

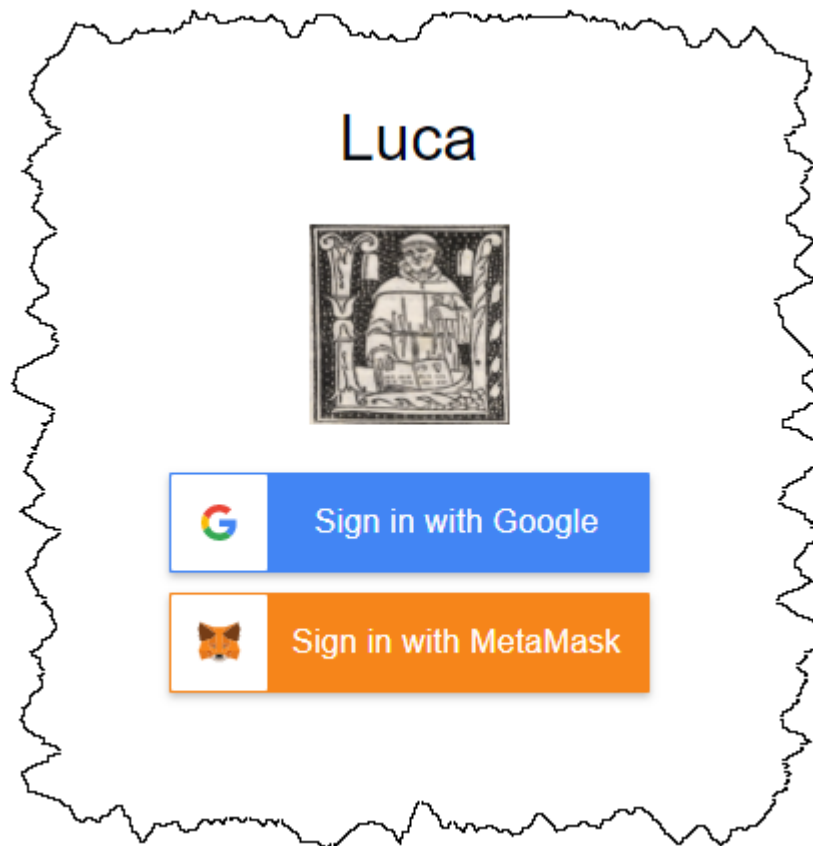
SFAC 6 Elements of Financial Statement Tutorial¹

This tutorial walks you through creating a very basic financial report for the FASB's SFAC 6 *Elements of Financial Statements*² using a web application version of a similar Windows Forms software application called Luca³.

This tutorial introduces two ideas. First, the IMPORT functionality of this cloud-based version of Luca and second, the notion of a BASE TAXONOMY for creating an XBRL-based financial report.

To use the Luca web application, navigate to the following URL in your browser:

<http://luca.yaxbri.com/>



Currently you can sign in using Google sign in or you can use the MetaMask crypto currency wallet. Simply click "Sign in with Google", select the Google account (gmail account) that you want to sign in with, and you will be logged into the application using that Google account. Alternatively, you can sign in using MetaMask by connecting Luca to your MetaMask wallet.

¹ Accounting Equation Representation, <http://xbri.site.azurewebsites.net/2020/master/ae/index.html>

² FASB, SFAC 6, *Elements of Financial Statements*, <https://www.fasb.org/pdf/con6.pdf>

³ Windows Forms-based Luca, <http://xbri.squarespace.com/journal/2020/9/15/luca.html>

