

1. Creation of Base Financial Reporting Scheme Models and Report Models

This section provides examples of good practices based base financial reporting schemes that have been represented using XBRL and report models that use base financial reporting schemes and extensions to create report models that are then used to create XBRL-based digital financial reports.

Keep in mind that financial reports are not standard forms, rather they are customizable. But the customizations must be kept with permitted boundaries. Before you tackle this section be sure to read the sections *Financial Report Knowledge Graphs* and the *Seattle Method*.

Remember that we are not building on existing processes by bolting on more work at the end of an inefficient process. What we are doing here is explaining a completely new approach to performing financial reporting, leveraging the nature of digital.

1.1. Base Financial Reporting Scheme Models

A base financial reporting scheme is some financial reporting scheme that serves as the basis of a general-purpose financial report. In the *Essence of Accounting*, we discussed financial reporting schemes in more detail. Examples of base financial reporting schemes are US GAAP, IFRS, UK GAAP, and other such financial reporting schemes.

1.2. Example Base Financial Reporting Scheme Models Represented using XBRL

The section *Golden Examples* has a set of good practices based base financial reporting schemes that have been carefully represented using XBRL. These examples get progressively larger and more sophisticated. These are excellent testing tools, benchmarks to understand software capabilities, examples for learning how to create base financial reporting schemes, report models, and reports.

Here is a summary of those example base financial reporting scheme models that have been represented effectively using XBRL. The examples start very small, a basic financial reporting scheme model that is used to represent the accounting equation, only three concepts: Assets, Liabilities, and Equity. But the examples grow bigger, and bigger, and bigger; increasing in complexity. These incremental examples help the reader understand XBRL-based report models of base financial reporting schemes, the complexities involved in representing them using XBRL, and otherwise help accountants get their heads around creating sophisticated XBRL-based representations of base financial reporting schemes.

Here are the best versions of these examples with links so you can go examine them and use them in the creation of financial report models:

- **Accounting Equation**¹: Very basic example with only one structure, four report elements, one rule. This results in only one reporting style.

¹ *Accounting Equation*, http://xbrlsite.com/seattlemethod/golden/ae/ae_ModelStructure.html

- **SFAC 6²**: Still very basic, but this base financial reporting scheme builds on the accounting equation example; expanding the number of structures to three, the number of report elements to about 10, adds a few more rules. But still, there is only one reporting style.
- **SFAC 8³**: The SFAC 8 example builds on the SFAC 6 example by adding more flexibility to the base financial reporting scheme. Up until now, the reporting schemes of the accounting equation and SFAC 6 were essentially unchangeable forms. With SFAC 8 we introduce the notion of reporting styles which changes the fundamental dynamics of a base financial reporting scheme.
- **Common Elements of Financial Report (Four Statement Model, prototype 2)⁴**: With this example we finally have something that looks close to a real financial report because it contains a balance sheet, an income statement, a statement of changes in equity, and we now introduce the cash flow statement. While still a very basic example, you should be happier that we are getting closer to something that looks like a real financial report.
- **MINI Financial Reporting Scheme⁵**: The MINI financial reporting scheme is just that; a miniature base financial reporting scheme that can be used to create real looking financial reports. What this example also does is ties a financial report to the transactions of an accounting system. We have grown our base financial reporting scheme representation to almost 500 report elements and many interconnected structures.
- **MINI Financial Reporting Scheme with Business Events and Classic Transactions⁶**: This is an improved version of the first MINI financial reporting scheme; plus, it adds the notions of business events and classic transactions which will be covered in later sections.
- **PROOF Financial Reporting Scheme⁷**: The PROOF financial reporting scheme is not really constructed to look like a real financial reporting scheme. In fact, to the untrained observer it might even look like a toy. However, this is no toy. This is a precision testing tool. All of the complexity of a financial reporting scheme such as US GAAP, IFRS, or UK GAAP is distilled down to its essence, represented in this PROOF, and then tested to make sure everything works as it was designed to work. Don't skip this example.
- **XASB Financial Reporting Scheme⁸**: The XASB financial reporting scheme is an imaginary standards body that I made up and a financial reporting scheme that is unbonded by any other financial reporting scheme. Basically, I made this up based on US GAAP, IFRS, and other financial reporting scheme

