
ged55XMLtoFamilyForm.xsl

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1. Overview

ged55XMLtoFamilyForm.xsl is an [Extensible Stylesheet Language](#) (XSL) stylesheet that uses [XSLT](#) to transform a [GEDCOM 5.5 XML](#) document to a [XSL-FO](#) stylesheet. This stylesheet can be converted to a [Portable Document Format](#) (PDF) file using [Apache's Formatting Objects Processor](#) Java application, `fop`. The pdf document resembles genealogy record keeping forms produced by [ProGenealogists](#). They specifically resemble the forms called "[Family Group Sheet Page 1](#)" and "[Family Group Sheet Page 2](#)".

1.1. Stylesheet Parameters

Several parameters can be supplied to XSLT processors which affect the data included in the document and the document's "look and feel."

1.1.1. Output Data Parameters

- **IncludeIDs** - accepts either 'true' or 'false' and acts as a flag to include the XREF ID numbers of family record elements (FAM) and the individual family member elements (INDI), including the spouses of children
- **IncludeDateGenerated** - accepts either 'true' or 'false'. If 'true', the date that the XSLT processor applied this stylesheet to a GEDCOM 5.5 XML document is included in the footer of the pdf document. This parameter relies on the <http://exslt.org/dates-and-times> extension. If the XSLT processor does not support this extension, the stylesheet may fail to be applied to the XML document. To be on the safe side, this parameter defaults to 'false.'
- **FamID** - accepts the XREF ID of one FAM element. If this value is supplied, the stylesheet will produce a document containing only the family record whose ID makes the FamID parameter. If this parameter is not supplied, the stylesheet is applied to all FAM elements in the XML document.
- **SortFamilies** - accepts either 'true' or 'false'. If the IDs of the FAM elements are structured in a way that can be sorted in ascending or descending order, this parameter tells the stylesheet to sort these IDs and output the families in that order. It defaults to 'false'.

1.1.2. Look and Feel Parameters

- **BorderStyle** - this parameter affects the style of the borders in the tables, rows, and cells. It defaults to 'solid', but could accept the following values: none, hidden, dotted, dashed, double, groove, ridge, inset, and outset. Use these values with caution. The stylesheet has been designed assuming solid borders.
- **BorderLineWidth** - this parameter sets the width of the borders. It defaults to .3mm. Supply this parameter with caution. The stylesheet has been designed assuming the default value.

1.2. Stylesheet Versions and Download Locations

The stylesheet described in this document is version 0.1. It is a beta version.

- Both the stylesheet and this documentation is located at <http://www.neomantic.com/downloads/ged55XMLtoFamilyForm-0.1/ged55XMLtoFamilyForm-0.1.tar.gz>.
- For verification purposes, I have signed this tar, gzipped archive with my [gnupg](#) public key located [here](#). The signature of ged55XMLtoFamilyForm-0.1.tar.gz is located [here](#).

1.3. Stylesheet License

The source code is released under the [GNU General Public License Version 2](#) (GPL). The full text of this license can be found in a file called “gpl-2.0” in ged55XMLtoFamilyForm-0.1.tar.gz.

1.4. Stylesheet Updates

Hyperlinks to the most up-to-date version of the stylesheet will be posted to <http://www.neomantic.com>.

2. Usage Instructions

The process of converting a GEDCOM 5.5 file into a pdf document which resembles the `progenealogists.com` forms takes three steps.

1. Convert the GEDCOM 5.5 file to a GEDCOM 5.5 XML document.
2. Transform the GEDCOM 5.5 XML document to an XSL-FO stylesheet by applying the `ged55XMLtoFamilyForm.xsl` stylesheet to the XML document using an XSLT processor.
3. Process the XSL-FO stylesheet using `fop`.