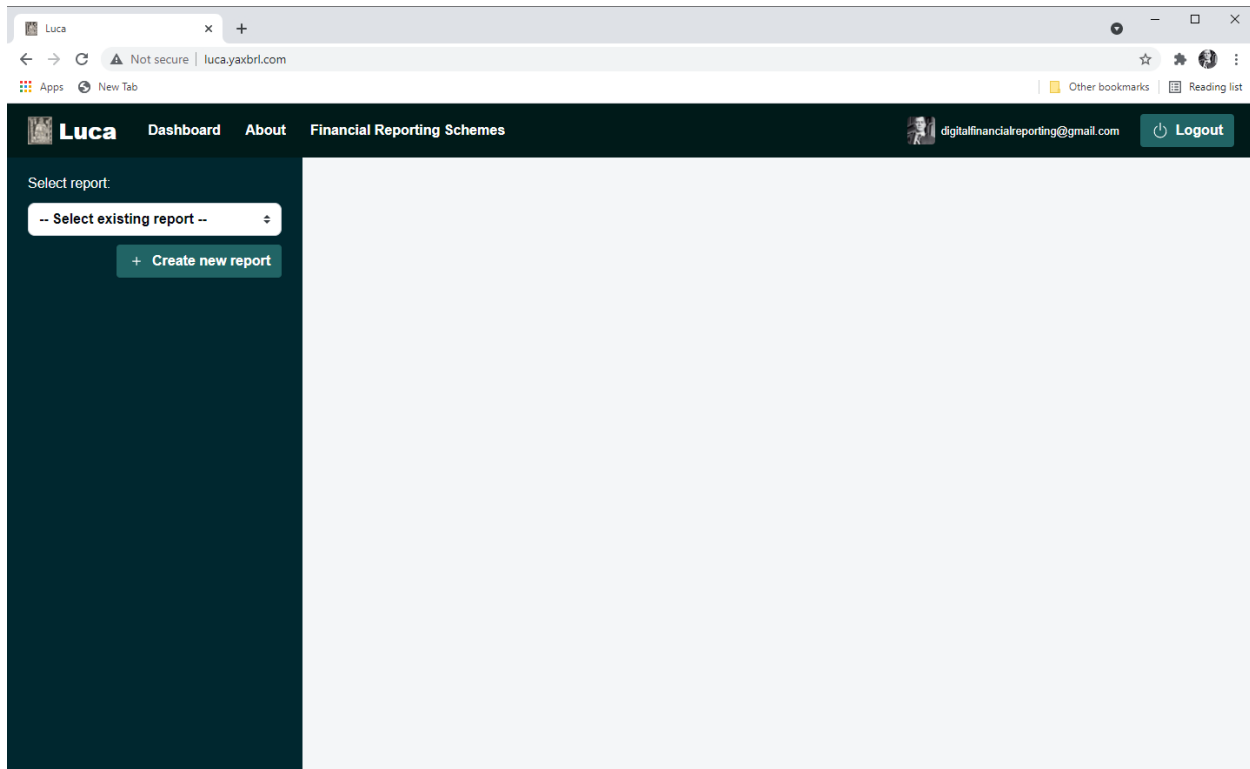
If you don't have MetaMask, you can use *How to Install and Use MetaMask*⁴ to understand that.

Note that the Accounting Equation tutorial showed you how to input information into Luca manually. It is highly recommended that you do that Accounting Equation tutorial prior to undertaking this tutorial.

This SFAC 6 tutorial will teach you how to use the Luca import functionality. Luca is not just a GUI application. There is also an API interface to Luca. And with Luca, you can generate XBRL-based financial reports or (coming soon) generate a PDF, HTML, Microsoft Word, or Google Documents version of such reports. Fundamentally, Luca is a rules-based expert system API and a GUI for creating financial reports.

There are four primary objectives of this tutorial. The first objective is to help you understand how to create an entire XBRL-based financial report from importing information from Excel spreadsheets. The second objective is to help you build on your understanding of the logical model of a financial report. The third objective is to help you understand the difference between a LOCAL report model and an IMPORTED base taxonomy. The fourth objective is to help you understand the sorts of information you can enter into the application by examining the Excel spreadsheets you use for importing the SFAC 6 report information.

After you sign in, in your browser window you will see something similar to the following:



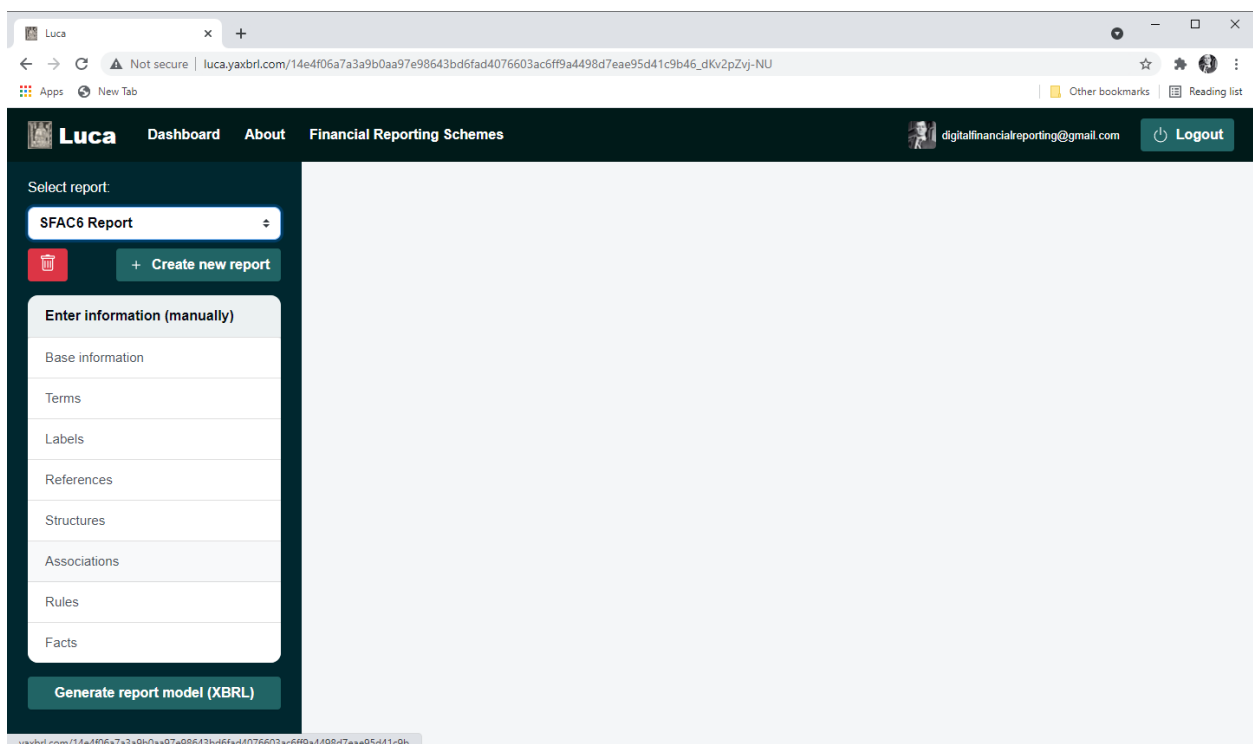
From the left and side of the screen notice the green “Create new report” button. Click that button to create a new report and the following form will be shown:

⁴ WeTrust, *How to Install and Use MetaMask*, <https://blog.wetrust.io/how-to-install-and-use-metamask-7210720ca047>

In the report name field enter the name of the report which you would like to create. We will be creating the SFAC 6 Elements of Financial Statements report, so enter “SFAC6”.

Press the green “Save” button to create the new report.

A shell has been created for your report and your browser application should look something like what you see below. Note your “SFAC6” report is selected and there is a menu of information which needs to be entered to create the report displayed.



We are trying to keep this tutorial as simple as possible. We encourage you to follow each step exactly in order to get the most out of this tutorial. We will build on this foundation in further tutorials that increase the complexity of the financial report being created. This tutorial simply walks you through the basics of some specific tasks.

Also recognize that Luca is a work in progress and incremental improvements will be made to make the application easier to use and increase functionality.









Let’s get started.

Step 1: Obtain the import files.

The first thing you need to do for this tutorial is to download the import files that will be used. You can get that ZIP archive here:

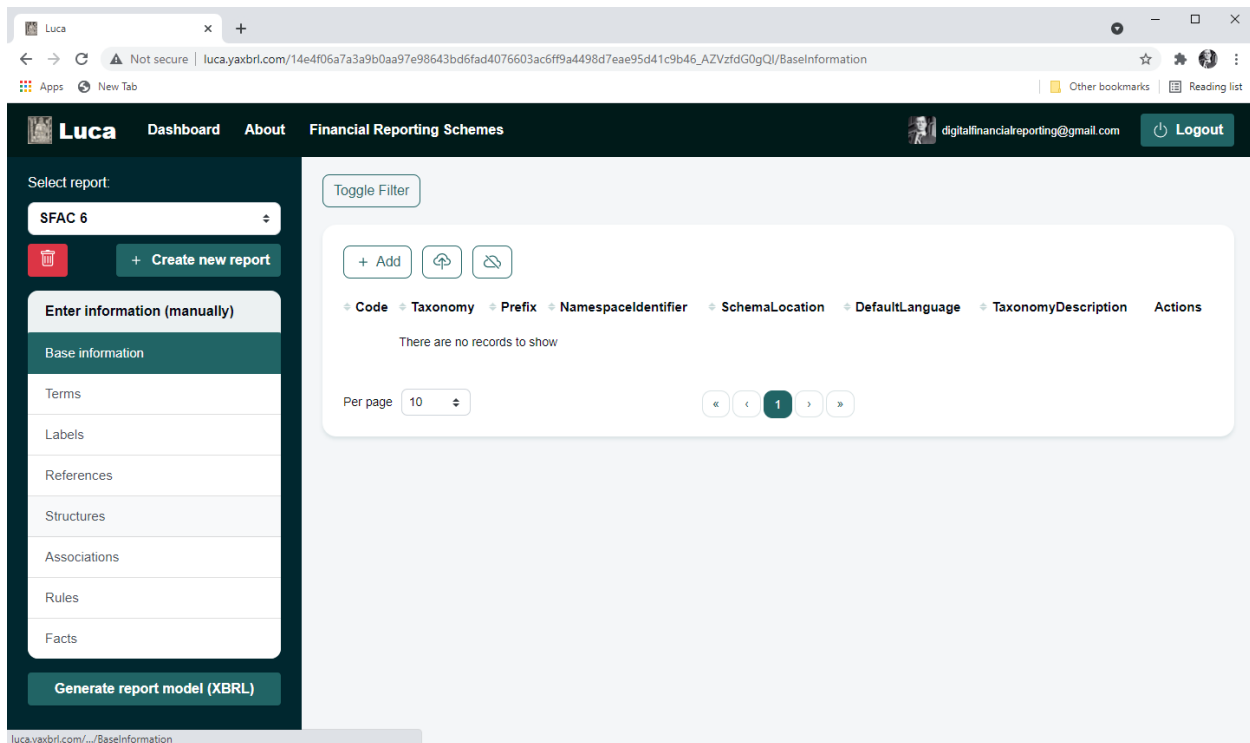
<http://xbrlsite.azurewebsites.net/2021/luca/sfac6-import.zip>

Download the file, unzip the file into a folder, and your files should look something like this:

Name	Date modified	Type	Size
 sfac6-associations.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	10 KB
 sfac6-baseinformation.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	10 KB
 sfac6-facts.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	10 KB
 sfac6-labels.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	9 KB
 sfac6-references.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	10 KB
 sfac6-rules.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	10 KB
 sfac6-structures.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	9 KB
 sfac6-terms.xlsx	8/31/2021 3:37 PM	Microsoft Excel Worksheet	10 KB

Step 2: Import Basic information.