² SFAC 6, http://www.xbrlsite.com/seattlemethod/golden/sfac6/sfac6_ModelStructure.html

³ SFAC 8, http://www.xbrlsite.com/seattlemethod/golden/sfac8/sfac8_ModelStructure.html

⁴ Common Elements of Financial Report, http://www.xbrlsite.com/seattlemethod/golden/common2/base-taxonomy/common_ModelStructure.html

⁵ MINI Financial Reporting Scheme, http://www.xbrlsite.com/seattlemethod/golden/mini/base-taxonomy/mini_ModelStructure.html

⁶ MINI Financial Reporting Scheme with Business Events and Classic Transactions, http://xbrlsite.azurewebsites.net/2023/reporting-scheme/mini/base-taxonomy/mini_ModelStructure2.html

⁷ PROOF, http://www.xbrlsite.com/seattlemethod/golden/proof/base-taxonomy/proof_ModelStructure.html

⁸ XASB Financial Reporting Scheme, http://xbrlsite.com/seattlemethod/golden/xasb/base-taxonomy/xasb_ModelStructure.html

in order to experiment with representing financial reporting schemes using XBRL but not be hamstrung by issues created within the representation of real financial reporting schemes.

- **AASB 1060 Financial Reporting Scheme (Prototype)**⁹: The AASB 1060 Financial Reporting Scheme prototype is a real financial reporting scheme; I figure that about 20 percent or so having been represented using XBRL. AASB 1060 is very similar to IFRS for SMEs. The 20% of that financial reporting scheme has, to the best of my professional abilities, has been represented completely and correctly using XBRL. There other approaches that might have been taken such as using dimensions where instead I used line items to represent something. Arbitrary choices such as this are not the point. The point is to create a provably correct XBRL-based base taxonomy that is then held out for others to examine, learn from, and providing a truly good practices base example of a base financial reporting scheme model represented using XBRL.

Each of the XBRL-based taxonomies and XBRL instances provided within those prototypes is of ultra-high quality, heavily tested, guaranteed to be consistent with the XBRL technical specification, and follows the *Seattle Method* good practices framework or "application profile".

Any off-the-shelf software application that says it supports XBRL will be able to work with the XBRL taxonomies and XBRL instances for each of the 9 prototypes. In addition, that off-the-shelf software should have no trouble with this conformance suite.

Any and all of these base financial reporting schemes can be used for testing software applications that make use of XBRL. These are excellent testing tools and help software developers understand the needs of accountants.

1.3. Understanding what Each Base Financial Reporting Scheme Model Example Provides

Each of the base financial reporting scheme models is intentionally very consistent. For each of the examples, the following information has been provided. I will use the smaller SFAC 6 financial reporting scheme as an example in this section; but all base financial reporting schemes effectively provide information about the XBRL representation of the base financial reporting scheme model similarly as described below for SFAC 6:

1. A landing page¹⁰ is provided which provides a summary of everything else that is provided.

⁹ AASB 1060 Financial Reporting Scheme (Prototype), http://xbrlsite.azurewebsites.net/2021/reporting-scheme/aasb1060/base-taxonomy/aasb1060_ModelStructure2.html

¹⁰ Landing page, http://www.xbrlsite.com/seattlemethod/golden/sfac6/sfac6_ModelStructure.html

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SFAC 6 (Golden, CM)

