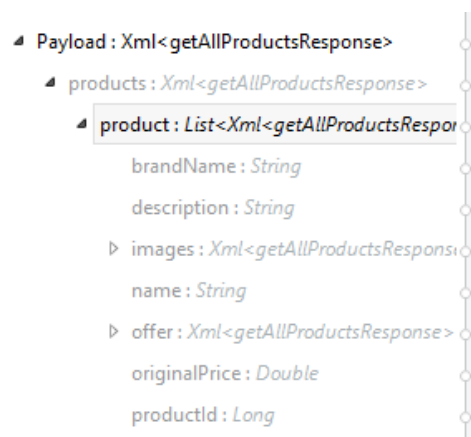
- how to use data sense while transforming
- How to generate DWL expression by just dragging and dropping

STEP 1

1) Open SoapDemo.xml and observe getallproducts flow

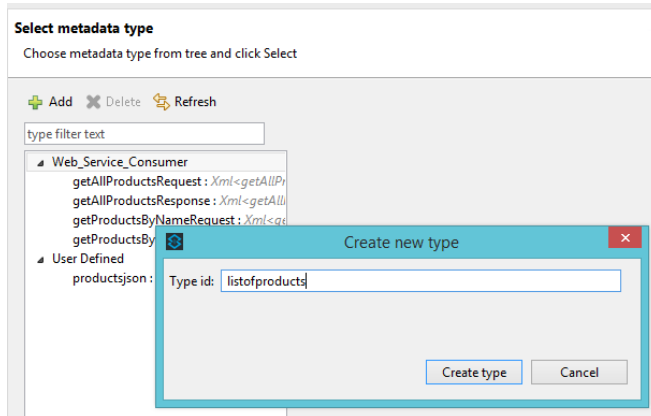
2) After Webservice consumer, Drag transform message component.

You should observe the meta data in the input section of Transform message component as shown below :





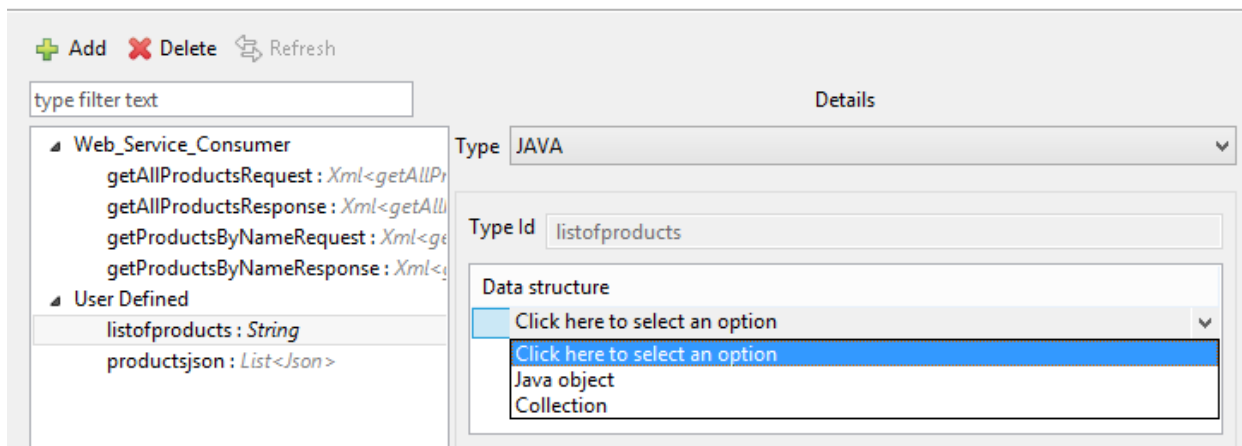
3) In the output section, click on "Define Metadata" link . Click on Add button to create a new type as shown below :



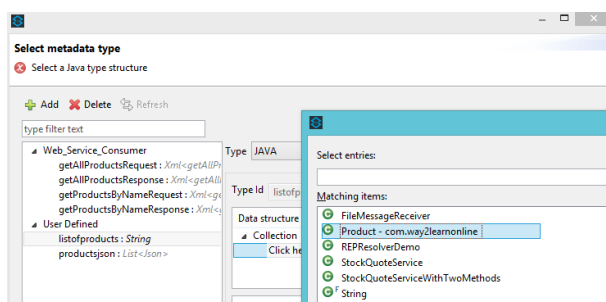
4) Select type as "Java" . Then selection Collection as Data Structure .

