

# Center for Educational Performance and Information (CEPI)

## Michigan Student Data System (MSDS)

### XML Validation Guide

Questions?

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## XML File Validation using XML Notepad

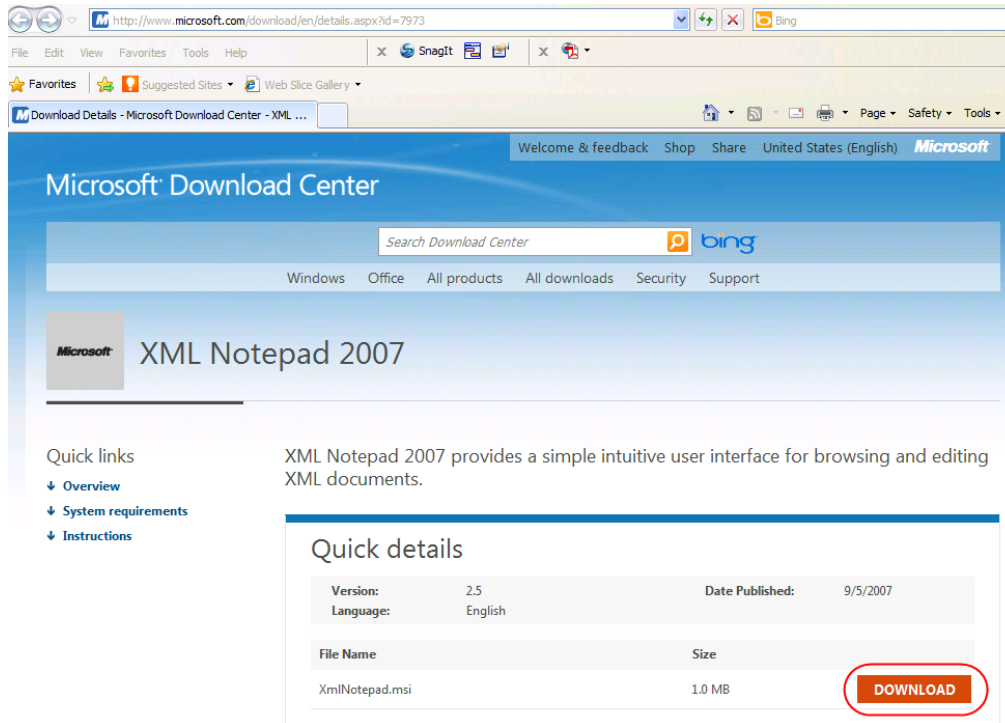
### Software Installation

The system requirements for this download are Windows XP, Vista, or 7, and .Net Framework v2.0.

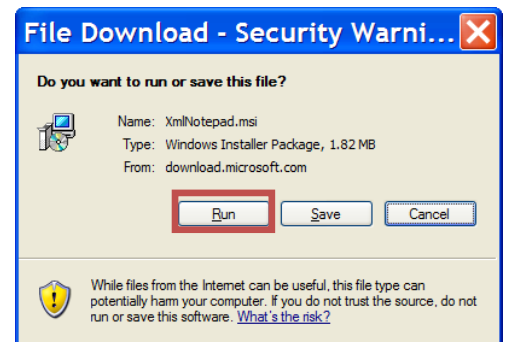
Go to the Web page listed below:

<http://www.microsoft.com/download/en/details.aspx?id=7973>

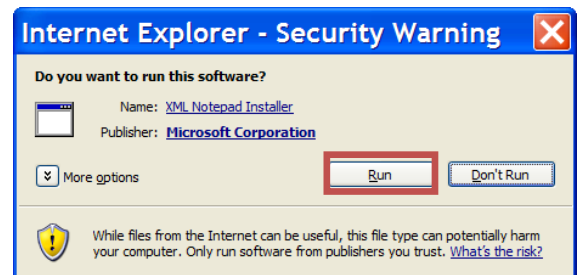
Click on the “Download” button.