Standards | 10 Interrelated Elements | Knowledge Graph | Entry Point | Terms | Structures | Disclosures | Disclosure Mechanics | Reporting Styles | Download | Reference Implementation

| Line | Label | Object Class | Period Type | Balance | Report Element Name |
|------|---|--------------------|-------------|---------|---|
| 1 | 11-Statement of Financial Position | Network | | | http://xbrl.site.com/seattlemethod/sfac6/role/BalanceSheet |
| 2 | Balance Sheet [Hyperscube] | Table | | | sfac6:BalanceSheetHypercube |
| 3 | Balance Sheet [Line Items] | LineItems | | | sfac6:BalanceSheetLineItems |
| 4 | Balance Sheet [Arithmetic] | Abstract | | | sfac6:BalanceSheetArithmetic |
| 5 | Assets | Concept (Monetary) | As Of | Debit | sfac6:Assets |
| 6 | Liabilities | Concept (Monetary) | As Of | Credit | sfac6:Liabilities |
| 7 | Equity | Concept (Monetary) | As Of | Credit | sfac6:Equity |
| 8 | 21-Statement of Comprehensive Income | Network | | | http://xbrl.site.com/seattlemethod/sfac6/role/ComprehensiveIncome |
| 9 | Comprehensive Income Statement [Hyperscube] | Table | | | sfac6:ComprehensiveIncomeStatementHypercube |
| 10 | Comprehensive Income Statement [Line Items] | LineItems | | | sfac6:ComprehensiveIncomeStatementLineItems |
| 11 | Comprehensive Income [Roll Up] | Abstract | | | sfac6:ComprehensiveIncomeRollup |
| 12 | Revenues | Concept (Monetary) | For Period | Credit | sfac6:Revenues |
| 13 | (Expenses) | Concept (Monetary) | For Period | Debit | sfac6:Expenses |
| 14 | Gains | Concept (Monetary) | For Period | Credit | sfac6:Gains |
| 15 | (Losses) | Concept (Monetary) | For Period | Debit | sfac6:Losses |
| 16 | Comprehensive Income | Concept (Monetary) | For Period | Credit | sfac6:ComprehensiveIncome |
| 17 | 31-Statement of Changes in Equity | Network | | | http://xbrl.site.com/seattlemethod/sfac6/role/ChangesInEquity |
| 18 | Changes in Equity [Hyperscube] | Table | | | sfac6:ChangesInEquityHypercube |
| 19 | Changes in Equity [Line Items] | LineItems | | | sfac6:ChangesInEquityLineItems |
| 20 | Changes in Equity [Roll Forward] | Abstract | | | sfac6:ChangesInEquityRollForward |
| 21 | Equity Beginning Balance | Concept (Monetary) | As Of | Credit | sfac6:Equity |
| 22 | Comprehensive Income | Concept (Monetary) | For Period | Credit | sfac6:ComprehensiveIncome |
| 23 | Investments by Owners | Concept (Monetary) | For Period | Credit | sfac6:InvestmentsByOwners |
| 24 | (Distributions to Owners) | Concept (Monetary) | For Period | Debit | sfac6:DistributionsToOwners |
| 25 | Equity, Ending Balance | Concept (Monetary) | As Of | Credit | sfac6:Equity |

- At the top of the landing page is a band of links. Those links are to the machine-readable files and human-readable files that explain the financial reporting scheme. There are slight differences between each financial reporting scheme example, but there are many more similarities. The ordering of the bands of links tends to be pretty consistent, but there are some differences
- The **terms**¹¹ link provides a link to the XBRL taxonomy schema that is used to represent the report elements of the base financial reporting scheme. In these examples, the XBRL labels and XBRL references tend to be hooked to the terms. But, there are reason to do this and also reasons to not make this connection.
- The **structures**¹² link provides a link to the XBRL taxonomy schema that provides the extended link roles that provide information about the networks used in the base financial reporting scheme.
- The **entry point**¹³ link provides a link to the XBRL taxonomy schema that hooks all of (or most of) the XBRL files together for the base financial reporting scheme model. The entry point tends to be used to read the entire base financial reporting scheme model. It connects the XBRL taxonomy schema and the XBRL presentation, calculation, and definition relations; also all XBRL formulas are hooked to the entry point.
- The **disclosures**¹⁴ link provides a link to the XBRL taxonomy schema that is used to represent the explicit disclosures represented within the base financial reporting scheme.
- The **topics**¹⁵ link provides a link to the XBRL taxonomy schema that is used to help organize the disclosures. Note that not all the base financial reporting schemes use topics, mainly the larger financial reporting schemes use them.
- The **disclosure mechanics**¹⁶ link provides a link to the XBRL taxonomy schema that contains a set of XBRL definition linkbases that explain the essence of each disclosure contained within the financial reporting scheme.