Select metadata type

Select a Java type structure

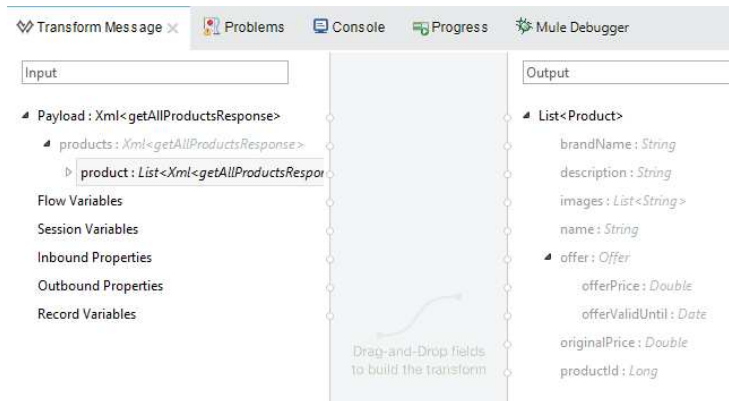


5) Then select Java Object and select Product class

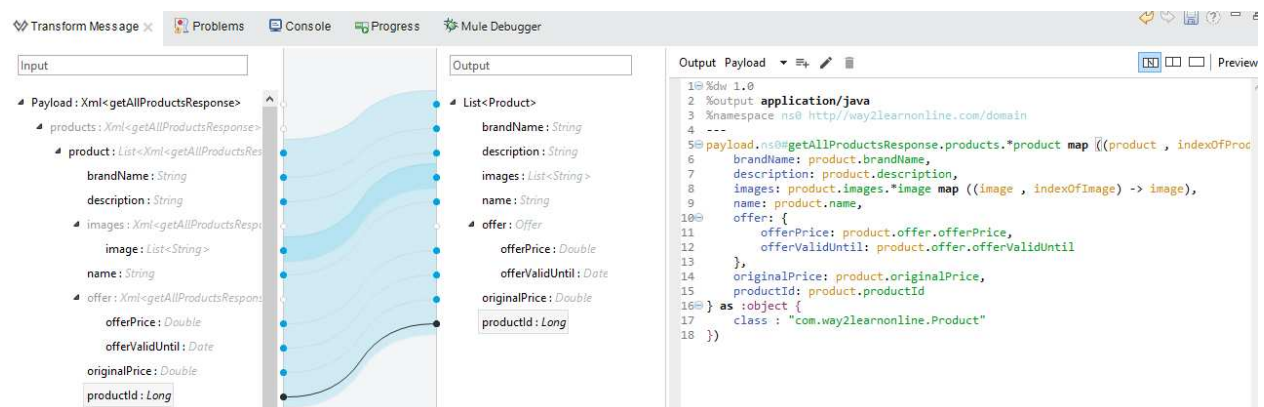




6) You should observe left side and right side meta data as shown below :



7) Now Drag and map the corresponding fields . It should look like below :



8) In the flow which has choice router, drag Transform message component after getallproducts flow reference.

Change the output to application/json and write the expression as payload

9) Deploy the application and give a request to <http://localhost:8081/soap/products>

You should see all the products which were received from soap webservice in json format.



STEP 2

1) Now you will be working on getproductsbyname flow inside soapdemo.xml

2) Drag a "Transform Message" component before Webservice Consumer.

You should observe output metadata as shown below :

```
▲ Xml<getProductsByNameRequest>
  name : String
```

3) Drag http.query.params on left side to name on right side

Then change the expression as shown below :

```
{
  ns0#getProductsByNameRequest: {
    name: inboundProperties."http.query.params".productname as :string
  }
}
```

4) Now Drag a Transform Message Component to the right side of Webservice Consumer.

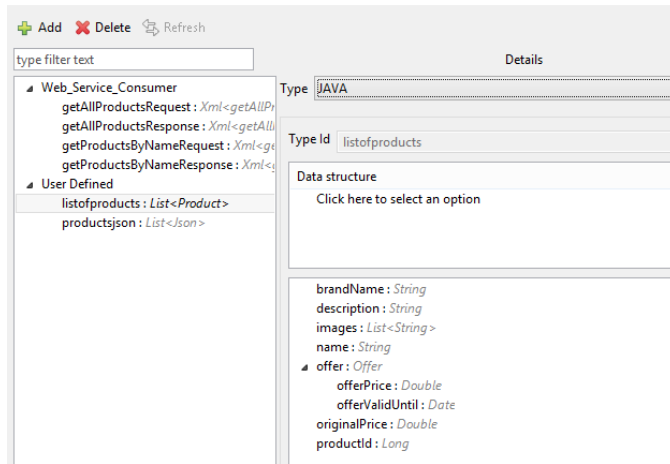
You should see the metadata on the left side as shown below :

```
▲ Payload : Xml<getProductsByNameResponse>
  ▲ products : Xml<getProductsByNameResponse>
    ▲ product : List<Xml<getProductsByNameResponse>
      brandName : String
      description : String
      ▸ images : Xml<getProductsByNameResponse>
        name : String
      ▸ offer : Xml<getProductsByNameResponse>
        originalPrice : Double
        productId : Long
```