From the menu on the left, click on “Base information” and the following form will appear:



The screenshot shows the Luca application interface. On the left, a sidebar menu lists various report types: SFAC 6, Base information, Terms, Labels, References, Structures, Associations, Rules, and Facts. The 'Base information' option is selected. The main content area displays a form for entering information manually. At the top, there's a 'Toggle Filter' button and a '+ Add' button. Below these, a table header lists columns: Code, Taxonomy, Prefix, NamespaceIdentifier, SchemaLocation, DefaultLanguage, TaxonomyDescription, and Actions. The table body is empty, showing 'There are no records to show'. At the bottom, there's a 'Per page' dropdown set to 10 and a pagination control showing page 1 of 1. The footer of the application shows the URL 'luca.yaxbri.com/.../BaseInformation'.

On the form you will see an icon that looks like this:



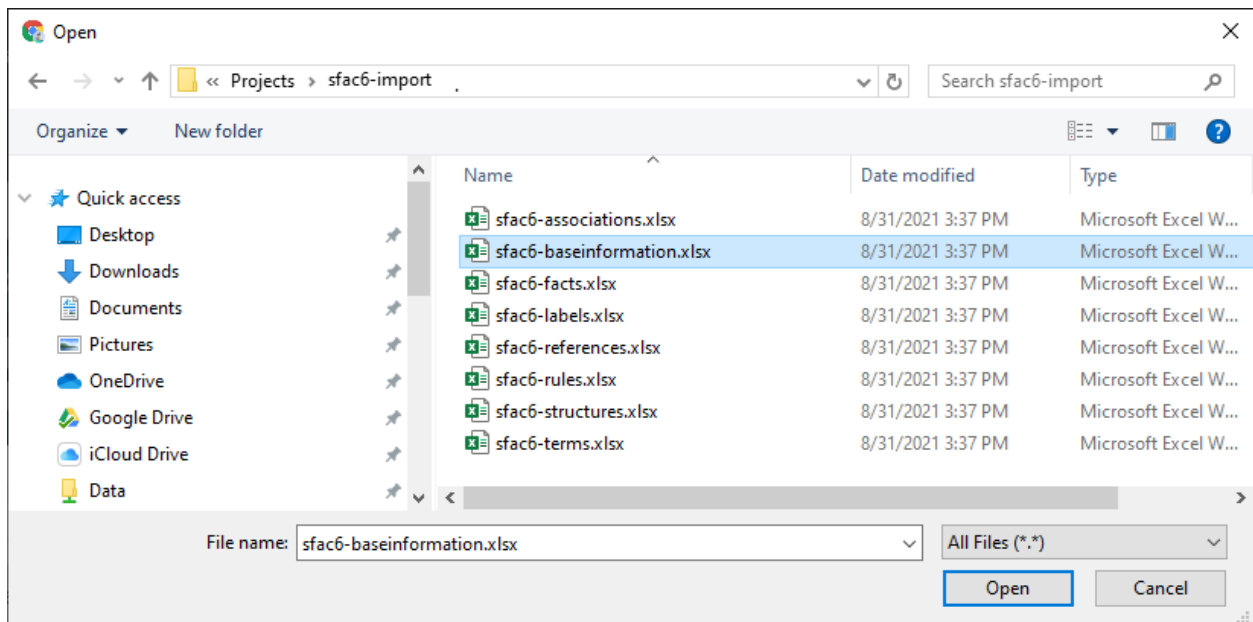
Click that icon which is the “Upload data from file” icon and the following form will appear:

Load data from Excel

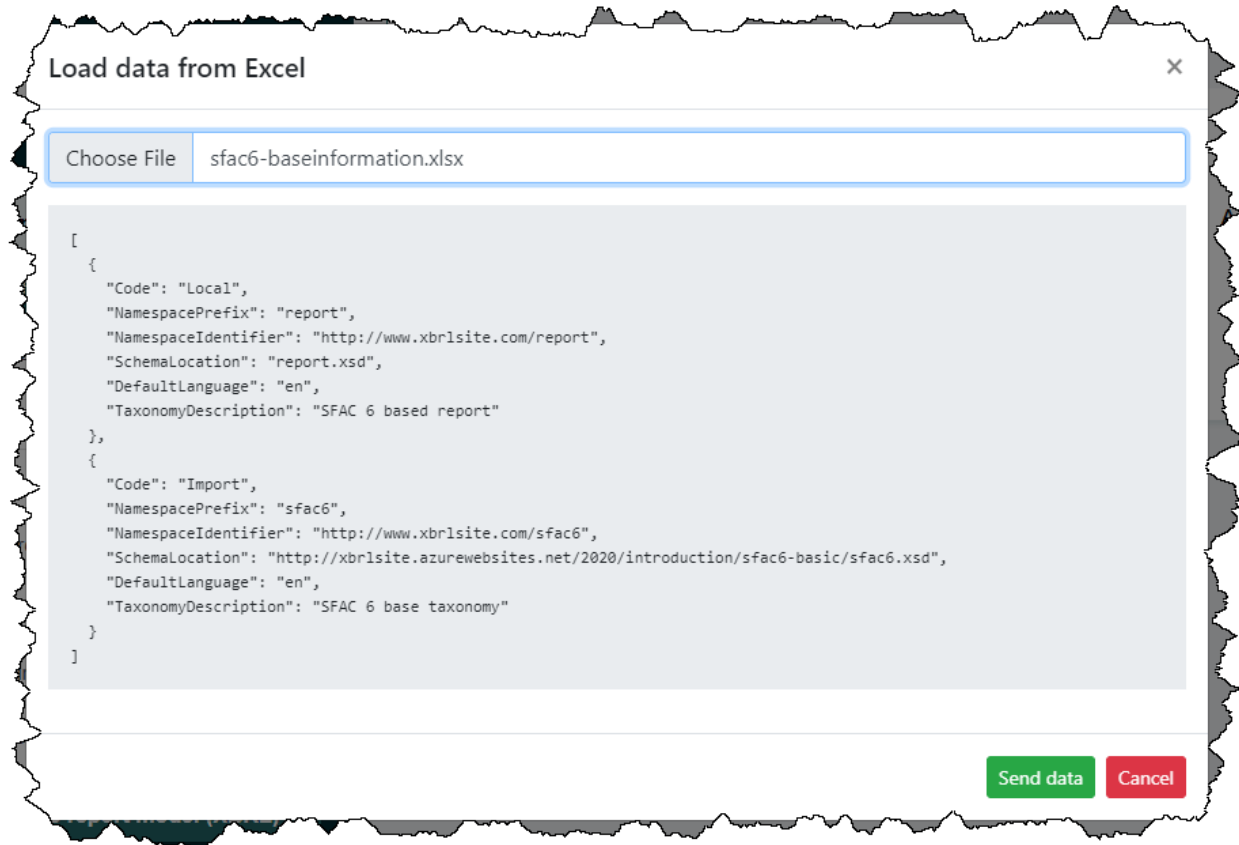
Choose File No file chosen

Send data Cancel

Click on the “Choose File” button and a dialog box will open that will let you select a file. Navigate to the folder where you put the ZIP archive that you downloaded and select the file “sfac6-baseinformation.xlsx”. Then press the “Open” button.



At that point the following form will be opened and you will see the information that was found in the Excel spreadsheet rendered as JSON:



If you open the Excel spreadsheet you will see something like the following:

Code	NamespacePrefix	NamespaceIdentifier	SchemaLocation	DefaultLanguage	TaxonomyDescription
Local	report	http://www.xbrlsite.com/report	report.xsd	en	SFAC 6 based report
Import	sfac6	http://www.xbrlsite.com/sfac6	http://xbrlsite.azurewebsites.net/2020/introduction/sfac6-basic/sfac6.xsd	en	SFAC 6 base taxonomy

Notice that there are two rows in the Excel spreadsheet. The first row “Local” is information for the report model of the report we will create. Effectively, this is the reporting entities XBRL taxonomy. The second row “Import” is the base taxonomy of the financial reporting scheme we will use for creating the report.

There is an important idea that you need to understand at this point. That idea relates to the terms that will be used to create the financial report model of the financial report you are constructing.

Terms can come from one of two places:

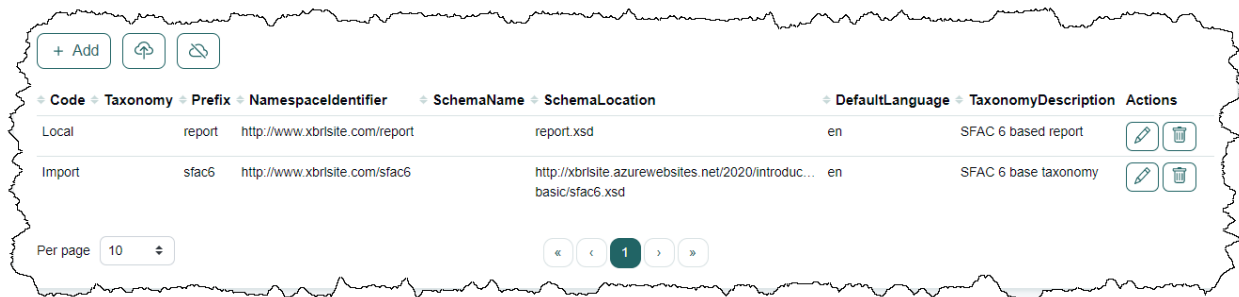
1. **Locally**, terms that you created directly within your report.
2. **Imported**, terms that you use from one or more XBRL taxonomies that you connect to the report.