The instructions below follow several conventions:

- `family.ged` represents a GEDCOM 5.5 file
- `family.xml` represents the `family.ged` file converted into a GEDCOM 5.5 XML document
- `family.fo` represents a XSL-FO stylesheet produced by the XSLT processor that has applied the `ged55XMLtoFamilyForm.xsl` stylesheet to `family.xml`
- `family.pdf` represents the pdf file that resembles the progenealogist's forms
- Text sandwiched between brackets, `[]`, indicates variables that depend upon your computer's environment

2.1. Convert the GEDCOM 5.5 File to a GEDCOM 5.5 XML Document

To perform the conversion, use a Java application released by Michael H. Kay that converts GEDCOM 5.5 files into what he calls “[GedML](#)” XML documents. GedML is similar to GEDCOM 5.5 XML. See this [link](#) for details.

1. Download Kay's [source code](#) and unzip it in a location of your choosing. Remember the path to this location. It will be referred to in the last step using the placeholder `[path-to-gedml-classes]`.
2. Find the files called “`GedcomParser.java`” and “`GedcomToXml.xsl`” in Kay's source code.
3. Compile the file `GedcomParser.java` using your favorite Java distribution's compiler - `javac`. This will produce a class file called “`GedcomParser.class`”. The command is as follows:

```
javac GedcomParser.java
```

4. Download Kay's [saxon](#) parser, install it, and remember its location. Its location will be referred to below using the [path-to-saxon] placeholder. (It may already be installed on your system; in the [Debian GNU/Linux distribution](#) it is located at /usr/share/java/saxon.jar.)
5. Convert family.ged to family.xml by issuing the following command in your terminal:

```
java -cp [path-to-saxon]/saxon.jar:[path-to-gedml-classes]  
com.icl.saxon.StyleSheet -x GedcomParser -o family.xml family.ged  
[path-to-gedml-classes]/GedcomToXml.xsl
```

The output of this command, family.xml, will be a near perfect reproduction of a GEDCOM 5.5 into GEDCOM 5.5 XML.

2.2. Transform the GEDCOM 5.5 XML Document to an XSL-FO stylesheet

To perform the transformation, the ged55XMLtoFamilyForm.xsl stylesheet must be applied to family.xml using an XSLT processor. I have used two command line applications to perform this transformation: [xsltproc](#) and [saxon](#). xsltproc uses the Open Source XML parser called “[libxml](#)” and is included in many GNU/Linux distributions. Saxon is the XSLT processor downloaded and used in the previous step.

The ged55XMLtoFamilyForm.xsl stylesheet parameters described above can be supplied to both XSLT processors. Please consult their respective documentation to find out how to do so.

NOTE: Both xsltproc and saxon may fail to transform extremely large GEDCOM 5.5 XML files due to either your computer's or the Java virtual machine's memory limitations. To get around these limitations, the saxon processor works best because Java's memory usage can be manipulated. See the instructions below.

2.2.1. xsltproc

To use xsltproc, issue the following command in a terminal:

```
xsltproc ged55XMLtoFamilyForm.xsl family.xml > family.fo
```

2.2.2. SAXON

To use saxon, issue the following command in a terminal:

```
java -cp [path-to-saxon]/saxon.jar com.icl.saxon.StyleSheet -o  
family.fo family.xml ged55XMLtoFamilyForm.xsl
```

As mentioned above, if the family.xml file is extremely large, this command may fail due to Java's default memory settings. To increase the memory used by the Java's virtual machine, simply add these two flags to the command line: -“-Xms512m -Xmx512m”- and adjust the memory by supplying a value like 512m for each flag.

2.3. Process the XSL-FO Stylesheet Using fop

The outcome of the previous step is a XSL-FO document called `family.fo`. This file now needs to be processed by `fop` to produce `family.pdf`. To do so, follow these steps:

1. Follow the `fop` “quick start” guide [here](#) to download and install `fop` or use your GNU/Linux distribution's package management system to install it.
2. Once installed, issue the following command in a terminal:

```
fop -fo family.fo -pdf family.pdf
```

The output of this command is the `family.pdf` file.