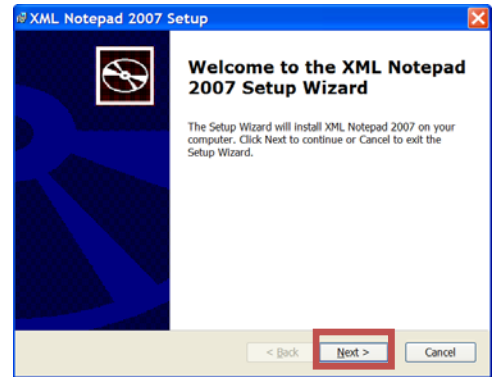
To install the application upon the completion of the download, click the “Run” button. If you wish to save the file for later, click “Save”.



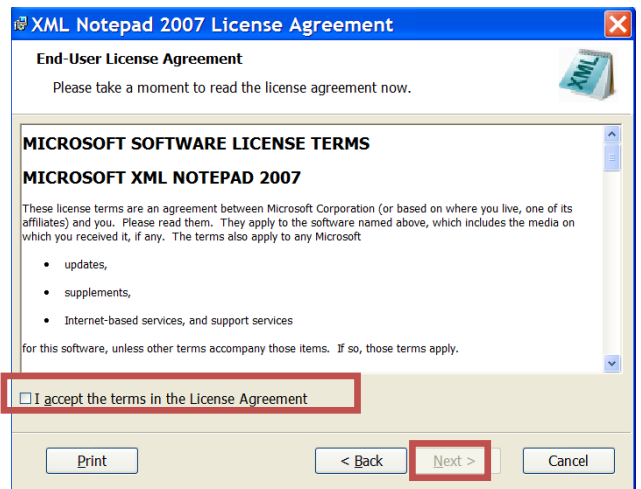
You may be prompted with a security warning when you begin the installation process. Click “Run” to continue.



Click “Next” to proceed with the installation process.

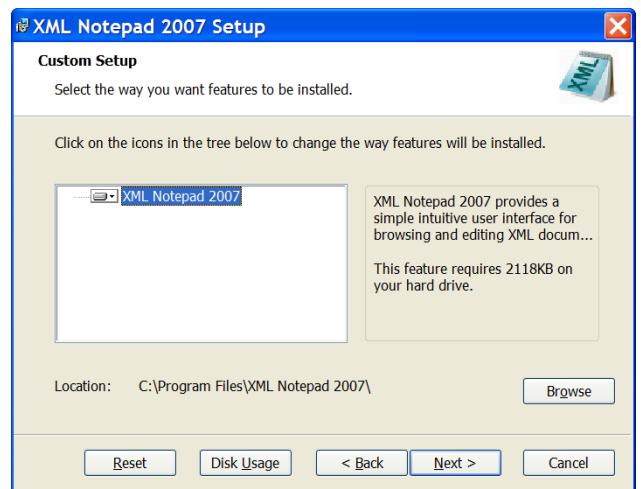


Check the box “I accept the terms...” and then click the “Next” button. (The “Next” button will activate once you accept the terms.)



The default destination folder should be:  
C:\Program Files\XML Notepad 2007\

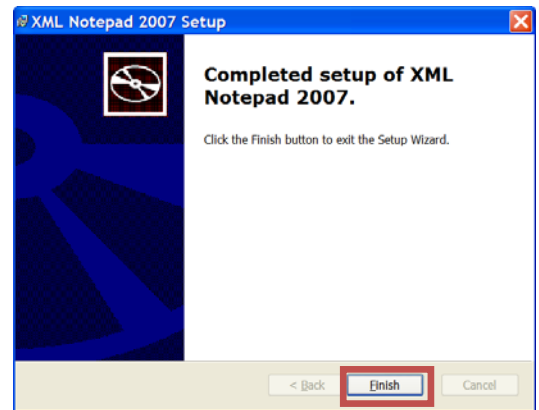
Advanced users may wish to customize their installation from this menu. To continue with the default installation click “Next”.