¹¹ Terms, <http://www.xbrl.site.com/seattlemethod/golden/sfac6/sfac6.xsd>

¹² Structures, <http://www.xbrl.site.com/seattlemethod/golden/sfac6/sfac6-roles.xsd>

¹³ Entry point, <http://www.xbrl.site.com/seattlemethod/golden/sfac6/sfac6-entryPoint.xsd>

¹⁴ Disclosures, <http://www.xbrl.site.com/seattlemethod/golden/sfac6/disclosures.xsd>

¹⁵ Topics, <http://www.xbrl.site.com/seattlemethod/golden/common2/disclosures-topics/topics.xsd>

¹⁶ Disclosure mechanics, <http://www.xbrl.site.com/seattlemethod/golden/sfac6/dm.xsd>

9. The **reporting styles**¹⁷ link provides a link to an XBRL reference linkbase that is used to represent information specific to each reporting style of the financial reporting scheme. The references within this XBRL reference linkbase points to additional information including:
 - a. The **fundamental accounting concepts**¹⁸ (FAC) XBRL taxonomy schema that describes the terms, consistency rules, and derivation rules used by a specific reporting style.
 - b. The **reporting checklist**¹⁹ link provides a link to the XBRL definition linkbase containing the disclosure rules of the reporting style.
 - c. The **type-subtype**²⁰ rules link provides a link to the XBRL taxonomy schema or XBRL definitions linkbase that provides type-subtype (a.k.a. wider-narrower or general-special) associations of a specific reporting style.
10. The **reference implementation**²¹ link provides a link to an HTML page that provides information related to a report model (extension taxonomy) and report (XBRL instance) that is used to test the base financial reporting taxonomy to be sure everything is working as expected.
11. The **download** link provides a link to a ZIP archive that contains the entire set of XBRL files for the base financial reporting scheme.

Note that other sections of the mastering XBRL documentation explains each of the things mentioned above.

Care has been taken to modularize each of the base financial reporting schemes appropriately. There are pros and cons related to linking XBRL files together. The interconnections matter a lot.

Note that the reader can look at any of the XBRL files by clicking on the links and observing the information in your browser. The smaller examples are the best to try and learn from. After you get grounded in the basics, understanding the more complex financial reporting schemes will be easier.

1.4. Reading the Base Financial Reporting Scheme Model using Software

Arelle²² tends to be overly technical software tool, but hey...it is free and if you are on a budget, it is something. Here is the SFAC 6 entry point loaded into Arelle:

¹⁷ Reporting styles, <http://www.xbrlsite.com/seattlemethod/golden/sfac6/reporting-styles-cm-ref.xml>