In the first Accounting Equation tutorial we created a local report model. In this tutorial we will create both a Local report model and import a base XBRL taxonomy that will be used to create the report.

Don’t worry about this any more than we have mentioned right now. We will dive into this in much more detail in another tutorial.

So, to import the base information, press the “Send data” button on the form you see.

Now, your base information form should look like this:



Code	Taxonomy	Prefix	NamespaceIdentifier	SchemaName	SchemaLocation	DefaultLanguage	TaxonomyDescription	Actions
Local	report		http://www.xbrlsite.com/report	report.xsd		en	SFAC 6 based report	 
Import	sfac6		http://www.xbrlsite.com/sfac6		http://xbrlsite.azurewebsites.net/2020/introduc... basic/sfac6.xsd	en	SFAC 6 base taxonomy	 

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« < 1 > »

Congratulations! You now know how to import into Luca.

Step 3: Import Terms information.

Next you will repeat the same steps above for the terms.

1. Select the “Terms” tab.
2. Import the “sfac6-terms.xlsx” file.

Step 4: Import Labels information.

Next you will repeat the same steps above for the labels.

1. Select the “Labels” tab.
2. Import the “sfac6-labels.xlsx” file.

Step 5: Import References information.

Next you will repeat the same steps above for the references.

1. Select the “References” tab.
2. Import the “sfac6-references.xlsx” file.

Step 6: Import Structures information.

Next you will repeat the same steps above for the structures.

1. Select the “Structures” tab.
2. Import the “sfac6-structures.xlsx” file.

Step 6: Import Associations information.

Next you will repeat the same steps above for the associations.

1. Select the “Associations” tab.
2. Import the “sfac6-associations.xlsx” file.

Step 7: Import Rules information.

Next you will repeat the same steps above for the rules.

1. Select the “Rules” tab.
2. Import the “sfac6-rules.xlsx” file.

Step 8: Import Facts information.

Next you will repeat the same steps above for the facts.

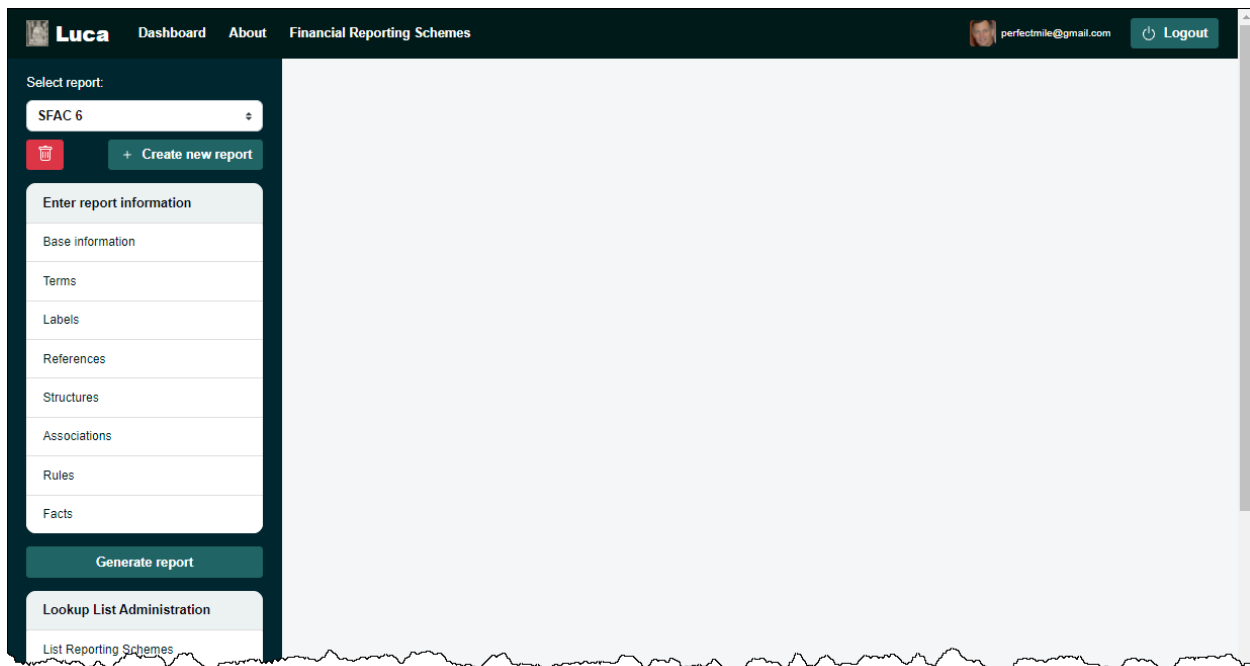
1. Select the “Facts” tab.
2. Import the “sfac6-facts.xlsx” file.

Step 9: Generate your XBRL taxonomy schema, XBRL linkbases, and XBRL instance.

