

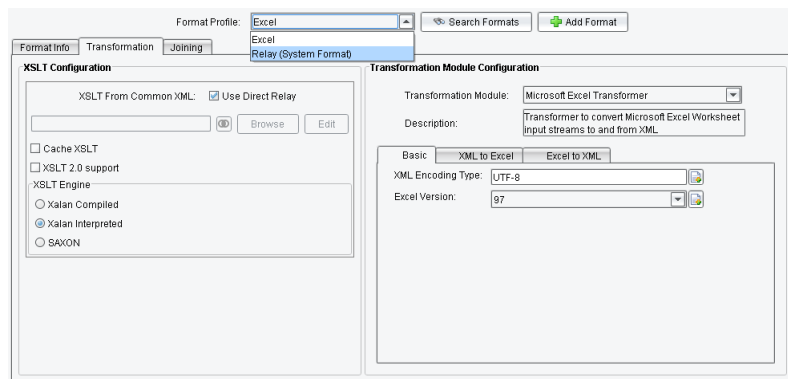
# Using Forking

## Overview

In this lab, we will ll cover the basic use of Forking. This tutorial expands on content and concepts covered in the “Lab 3: Using Transformers” lab. This exercise will fork a Route based on the Microsoft Excel Sheets contained in a file.

## Steps

1. Continuing where we left off with “Using Transformers”, remove the ‘Target Transformation’ by selecting that stage and changing the Format Profile back to “Relay”:

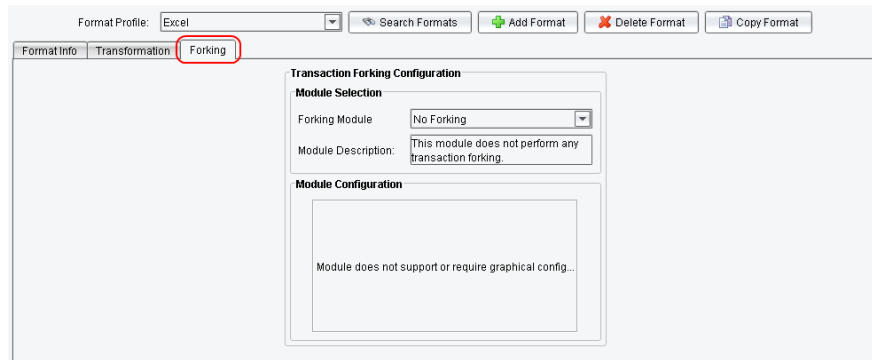


2. Since the output is now going to be XML, change the output ‘file extension’ of the ‘Target Transport’ to “xml”.

The route should now look like this:



3. Select the ‘Source Transform’ stage and then select the ‘Forking’ tab:



4. Select "XPath Forking" from the Forking Module dropdown.

The forking stage will be invoked after transformation has taken place. The basic structure of a Spreadsheet once converted to XML can be seen below.

```
<?xml version="1.0" encoding="utf-8"?>
<XCSExcelBook sheetCount="1">
  <XCSExcelSheet name="People" rowCount="98">
    ...
  </XCSExcelSheet>
  <XCSExcelSheet name="Customers" rowCount="14">
    ...
  </XCSExcelSheet>
</XCSExcelBook>
```