2.4. Sample

In a directory called “example” included with the stylesheet and documentation are samples of the stylesheet output (a `.fo` file) and `fop`'s output (a `.pdf` file). The genealogical data in these examples was drawn from a GEDCOM 5.5 file called “royal92.ged” which can easily be found on the Internet. It contains the genealogical history of the British Royal family. The example distributed with the source contains only one royal family.

Family Group Record

Husband's Given name(s)		Albert Augustus Charles		Last name		
	Born	26 AUG 1819	Place	Schloss Rosenau, Near Coburg, Germany		
	Died	14 DEC 1861	Place	Windsor Castle, Berkshire, England		
	Buried		Place	Royal Mausoleum, Frogmore, Windsor, England		
	Married		Place			
	Husband's Father's Given name(s)		Ernest I of Saxe-Coburg- Saalfeld		Last name	
Husband's Mother's Given name(s)		Louise of Saxe-Coburg- Altenburg		Last name		
Wife's Given name(s)		Victoria		Last name Hanover		
	Born	24 MAY 1819	Place	Kensington, Palace, London, England		
	Died	22 JAN 1901	Place	Osborne House, Isle of Wight, England		
	Buried		Place	Royal Mausoleum, Frogmore, Berkshire, England		
	Wife's Father's Given name(s)	Edward Augustus		Last name Hanover		
	Wife's Mother's Given name(s)	Victoria Mary Louisa		Last name		
Children - List each child in order of birth						
Sex F	Given name(s) Victoria Adelaide Mary					
1	Born	21 NOV 1840	Place	Buckingham, Palace, London, England		
	Died	5 AUG 1901	Place	Friedrichshof, Near, Kronberg, Taunus		
	Buried		Place	Friedenskirche, Potsdam		
	Spouse's Given name(s)		Frederick III		Last name	
	Married	25 JAN 1858	Place	London, England		
Sex M	Given name(s) Edward VII					
2	Born	9 NOV 1841	Place	Buckingham, Palace, London, England		
	Died	6 MAY 1910	Place	Buckingham, Palace, London, England		
	Buried	20 MAY 1910	Place	Windsor, Berkshire, England		
	Spouse's Given name(s)		Alexandra of Denmark "Alix"		Last name	
	Married	10 MAR 1863	Place	St. George Chap., Windsor, England		
Sex F	Given name(s) Alice Maud Mary					
3	Born	25 APR 1843	Place	Buckingham, Palace, London, England		
	Died	14 DEC 1878	Place	Darmstadt, Germany		
	Buried		Place			
	Spouse's Given name(s)		Louis IV of Hesse		Last name	
	Married	1 JUL 1862	Place	Osborne House, Isle of Wight		
Sex M	Given name(s) Alfred Ernest Albert					
4	Born	6 AUG 1844	Place	Windsor Castle, Berkshire, England		
	Died	30 JUL 1900	Place	Schloss Rosenau, Near Coburg		
	Buried		Place			
	Spouse's Given name(s)		Marie Alexandrovna		Last name	
	Married	23 JAN 1874	Place	Winter Palace, St. Petersburg, Russia		
Notes						

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3. Limitations

- The number of characters which DATA and PLAC elements can accept, following the GEDCOM 5.5 standard, are longer than what the pdf file can display. The stylesheet attempts to handle these situations by scaling the text and/or truncating it with ellipses. There are some circumstances, however, where the stylesheet fails to truncate the data within the limits of what can be displayed in the form.
- Processing large family trees with the stylesheet and subsequently with fop will likely strain your computer's resources. Significant processing power and RAM are highly recommended. The stylesheet needs to be optimized.

4. Documentation License

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The full text of this license is found in the file called "fdl.txt" released with ged55XMLtoFamilyForm-0.1.tar.gz.

5. Contact

Please direct questions or requests for more information to <chad@neomantic.com>. Corrections, suggestions, bug reports, and patches are welcome as well.