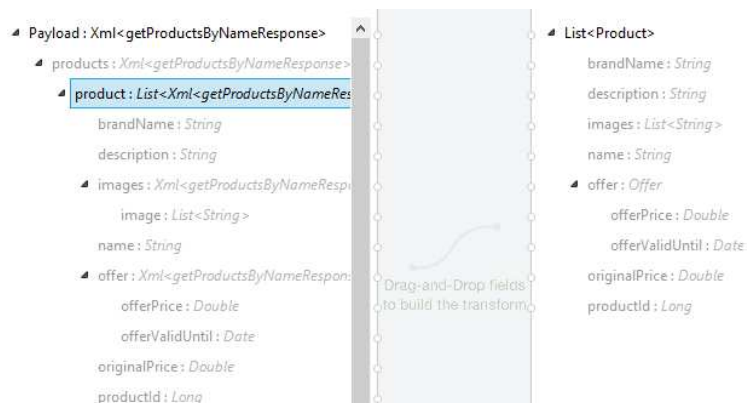
5) In the output section, Click on Define Metadata link.



Select listofproducts as shown below :



6) Now you should observe that input and output metadata will look like below :



7) Now map the input and output by dragging and dropping. You should observe that expression is generated as shown below :



```
%dw 1.0
%output application/java
%namespace ns0 http://way2learnonline.com/domain
---
payload.ns0#getProductsByNameResponse.products.*product map ((product , indexOfProduct) -> {
    brandName: product.brandName,
    description: product.description,
    images: product.images.*image map ((image , indexOfImage) -> image),
    name: product.name,
    offer: {
        offerPrice: product.offer.offerPrice,
        offerValidUntil: product.offer.offerValidUntil
    },
    originalPrice: product.originalPrice,
    productId: product.productId
} as :object {
    class : "com.way2learnonline.Product"
})
```

8) Now drag Transform Message after getproductsbyname flow reference inside choice router flow.

Change the output mime type as "application/json " and write the expression as payload.

9) Now give a request to <http://localhost:8081/soap/products?productname=Mac>. You should observe the products in json format

STEP 3

1) Open Dbdemo.xml.

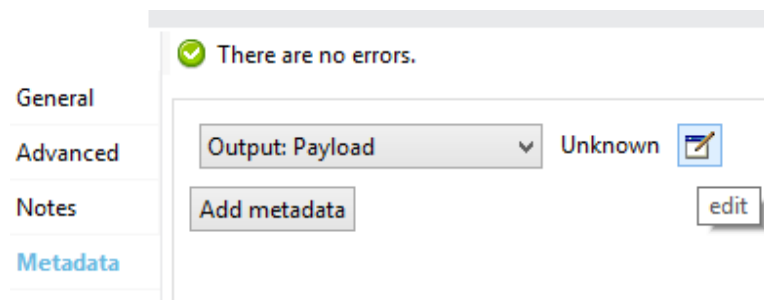
Transform the List<Map> to List<Product> using "Transform Message"

STEP4

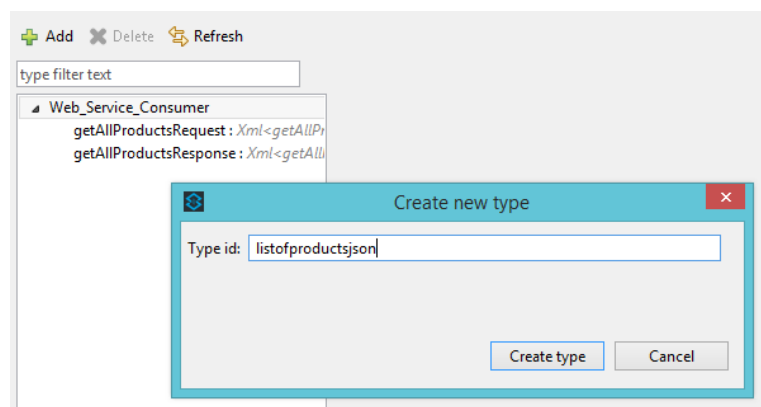


- 1) Open rest.xml.
- 2) Outbound Http endpoint does not support datasense. So, double click on Http Outbound end point and select metadata tab