5. Fork based on the following Xpath Expression:

```
//XCSExcelSheet
```

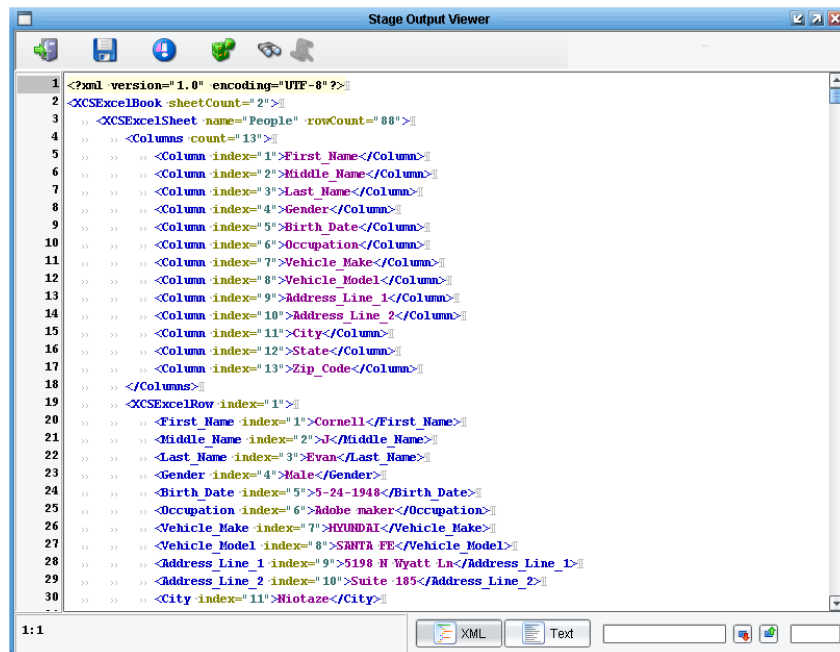
## Testing

For our sample file, we have created an Excel sheet like so:

	A	B	C	D	E	F	G	H	I	J	K	L	M
5	Quincy	T	Felix	Male	8-23-1991	Assistant, his UM	ELECTREK	689 E Ivory Rd	Mirflinburg	PA			17844
6	Simone	F	Chassidy	Female	12-12-1984	Wood grinder OLDSMOBILE	ROYALE	3055 W Ernesto Ln	Osage	IA			50461
7	Brad	Q	Bobbie	Male	6-5-1987	Last sorter SATURN	OTHER	6706 W Sonny Ln	Kearney	NE			68845
8	Frances	W	Ellis	Male	9-17-1948	Mechanic, val VOLVO	S70	4701 E Rudolph St	Grant	LA			70644
9	Minna	E	Ha	Female	4-1-1968	Boat pilot GMC	PICKUP	4373 S Trent Ave	Vandalia	OH			45377
10	Levi	Z	Benjamin	Male	9-9-1935	Supervisor, v OLDSMOBILE	CUTLASS	1058 E Lavern St	David	KY			41616
11	Karl	X	Emile	Male	1-12-1963	Sales, tobacc SUBARU	BRAT MPV	732 N Adrian St	Dupo	IL			62239
12	Tiffany	I	Simona	Female	10-14-1957	Laboratory ch CHEVROLET	CORVETTE	1536 N Lee Cir	Morris Run	PA			16939
13	Homer	V	Rich	Male	6-20-1976	Patent classif FORD	FUSION	2185 N Zack Cir	New Madrid	MO			63869
14	Robert	D	Brook	Male	1-12-1935	Wood gluer FORD	FREESTYLE	5655 N Theodore Cir	Olamon	ME			4467
15	Neville	Z	Raleigh	Male	7-5-1937	Irrigation flum ACURA	LEGEND	59 S Carson Ave	Houston	TX			77230
16	Felipe	G	Ty	Male	1-16-1968	Morphologist AUDI	A8	7978 S Felipe Ln	Brandon	FL			33511
17	Oscar	S	Reyes	Male	8-2-1985	Solution mixer FORD	EDGE	2678 N Moses St	North Las Vegas	NV			89086
18	Asa	U	Salvador	Male	6-7-1951	Trip follower WAYNE	FORWARD C	4697 E Connk Suite 720	Millwood	VA			22646
19	Sharyl	H	Siobhan	Female	3-22-1984	Range scient MERCEDES	C230	2751 S Ty Cir	Amarillo	TX			79108
20	Chun	K	Constance	Female	9-15-1955	Skirt maker MERCEDES	E320	9599 N Mohar Suite 356	Vincennes	IN			47591
21	Zackary	P	Ted	Male	8-1-1959	Helper, annea VOLVO	S70	3951 W Sid St	Dilworth	MN			56529
22	Lorrie	B	Alexandra	Female	9-13-1975	Armed guard HYUNDAI	OTHER	5309 E Gail Blvd	Mansfield	OH			44904
23	Verdell	P	Kelli	Female	6-26-1952	Paymaster of BMW	328 i	693 S Brant Blvd	Toledo	OH			43615
24	King	Z	Eldon	Male	10-5-1970	Merryv oper TOYOTA	CORONA	3149 S Abram Cir	Nebo	WV			25141
25	Fredricka	B	Leah	Female	2-5-1935	Carton making JEEP	CHEROKEE	3228 S Jacques Ave	Union	MS			39365
26	Andrea	E	Monte	Male	11-18-1932	Auto cleaner DODGE	INTREPID	8764 E Shirley Rd	Chilton	TX			76632
27	Deon	E	Tomiko	Female	3-26-1989	Repair servio GMC	S15 PICKUP	5675 W Marco Suite 981	Weldona	CO			80653
28	Mariah	F	Latoiya	Female	2-22-1956	Bonder CHRYSLER	NEWPORT	5095 W Fredric St	Virginia Beach	VA			23450
29	Judi	F	Elaina	Female	2-17-1970	Farm labor co SUBARU	LEGACY	2211 N Leopoldo Rd	Independence	IA			50644
30	Darell	Z	Eddie	Male	2-11-1943	Mechanic, tile SUZUKI	FORENZA	2730 W Maurice Blvd	Middletown	MD			21769
31	Fabian	P	Fritz	Male	8-19-1943	Inspector, prii LEXUS	ES300	1300 E Mark Blvd	Lochgetly	WV			25866
32	Dianna	Q	Elvira	Female	7-2-1975	Steaming cab FORD	FULL SIZE	6762 S Dominic St	Larsen	WI			54947
33	Jonell	A	Herma	Female	7-16-1975	Needle bar mx MERCURY	COUGAR	216 N Ethan Rd	Somerset	NJ			8873
34	Hubert	H	Perry	Male	8-19-1984	Paving contra LEXUS	SC300	4683 E Dante Ln	Lithia Springs	GA			30122
35	Kalyn	U	Reyna	Female	8-5-1973	Supervisor, v MAZDA	RX-8	8707 S Buck Rd	Brocket	ND			58321
36	Lanny	X	Booker	Male	5-9-1935	Chief technok CHEVROLET	PICKUP	8595 S Lamar Ln	Galeton	CO			80622
37	Iona	K	Pamila	Female	9-4-1979	Land use map FORD	FESTIVA	5213 N Ruebe Apt 805	Oakland	OR			97462
38	Buddy	Q	Arlen	Male	4-26-1949	Hospital pharr SATURN	OUTLOOK	3655 S Darrin Ave	Woodson	AR			72180
39	Larhonda	V	Sadye	Female	9-7-1945	Fixer, machini ISUZU	AMIGO	3658 E Hal Ln	Manakin Sabo	VA			23103
40	Rodger	W	Jerrell	Male	12-15-1977	Glass washe SUBARU	OUTBACK	992 S Willard Cir	Borger	TX			79007