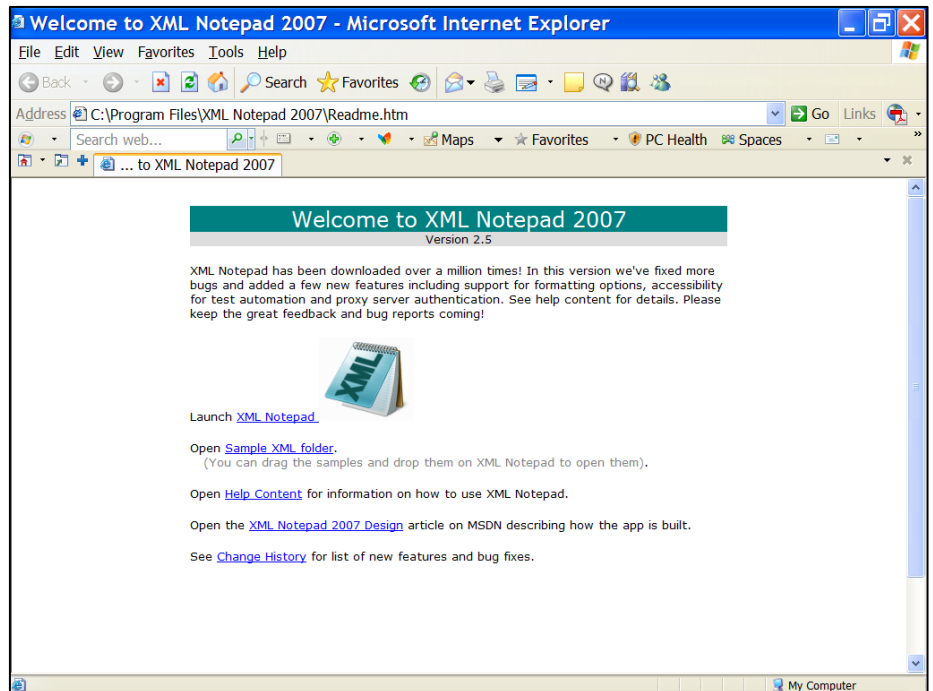
On the next screen, click “Install”.



When installation is complete, a confirmation window will appear. Click “Finish” to end the installation process.

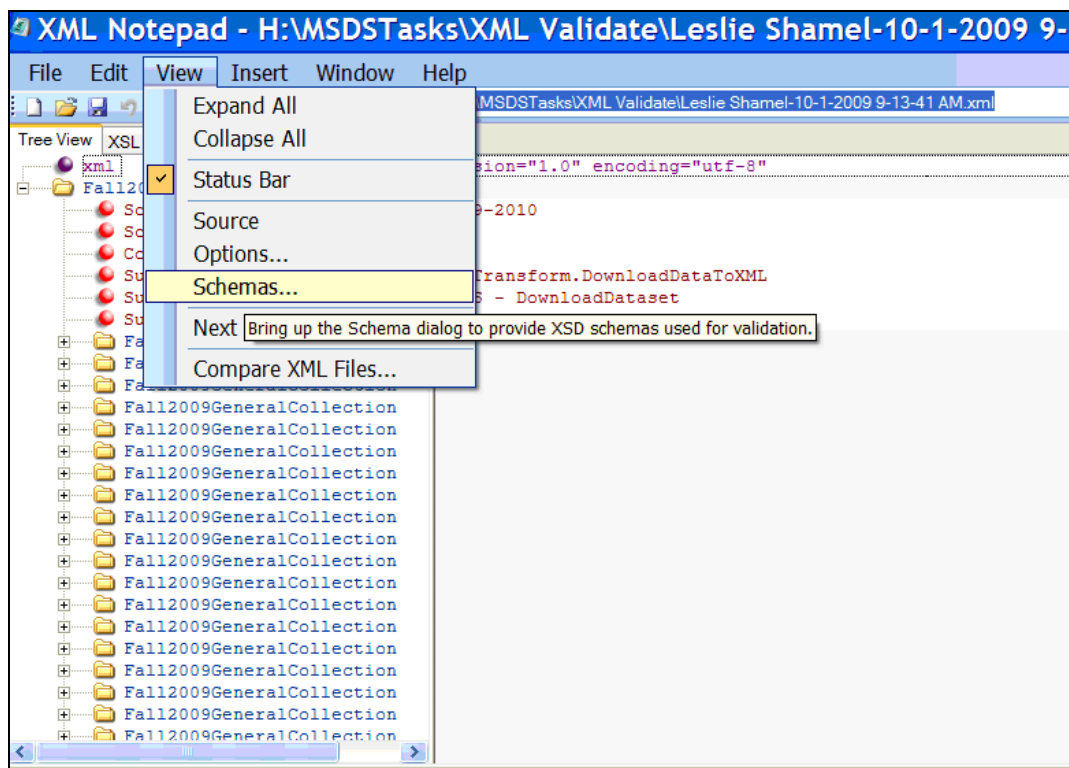


The Web page shown below will open in your browser, and contains links to additional information on the XML Notepad application.