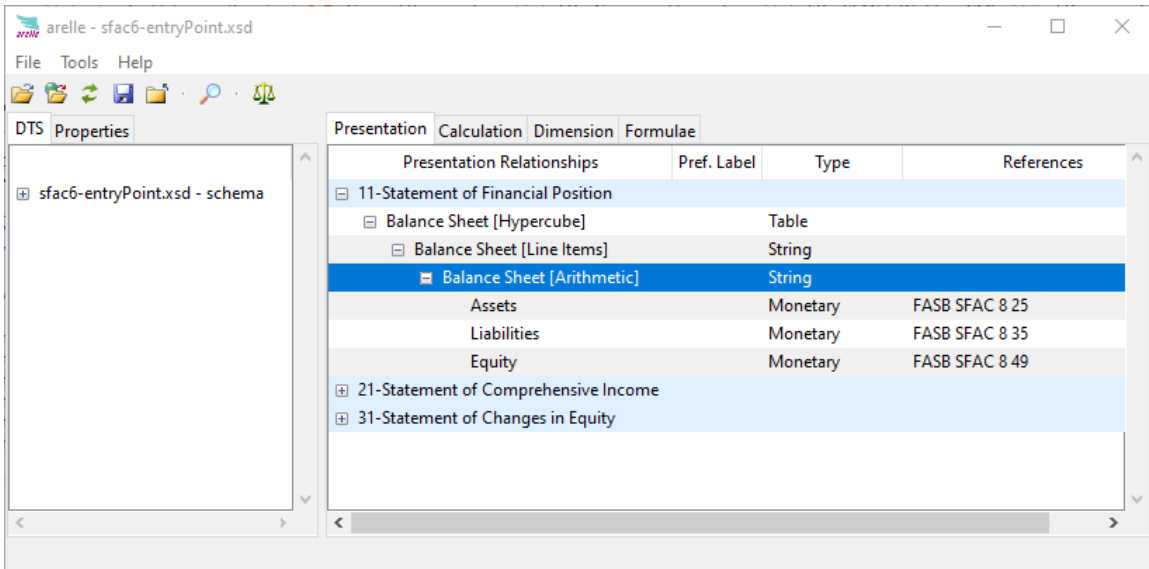
¹⁸ FAC, <http://www.xbrlsite.com/seattlemethod/golden/sfac6/fac.xsd>

¹⁹ Reporting checklist rules, <http://www.xbrlsite.com/seattlemethod/golden/sfac6/dr-rules2-def.xml>

²⁰ Type-subtype rules, <http://www.xbrlsite.com/seattlemethod/golden/sfac6/types-BS1-IS1-rules-def.xml>

²¹ Reference Implementation, <http://www.xbrlsite.com/seattlemethod/golden/sfac6/index.html>

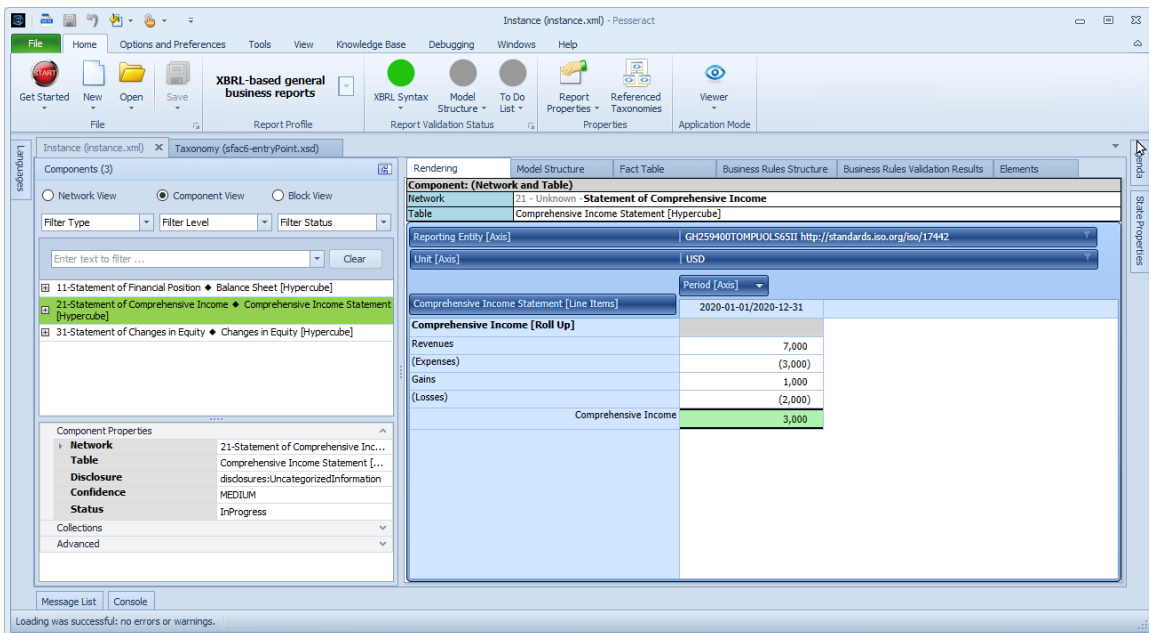
²² Arelle download, <https://arelle.org/arelle/pub/>



I would suggest starting with the entry point. You can explore any of the files using Arelle.