This sample ("people.xls") should be available in the same location as the lab materials. Copy the file into the input directory ("C:\in"), switch to Testing Mode, and Execute Test. Once the processing completes, we'll view the output at three different stages; First, at the Transform, then Forking and finally XSLT.

We can see from [Transformation Stage Output](#) that the root element is <XCSEExcelBook>:

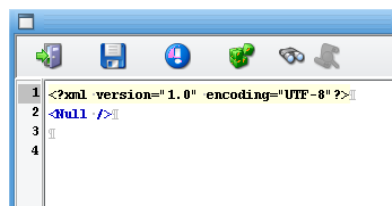


```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <XSEExcelBook sheetCount="2">
3   <XSEExcelSheet name="People" rowCount="88">
4     <Columns count="13">
5       <Column index="1">First_Name</Column>
6       <Column index="2">Middle_Name</Column>
7       <Column index="3">Last_Name</Column>
8       <Column index="4">Gender</Column>
9       <Column index="5">Birth_Date</Column>
10      <Column index="6">Occupation</Column>
11      <Column index="7">Vehicle_Make</Column>
12      <Column index="8">Vehicle_Model</Column>
13      <Column index="9">Address_Line_1</Column>
14      <Column index="10">Address_Line_2</Column>
15      <Column index="11">City</Column>
16      <Column index="12">State</Column>
17      <Column index="13">Zip_Code</Column>
18    </Columns>
19    <XSEExcelRow index="1">
20      <First_Name index="1">Cornell</First_Name>
21      <Middle_Name index="2">J</Middle_Name>
22      <Last_Name index="3">Evan</Last_Name>
23      <Gender index="4">Male</Gender>
24      <Birth_Date index="5">5-24-1948</Birth_Date>
25      <Occupation index="6">Adobe maker</Occupation>
26      <Vehicle_Make index="7">HYUNDAI</Vehicle_Make>
27      <Vehicle_Model index="8">SMHTA FE</Vehicle_Model>
28      <Address_Line_1 index="9">5198 N Wyatt Ln</Address_Line_1>
29      <Address_Line_2 index="10">Suite 183</Address_Line_2>
30      <City index="11">Mioataze</City>

```

Forking Stage Output is NULL because it spawns new transactions:

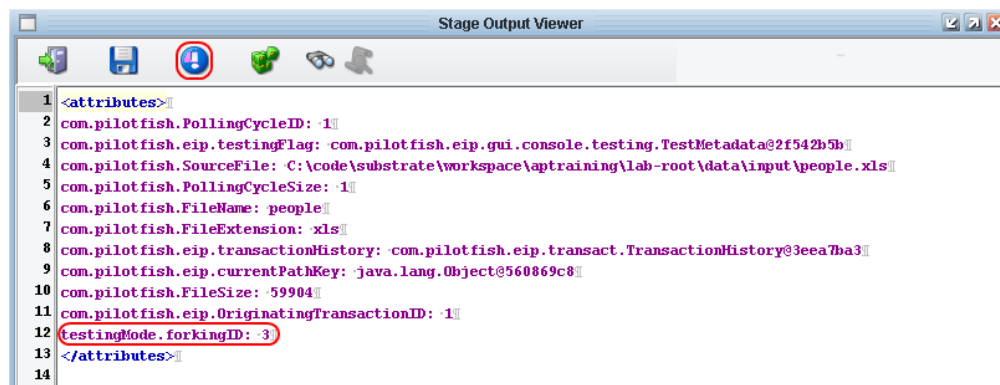


```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <Null />
3
4

```

Switching to Attribute View reveals a “forkingID” attribute:



```

1 <attributes>
2 com.pilotfish.PollingCycleID: 1
3 com.pilotfish.eip.testingFlag: com.pilotfish.eip.gui.console.testing.TestMetadata@2f542b5b
4 com.pilotfish.SourceFile: C:\code\substrate\workspace\aptraining\lab-root\data\input\people.xls
5 com.pilotfish.PollingCycleSize: 1
6 com.pilotfish.FileName: people
7 com.pilotfish.FileExtension: xls
8 com.pilotfish.eip.transactionHistory: com.pilotfish.eip.transact.TransactionHistory@3eea7ba3
9 com.pilotfish.eip.currentPathKey: java.lang.Object@560869c8
10 com.pilotfish.FileSize: 59904
11 com.pilotfish.eip.OriginatingTransactionID: 1
12 testingMode.forkingID: 3
13 </attributes>
14

```

We can see that the transaction was split in two from the ‘Test Results’ panel on the next stage:

Objects within selected stage:

Stage Status	Stage Name	Stage Type
	Microsoft Excel Transformer	Transformation
	Forking	Forking
	XSLT	XSLT

Testing Configuration

Stage Name:

Stage Configuration

☐ Start Test Here ☐ Skip This Stage

☐ Trace Point After Here ☐ End Test After Here

Initial File:

Test Results

TX ID	Time	Percent	Status
1-1	17:42:03.672	12.84	Success
1-2	17:42:03.756	12.84	Success

Viewing the output of one of the XSLT stages we can see that the root element is now `<XCSExcelSheet>`:

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <XCSExcelSheet name="People" rowCount="88">
3   <Columns count="13">
4     <Column index="1">First_Name</Column>
5     <Column index="2">Middle_Name</Column>
6     <Column index="3">Last_Name</Column>
7     <Column index="4">Gender</Column>
8     <Column index="5">Birth_Date</Column>
9     <Column index="6">Occupation</Column>
10    <Column index="7">Vehicle_Make</Column>
11    <Column index="8">Vehicle_Model</Column>
12    <Column index="9">Address_Line_1</Column>
13    <Column index="10">Address_Line_2</Column>
14    <Column index="11">City</Column>
15    <Column index="12">State</Column>
16    <Column index="13">Zip_Code</Column>
17  </Columns>
18  <XCSExcelRow index="1">
19    <First_Name index="1">Cornelli</First_Name>
20    <Middle_Name index="2">J</Middle_Name>
21    <Last_Name index="3">Evan</Last_Name>
22    <Gender index="4">Male</Gender>
23    <Birth_Date index="5">5-24-1948</Birth_Date>
24    <Occupation index="6">Adobe maker</Occupation>
25    <Vehicle_Make index="7">HYUNDAI</Vehicle_Make>
26    <Vehicle_Model index="8">SANTRA FE</Vehicle_Model>
27    <Address_Line_1 index="9">5198 N Wyatt Ln</Address_Line_1>
28    <Address_Line_2 index="10">Suite 185</Address_Line_2>
29    <City index="11">Niotaze</City>
30    <State index="12">KS</State>

```

Lastly we should see two XML files created in our output directory.