## Validating an XML File against the Schema File

1. Download the collection schema file from CEPI's website. To do this, start by clicking on the link below:  
[http://www.michigan.gov/cepi/0,1607,7-113-986\\_50502---,00.html](http://www.michigan.gov/cepi/0,1607,7-113-986_50502---,00.html).
2. From the MSDS Data Collections section, click on the collection you wish to validate your local file against (e.g. Early Roster, General Collection, Student Record Maintenance, etc.).
3. Under the Technical Resources, right-click on the desired XML Schema and choose "Save target as". Change the file extension to .xsd and save it to your local drive.
4. Open XML Notepad by clicking on the shortcut on your desktop or click on Start > Programs > XML Notepad 2007 > XML Notepad 2007.
5. Under the File Menu, click "Open". Navigate to the location your XML file is located and double-click it to open. The file will open with a vertically split window of "Tree View" on the left and the texts of values on the right.
6. Select View from the top menu and click on "Schemas..." as shown below.



7. The XML Schemas dialog box opens.
8. If any schemas are listed in the XML Schemas dialog box, go to the File menu and choose "Clear". This will erase any schemas that have been previously loaded.
9. Click the File menu, and then click "Add schemas". Type or browse to the location of the xsd file saved in step 3, and then click "Open".

- To load the XML schema, click “OK”. If any errors occur while you are editing the XML file, they will be reported in the Error List tab at the bottom of the XML Notepad 2007 window.

| Description  | File                      | Line | Column |
|--|---------------------------|------|--------|
| The 'DateOfBirth' element is invalid - The value '111111' is invalid according to its datatype 'DateOfBir... | Leslie%20Shamel-10-1-2... | 13   | 14     |

- When you double-click on the error, the record with the error will be opened on the right side with the value enclosed in a box.

The screenshot shows the XML Notepad 2007 interface. The title bar reads "XML Notepad - H:\MSDSTasks\XML Validate\Leslie Shamel-10-1-2009 9-13-41 AM". The menu bar includes File, Edit, View, Insert, Window, and Help. The toolbar contains various icons for file operations and editing. The main window is split into two panes. The left pane, titled "Tree View", shows a hierarchical XML structure. The right pane, titled "XSL Output", displays the XML content. The value "111111" for the "DateOfBirth" element is highlighted in a box, indicating the error.

- Correct the value and save.

## XML File Validation using Notepad++

### Software Installation

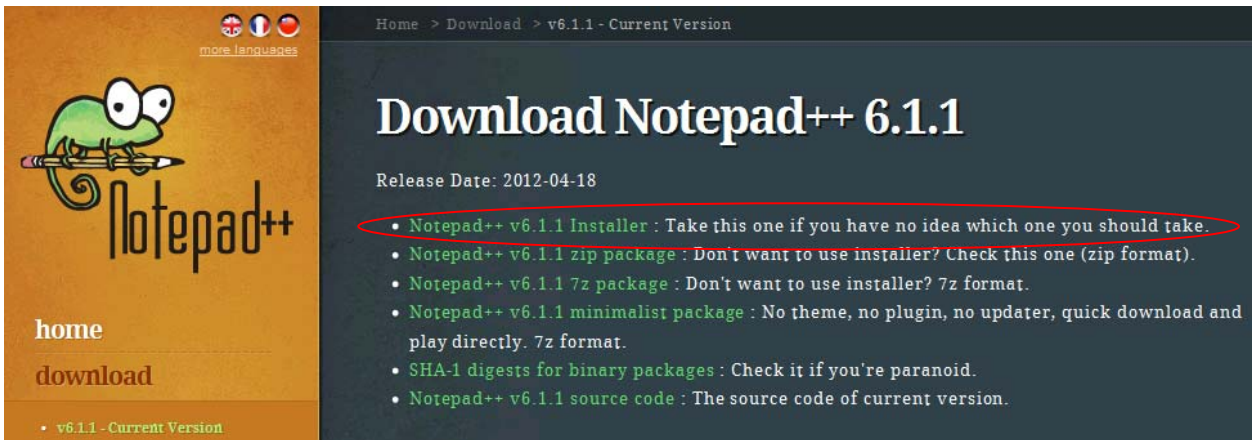
Go to the Web page listed below:

<http://notepad-plus.sourceforge.net/uk/site.htm>

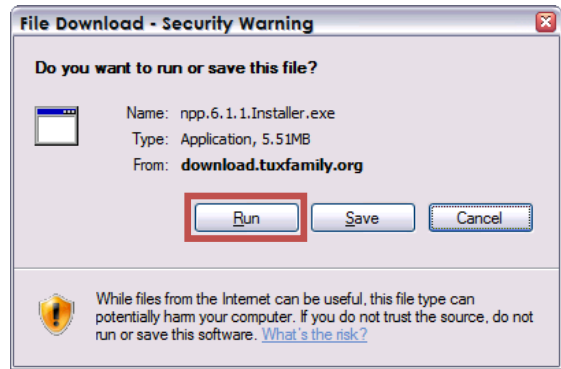
Click "Download" to continue.



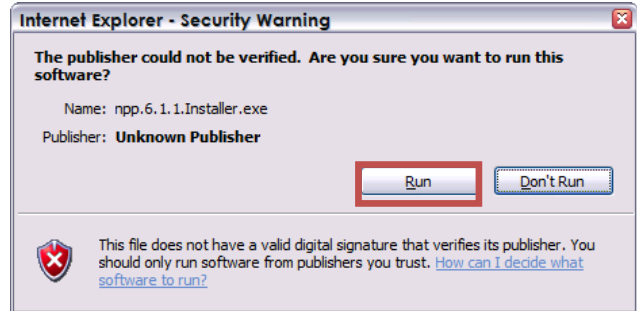
The latest version of Notepad++ as of April 2012 is 6.1.1. Click the Installer option as shown below.



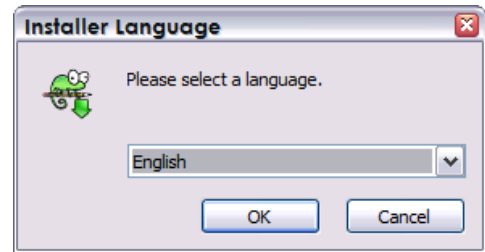
To install the application upon the completion of the download, click the “Run” button. If you wish to save the file for later use, click “Save”.



You may be prompted by a security warning when you being the installation process. Click “Run” to continue.



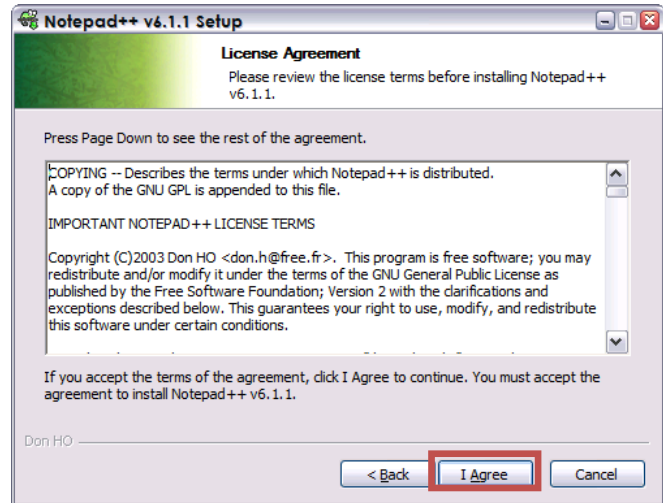
Select a language for installation and click “OK”.



Click “Next” to proceed with the installation process.

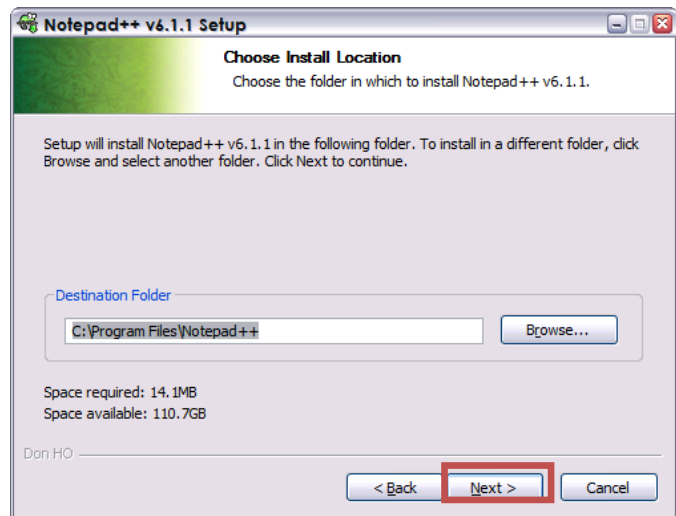


Review the terms for the application and click “I Agree” to continue.