Again, I want to remind you that we are focusing on the mechanical steps of importing the set of files you need in order to generate a report model and a report. Don't worry if you don't understand everything that is in those Excel spreadsheets yet. We will get to that.

You can go explore what you have entered by selecting any of the forms on the left and then the edit icon on the right.

Next, we want to generate the XBRL files. To do that, press the green "Generate report model (XBRL)" on the lower left hand side of the main menu:



Pressing that green "Generate report" button will open the following form:



Press the “Download All” button at the bottom LEFT of the form to download a ZIP archive that contains all XBRL files generated. Alternatively on the RIGHT you can download each file individually.

Step 10: Verify the information output into that XBRL format.

Several XBRL files will be generated that contain the information that you entered into the Luca application. You can open these files using any XBRL tool. Below we show the XBRL taxonomy schema opened in Arelle⁵ which is a free open-source tool for working with XBRL.

The screenshot shows the Arelle application window titled 'arelle - ae.xsd'. The 'Properties' pane on the left lists the following details for the 'Balance Sheet [Set]' concept:

Property	Value
label	Balance Sheet [Set]
label (en)	Balance Sheet [Set]
namespace	http://www.xbrlsite.com/ae
name	BalanceSheetSet
QName	ae:BalanceSheetSet
id	ae_BalanceSheetSet
abstract	true
type	xbrl:stringItemType
subst grp	xbrl:item
period type	duration

The 'Presentation' pane on the right shows the '01-Balance Sheet' presentation structure:

Presentation Relationships	Pref. Label	Type	References
01-Balance Sheet			
Balance Sheet [Set]		String	
Assets		Monetary	
Liabilities		Monetary	
Equity		Monetary	

The 'Messages/Concepts' pane at the bottom displays a table of concepts:

Label	Name	ID	Abstract	Subs Grp	Type	Period Type	Balance
Assets	Assets	ae_Assets	false	xbrl:item	xbrl:monetaryItemType	instant	debit
Balance Sheet [Set]	BalanceSheetSet	ae_BalanceSheetSet	true	xbrl:item	xbrl:stringItemType	duration	
Equity	Equity	ae_Equity	false	xbrl:item	xbrl:monetaryItemType	instant	credit
Liabilities	Liabilities	ae_Liabilities	false	xbrl:item	xbrl:monetaryItemType	instant	credit

Step 11: Verify your XBRL files.

Finally, we will want to verify that the XBRL taxonomy that we created was consistent with the XBRL technical specification. Luca does not perform XBRL validation. You can use any off-the-shelf XBRL processor to verify that your XBRL is correct. Below you see the validation results provided by XBRL Cloud:

⁵ Arelle.org, Arelle Download, <https://arelle.org/arelle/>

XBRL Validation Report

Severity	Count
Error	0
Warning	0
Inconsistency	0
Best Practice	0
Information	0
Total	0

No Errors!

UBmatrix XBRL Processing Engine⁶ is another freely available open source software application for processing XBRL-based reports. Here is the UBmatrix validation results for the business rules which were created:

Summary

Formulas Compiled	Formula Fired	Assertions Compiled	Assertions Fired	Assertions Satisfied	Assertions Not Satisfied
0	0	4	6	6	0

Assertion Report

Value Assertions

id	satisfied	message
Arithmetic_BS01 (evaluation 1)	satisfied	\$Assets=3500 = (\$Liabilities=0 + \$Equity=3500)
Arithmetic_BS01 (evaluation 2)	satisfied	\$Assets=0 = (\$Liabilities=0 + \$Equity=0)
RollForward_RF1 (evaluation 1)	satisfied	\$Equity_BalanceStart=0 + \$ComprehensiveIncome=3000 + \$InvestmentsByOwners=1000 - \$DistributionsToOwners=500 = \$Equity_BalanceEnd=3500

We already mentioned Arelle; here is the fact table of the XBRL-based report which you generated:

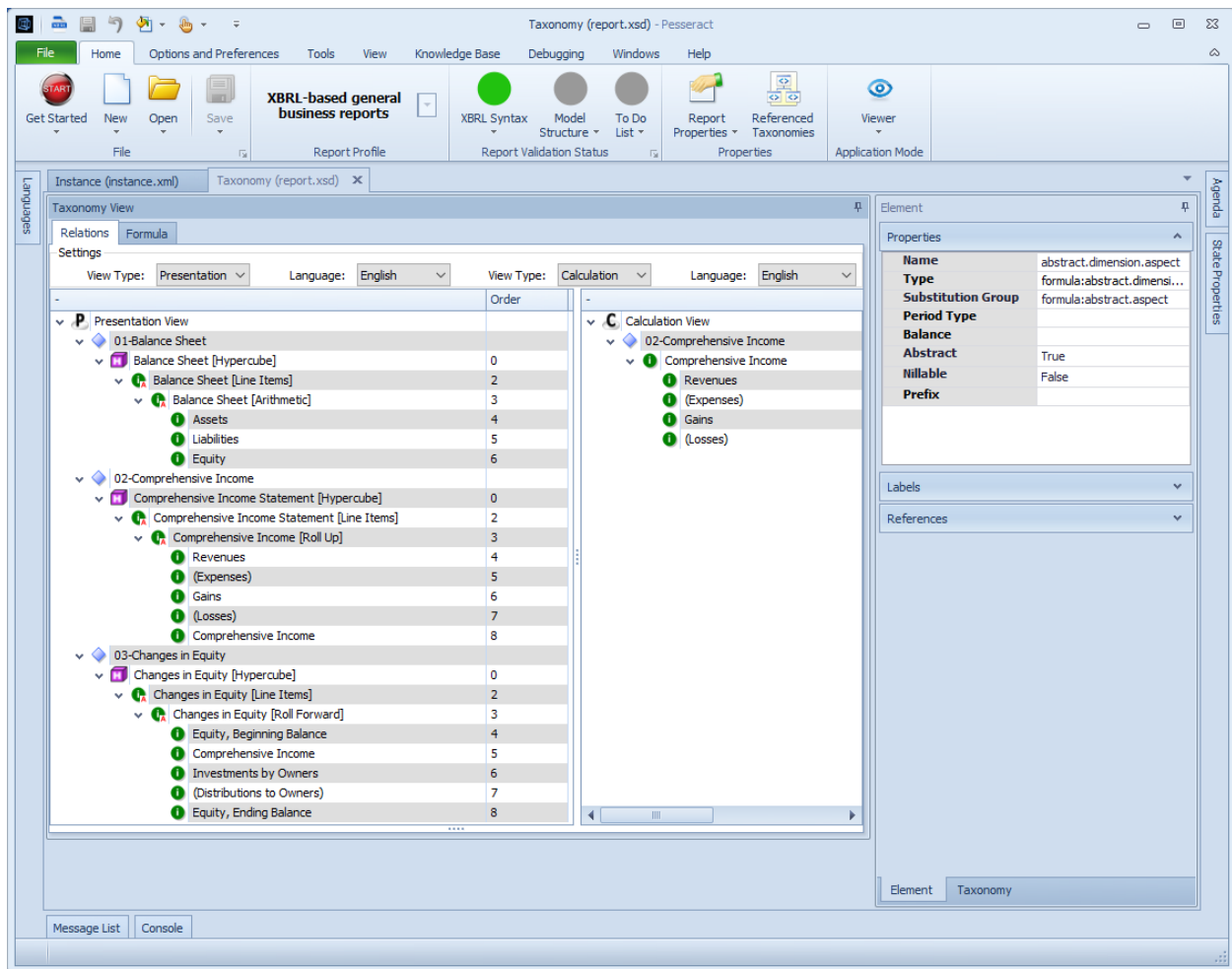
Fact Table	Fact List	Presentation	Formulae
	Concept	2020-12-31	2021-12-31
<input type="checkbox"/>	01-Balance Sheet		
<input checked="" type="checkbox"/>	Balance Sheet [Set]		
	Assets	1,000	10,000
	Liabilities	0	5,000
	Equity	0	5,000

Another tool for working with XBRL-based reports is Pesseract⁷. Pesseract is a working proof of concept which is also freely available.

⁶ Sourceforge, UBmatrix XBRL processing Engine, <https://sourceforge.net/projects/ubmatrix-xbrl/files/UBmatrix%20Processing%20Engine%202.5/2.500/>

⁷ Pesseract, <http://pesseract.azurewebsites.net/>

Below you see the technical perspective of the XBRL taxonomy that you created for the accounting equation:



This is what your XBRL instance looks like in Pesseract:

Instance (instance.xml) - Pesseeract

File Home Options and Preferences Tools View Knowledge Base Debugging Windows Help

Get Started New Open Save XBRL-based general business reports XBRL Syntax Model Structure To Do List Report Properties Referenced Taxonomies Viewer

File Report Profile Report Validation Status Properties Application Mode

Instance (instance.xml) Taxonomy (report.xsd)

Components (3)

Network View Component View Block View

Filter Type Filter Level Filter Status

Enter text to filter ... Clear

- 01-Balance Sheet • Balance Sheet [Hypercube]
- 02-Comprehensive Income • Comprehensive Income Statement [Hypercube]
- 03-Changes in Equity • Changes in Equity [Hypercube]

Component Properties

Network 01-Balance Sheet

Table Balance Sheet [Hypercube]

Disclosure disclosures:UncategorizedInformation

Confidence MEDIUM

Status InProgress

Collections

Advanced

Rendering Model Structure Fact Table Business Rules Structure Business Rules Validation Results Elements

Component: (Network and Table)

Network 01 - Unknown - Balance Sheet

Table Balance Sheet [Hypercube]

Reporting Entity [Axis] GH259400TOMPUOLS65II <http://standards.iso.org/iso/17442>

Unit [Axis] USD

Period [Axis]

Balance Sheet [Line Items]

	2020-12-31	2019-12-31
Balance Sheet [Arithmetic]		
Assets	3,500 ¹	0 ¹
Liabilities	0	0
Equity	3,500	0

Message List Console

Loading was successful: no errors or warnings.