If you are a little more ambitious, you can download and use **Pesseract**²³ to have a look at the example base financial reporting models or the reports used to create those models.

Here you see the XBRL instance (the report model and report) of the SFAC 6 base financial reporting scheme example loaded into Pesseract²⁴:



²³ Pesseract, <http://pesseract.azurewebsites.net>

²⁴ XBRL Instance (report model and report), <http://www.xbrlsite.com/seattlemethod/golden/sfac6/instance.xml>

Pacioli²⁵ is (as of this writing) a freely available tool provided by Auditchain that can be used to view or verify an XBRL based report or report model. The Pacioli Power User Tool²⁶ is a cloud-based interface to Pacioli’s powerful verification. This²⁷ is what a rendering of one of the report disclosures looks like in Pacioli:

| | Period | |
|----------------------------------|--------|--------------------------|
| Concept | | 2020-01-01 to 2020-12-31 |
| Changes in Equity [Roll Forward] | | |
| Equity, Beginning Balance | | 0 |
| Comprehensive Income | | 3,000 |
| Investments by Owners | | 1,000 |
| (Distributions to Owners) | | (500) |
| Equity, Ending Balance | | <u>3,500</u> |

Luca is another Auditchain cloud-based software application that as of this writing can be used by anyone to fiddle with XBRL-based digital financial reports. Luca is being built to be an expert system for creating financial reports²⁸. Each of the prototype financial reporting scheme XBRL taxonomies can be used with the Luca cloud-based software application.

Information can be put into Luca manually, by importing a template from a financial reporting scheme, using an API, importing from Excel or JSON.

Below you see a screen shot of a balance sheet that was created using the MINI financial reporting scheme from imported information.

²⁵ Auditchain Pacioli, <https://docs.auditchain.finance/auditchain-protocol/pacioli-logic-and-rules-engine>

²⁶ Pacioli Power User Tool, <https://pacioli.auditchain.finance/tools/PowerUserTool.swinb>

²⁷ Pacioli verification result of SFAC 6 report, <https://auditchain.infura-ipfs.io/ipfs/QmdZhQeZg8PfU7Ce3ApkZTaJBK1FzzhkRrnVCoFq1jVBHv/>

²⁸ World's First Standards Based Expert System for Creating Financial Reports, <https://digitalfinancialreporting.blogspot.com/2023/01/worlds-first-standards-based-expert.html>

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| | |
|------------------------------------|---|
| Component: (Network and Hypercube) | |
| Network | 1110 - Statement - Balance Sheet (http://www.xbrl.org/role/BalanceSheet) |
| Hypercube | Implied |

| | |
|---------------------------|---|
| Reporting Entity [Aspect] | 30810137d58f76b84afd http://standards.iso.org/iso/17442 |
| Unit [Aspect] | iso4217:USD |

| Concept [Aspect] | Period [Aspect] | |
|---|-----------------|-----------------|
| | 2020-12-31 | 2019-12-31 |
| Balance Sheet [Abstract] | | |
| Assets [Roll Up] | | |
| Current Assets [Roll Up] | | |
| Cash and Cash Equivalents | \$ (648,551.94) | \$ 398,937.76 |
| Receivables | 2,035,468.27 | 1,231,338.47 |
| Inventories | 451,842.19 | 467,010.20 |
| Current Assets | 1,838,758.52 | 2,097,286.43 |
| Noncurrent Assets [Roll Up] | | |
| Property, Plant and Equipment | 1,245,567.16 | 1,266,995.32 |
| Noncurrent Assets | 1,245,567.16 | 1,266,995.32 |
| Assets | \$ 3,084,325.68 | \$ 3,364,281.75 |
| Liabilities and Equity [Roll Up] | | |
| Liabilities [Roll Up] | | |
| Current Liabilities [Roll Up] | | |
| Accounts Payable | \$ 2,689,452.31 | \$ 1,595,349.42 |
| Current Liabilities | 2,689,452.31 | 1,595,349.42 |
| Noncurrent Liabilities [Roll Up] | | |
| Long-term Debt | 338,349.05 | 361,285.69 |
| Noncurrent Liabilities | 338,349.05 | 361,285.69 |
| Liabilities | 3,027,801.36 | 1,956,635.11 |
| Equity [Roll Up] | | |
| Retained Earnings | 56,524.32 | 1,407,646.64 |
| Equity | 56,524.32 | 1,407,646.64 |
| Liabilities and Equity | \$ 3,084,325.68 | \$ 3,364,281.75 |