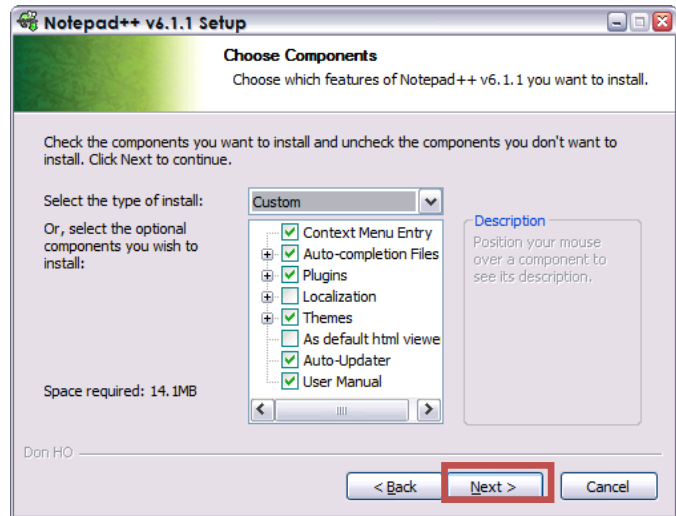


The default destination folder should be:  
C:\Program Files\Notepad++\

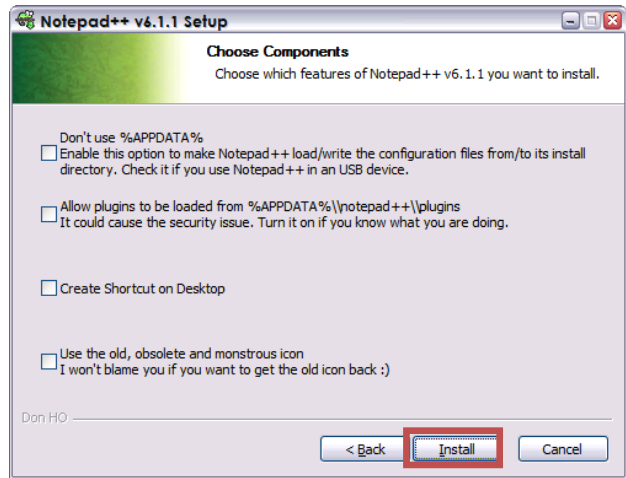
If you wish to change that location, click “Browse” to choose a location. Click “Next” when you are ready to continue.



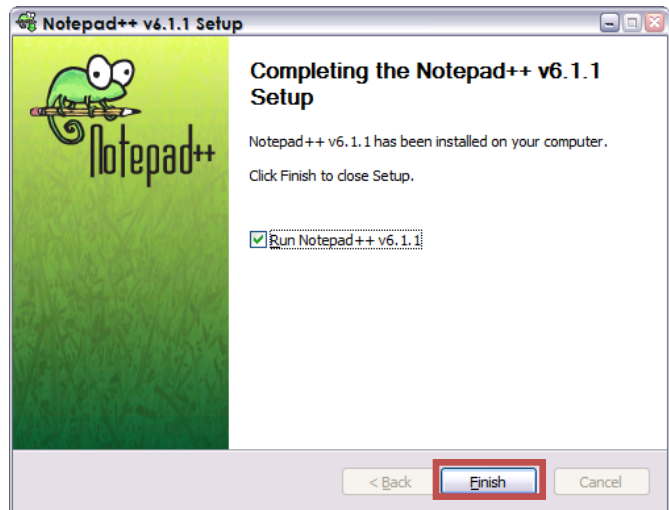
Advanced users may wish to customize their installation from this menu. To continue with the default installation, click “Next”.



Click “Install” to proceed.



When installation is complete, a confirmation window will appear. Click “Finish” to end the installation process.