Click on Add MetaData and select output:payload. Click on edit button



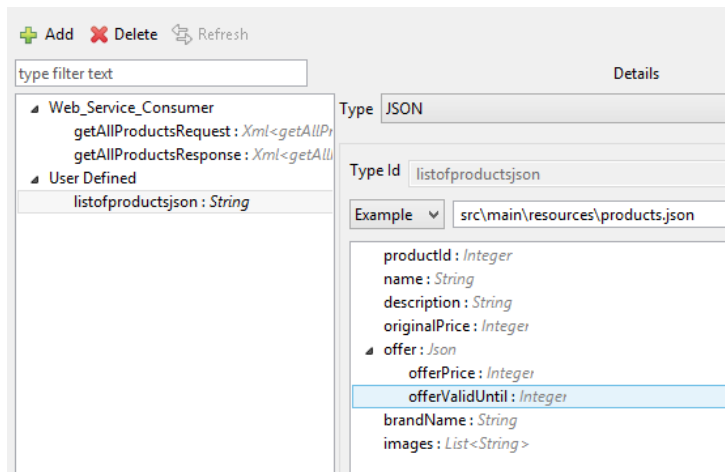
- 3) Click on Add button and give the name as listofproductsjson.



- 4) Select Type as JSON . Point the example as products.json in



src/main/resources

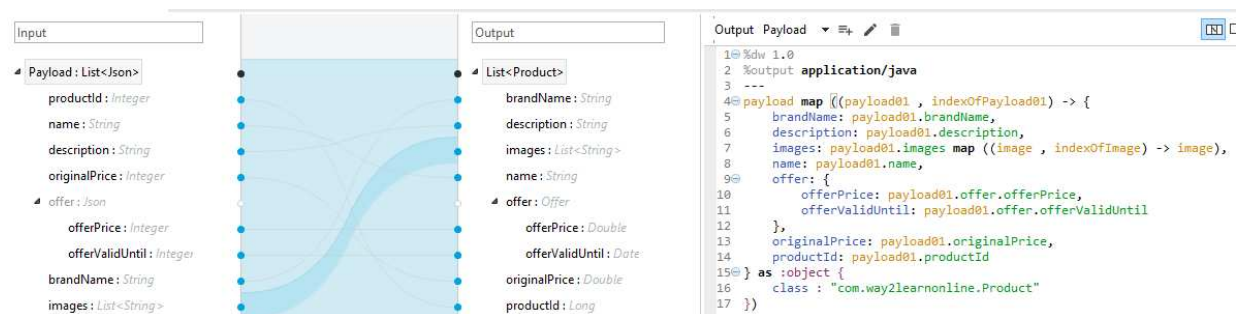


5) Now drag "Transform message" and observe the metadata is generated on left side.

6) In the output section, click the "Define Metadata" link and select "listofproducts"

Now map left side meta data to right side.

it should look like below :



7) Deploy the application and give a request to `http://localhost:8081/products?productname=Mac`

You should see the `List<Product>` in serialized format.

Dont worry If the browser prompts you to open with dialog box

STEP5



- 1) Create a new configuration file allproducts.xml
- 2) Drag a Http Endpoint and configure it for URL : `http://localhost:8081/allproducts`

- 3) Drag a Scatter-Gather after Http Endpoint.

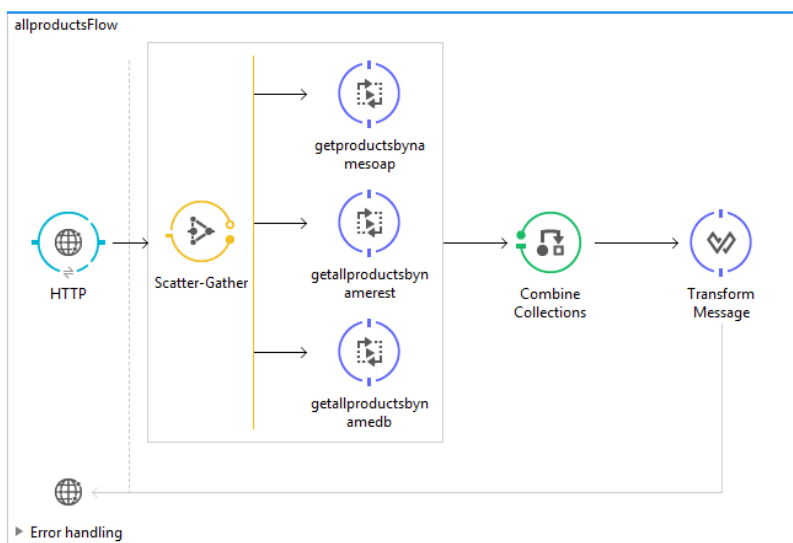
Drag 3 flow references pointing to "getallproductsbynamesoap" flow, rest flow and database flow.

Drag a combine collections transformer after scatter-gather.

Drag a "Transform Message" component after Combine collections transformer.

Make the output type as "application/json" and expression as payload

The flow should look like below :



Deploy the application and give a request to `http://localhost:8081/allproducts?productname=Mac`

You should observe the list of products as json format.

This is the end of the Exercise

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