Another cloud base software application for creating XBRL-based financial reports using the Seattle Method also called Luca is available for use for free. General Luca²⁹ provides an API interface for creating XBRL-based reports. Reports can also be uploaded using Excel or information may be entered manually. General Luca versions exist that support Inline XBRL. As I understand it a version of General Luca is used to create ESEF reports that are submitted to the ESMA.

Here is a screen shot of General Luca:

²⁹ General Luca, <https://general.luca.report/en/>

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| Concept [Aspect] | Period [Aspect] | |
|-----------------------------------|-----------------|------------|
| | 2020-12-31 | 2019-12-31 |
| Balance Sheet [Arithmetic] | | |
| Assets | 3500 | 0 |
| Liabilities | 0 | 0 |
| Equity | 3500 | 0 |

This is another screen shot of General Luca:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Generated by https://general.luca.report -->
<!-- 2023-03-05 23:32:11 -->
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:link="http://www.xbrl.org/2003/linkbase"
  xmlns:xbrli="http://www.xbrl.org/2003/instance"
  xmlns:num="http://www.xbrl.org/dtr/type/numeric"
  xmlns:nonnum="http://www.xbrl.org/dtr/type/non-numeric"
  xmlns:xbrldt="http://xbrl.org/2005/xbrldt"
  xmlns:generic="http://xbrl.org/2008/generic"
  elementFormDefault="qualified" targetNamespace="http://www.xbrl.com/report" xmlns:report="http://www.xbrl.com/report" xmlns:proof="http://www.xbrl.com/seattlemethod/pro"
  >
  <xsd:annotation>
  <xsd:appinfo>
  <link:linkbaseRef xlink:type="simple" xlink:role="http://www.xbrl.org/2003/role/label/linkbaseRef" xlink:arcrole="http://www.w3.org/1999/xlink/properties/linkbase" xlink:href="report-lab.xml" xlink:
  <link:linkbaseRef xlink:type="simple" xlink:role="http://www.xbrl.org/2003/role/reference/linkbaseRef" xlink:arcrole="http://www.w3.org/1999/xlink/properties/linkbase" xlink:href="report-ref.xml"
  <link:linkbaseRef xlink:type="simple" xlink:role="http://www.xbrl.org/2003/role/presentation/linkbaseRef" xlink:arcrole="http://www.w3.org/1999/xlink/properties/linkbase" xlink:href="report-pre.x
  <link:linkbaseRef xlink:type="simple" xlink:role="http://www.xbrl.org/2003/role/calculation/linkbaseRef" xlink:arcrole="http://www.w3.org/1999/xlink/properties/linkbase" xlink:href="report-cal.xml"
  <link:linkbaseRef xlink:type="simple" xlink:role="http://www.xbrl.org/2003/role/definition/linkbaseRef" xlink:arcrole="http://www.w3.org/1999/xlink/properties/linkbase" xlink:href="report-def.xml"
  <link:roleType roleURI="http://www.xbrl.com/report/role/BalanceSheet" id="BalanceSheet">
  <link:definition>01-Balance Sheet</link:definition>
  <link:usedOn>link:presentationLink</link:usedOn>
  <link:usedOn>link:calculationLink</link:usedOn>
  </link:roleType>
  </xsd:appinfo>
  </xsd:annotation>
  </xsd:schema>
```