## Plug-in Installation

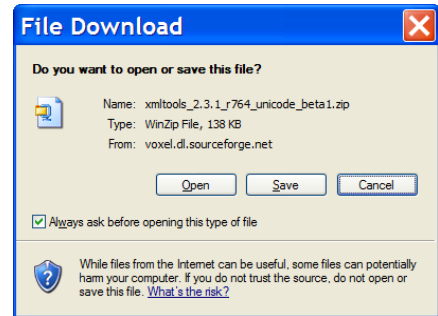
Once Notepad++ is installed, plug-in tools will need to be installed in order for Notepad++ to validate XML files.

Click the following link to download the plug-in tools:

[http://sourceforge.net/projects/npp-plugins/files/XML%20Tools/Xml%20Tools%202.3.2%20r908%20Unicode%20Beta4/xmltools\\_2.3.2\\_r908\\_unicode\\_beta4.zip/download](http://sourceforge.net/projects/npp-plugins/files/XML%20Tools/Xml%20Tools%202.3.2%20r908%20Unicode%20Beta4/xmltools_2.3.2_r908_unicode_beta4.zip/download)

Your download will begin on the next screen in a few seconds. If for some reason it does not begin, click the “direct link” option on the page to manually download the file.

Depending on your browser’s configuration you will be prompted to open or save the file, or one of those options will occur automatically.



Once your download is complete, the file may automatically open with your system's ZIP default application. If not, navigate to the location you saved the file and open it manually. Once you have opened it, the following files will be shown. Right click on the XMLTools.dll file and click “Copy”.

| Name         | Type             | Package... | Has ... | Size   | R... | Date              |
|--------------|------------------|------------|---------|--------|------|-------------------|
| ext_libs     | File Folder      | 0 KB       |         | 0 KB   | 0%   | 4/10/2012 3:14 PM |
| Changes.log  | Text Document    | 3 KB       | No      | 7 KB   | 62%  | 4/10/2012 2:57 PM |
| XMLTools.dll | Application E... | 139 KB     | No      | 304 KB | 55%  | 4/10/2012 2:59 PM |

Using Windows Explorer, go to the folder listed below and paste the file:

C:\Program Files\Notepad++\plugins

(This location may be different if you did not use the default installation location.)

Next, re-open the ZIP file and open the “ext\_libs” folder (as shown above). Select the four DLL files, right click, and select “Copy”.

| Name              | Type             | Package... | Has ... | Size   | R... | Date               |
|-------------------|------------------|------------|---------|--------|------|--------------------|
| COPY THESE FIL... | Text Document    | 1 KB       | No      | 1 KB   | 26%  | 4/10/2012 3:07 PM  |
| iconv.dll         | Application E... | 633 KB     | No      | 868 KB | 28%  | 10/28/2008 9:01 AM |
| lit               | Application E... | 465 KB     | No      | 964 KB | 52%  | 6/19/2011 9:52 PM  |
| lit               | Application E... | 79 KB      | No      | 163 KB | 52%  | 11/1/2009 7:53 PM  |
| zli               | Application E... | 36 KB      | No      | 76 KB  | 54%  | 10/2/2010 1:21 PM  |

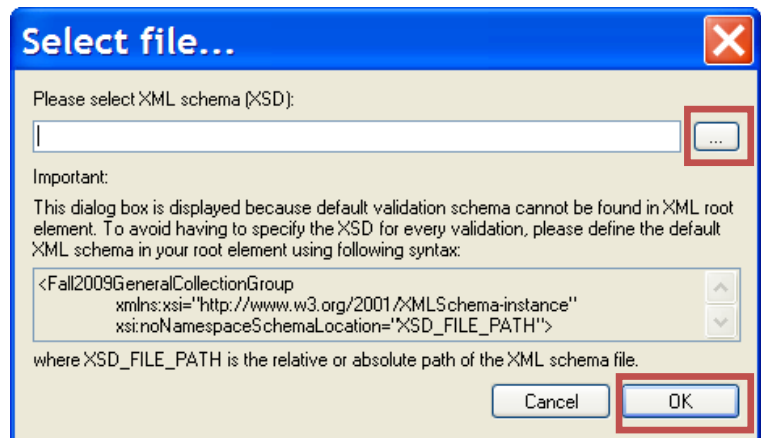
In your Windows Explorer go to the folder listed below and paste the files:

C:\Program Files\Notepad++\plugins

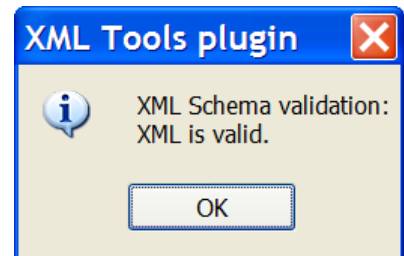
(This location may be different if you did not use the default installation location.)

## Validating an XML File against the Schema File

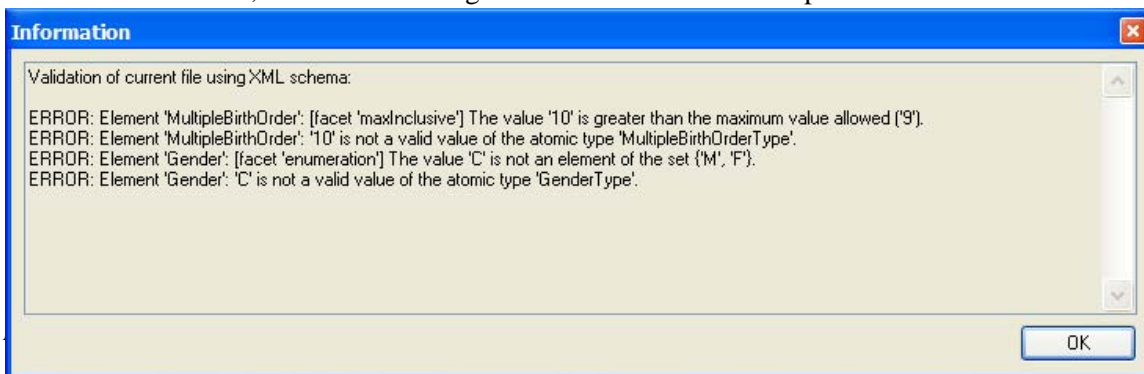
1. Download the collection schema file from CEPI's website. To do this, start by clicking on the link below:  
[http://www.michigan.gov/cepi/0,1607,7-113-986\\_50502---,00.html](http://www.michigan.gov/cepi/0,1607,7-113-986_50502---,00.html).
2. From the MSDS Data Collections section, click on the collection you wish to validate your local file against (e.g. Early Roster, General Collection, Student Record Maintenance, etc).
3. Under the Technical Resources, right-click on the desired XML Schema and choose "Save target as". Change the file extension to .xsd and save it to your local drive.
4. Open Notepad++ by clicking on the shortcut on your desktop or click on Start > Programs > Notepad++ > Notepad++ .
5. Under the File Menu, Click "Open" and locate your XML file to be validated.
6. When the file is opened, press Ctrl+Alt+Shift+M to validate your file.
7. If necessary, click on the browse button (labeled "...") next to XML Schema to select the .xsd file saved in the second step. Click "OK" to continue.



If the XML file is valid, the following window will open. Click on "OK" to close.



If the file is not valid, then the following Information window will open.



## How to Read the Error Message

Each error will have two lines of code in the information window. The first line is the value from the Schema (XSD) file and the second line is the error that has occurred in the XML file.

In the illustrated example above, in the first error, the first line indicates that the maximum value allowed for MultipleBirthOrder is 9. The second line indicates that a record contains number 10 as the value of Multiple Birth Order.

In the second error, the first line indicates that only M or F are allowed in the Gender Type. The second line indicates there is a record in the XML file with the value of C instead of M or F.

In order to fix the errors, select the Search menu and click on Find. In the Find What text box, type “<elementname> value” and click “Find Next” (e.g., “<Gender>C”).

The search will point to the error record.

```
<SubmittingEntityTypeCode>D</SubmittingEntityTypeCode>
<SubmittingEntityTypeCode>25260</SubmittingEntityTypeCode>
</SubmittingEntity>
<PersonalCore>
  <UIC>0019191919</UIC>
  <LastName>DOE</LastName>
  <FirstName>JAMES</FirstName>
  <MiddleName>G</MiddleName>
  <DateOfBirth>2008-09-05</DateOfBirth>
  <MultipleBirthOrder>0</MultipleBirthOrder>
  <Gender>C</Gender>
</PersonalCore>
<EntityDemographics>
  <OperatingISDESANumber>25</OperatingISDESANumber>
```

Fix the error and perform the validation again.