

Validating an XML File Against a Schema File

Last Modified on 05/31/2023 9:05 am CDT

This article was designed to assist Campus users in validating Campus-created XML files against state provided schema files. See the following steps for completing this process:

- [Step 1. Install XML Validation Software](#)
- [Step 2. Access the State Schema File\(s\)](#)
- [Step 3. Generate XML Files within Campus](#)
- [Step 4. Load the Schema into the XML Validation Software](#)
- [Step 5. Validate an XML File Against a Schema File](#)
- [Step 6. Analyze XML Validation Errors](#)

Step 1. Install XML Validation Software

Before XML files can be validated, users need to download and install software which facilitates the validation of an XML file against a schema file. For use in this article, and a quality, free product for validating XML files, the Microsoft XML Notepad 2007 software will be used.

XML validation can be done using any software designed to validate XML files against a schema file. Microsoft XML Notepad 2007 is only being used as an example of an available software solution.

Step 2. Access the State Schema File(s)

Once an XML validation software has been installed, users will need to download their state's schema file(s). Typically these files can be downloaded from the state's Department of Education website with an .XSD file extension.

In the example below, the user is downloading the state schema file (.XSD) for the Staff Course Records file off the Minnesota Department of Education website.

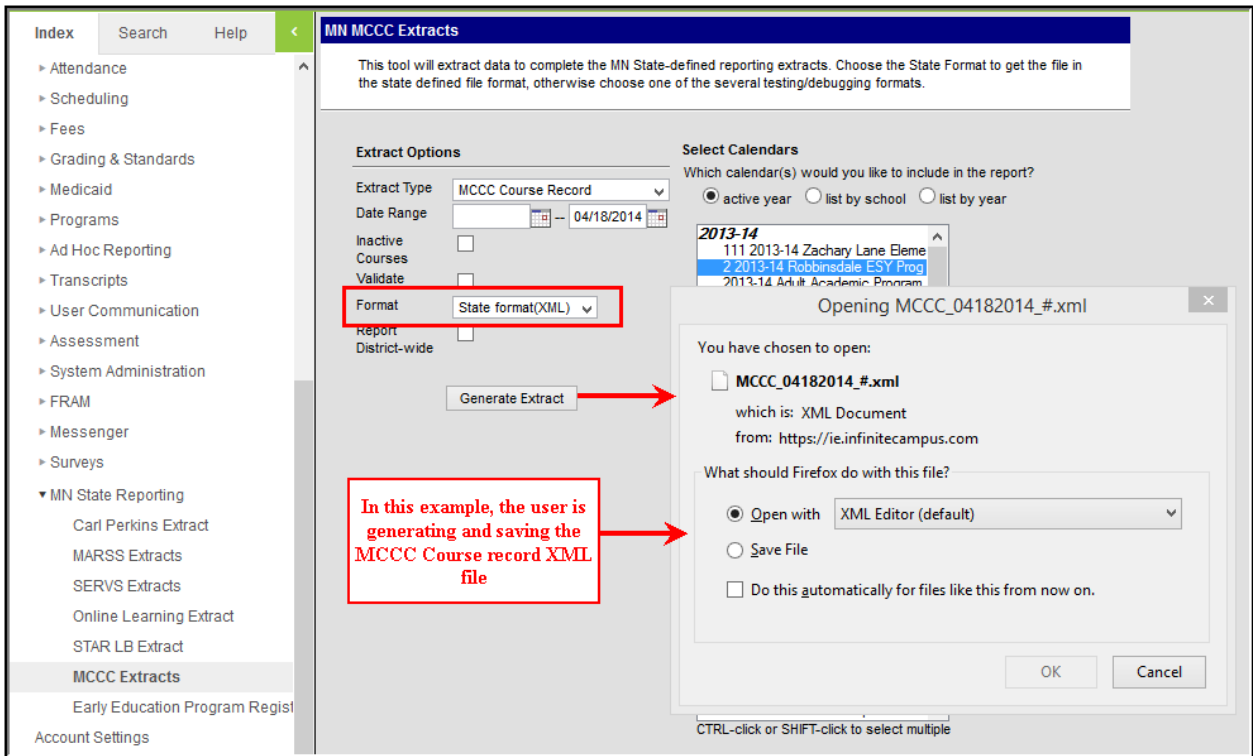
education.state.mn.us/MDE/SchSup/DataSubLogin/MCCC/index.html

Online Licensing System	2010-11 Complete Minnesota Common Course Catalogue 9-12
Reading K-3 Data Upload	2010-11 Annotated Classification Title Index 9-12
SERVS Financial	WebEx Information Sessions
Special Education Compliance Document Upload	To request links to recorded training sessions contact mde.mccc@state.mn.us .
Staff Development Report	Document Download:
STAR Web Edit System	Registration Instructions: Changes for 2012 Grades 9-12
Student ID Validations	Registration Instructions for WebEx Information Sessions
Test WES	Calendar Information 9-12
UFARS Year-end data reporting	Local Course Index File Submission 9-12
Contact	Local Course Index Submission
Sally Gordon	Document Download:
mde.mccc@state.mn.us	11-12 Local Course Index XML Field Definitions
651-582-8578	11-12 Local Course Index XML File Example
	11-12 Local Course Index XSD
	download this file to help create and validate your XML file.
	Local Course Index EXCEL Field Definitions
	Local Course Index EXCEL File Example
	Staff Course Records Submission
	Document Download:
	Staff Course Records Field Definitions and Validations V2 - valid beginning 1/18/2013
	Staff Course Records XSD File V2 - valid beginning 1/18/2013
	download this file to help create and validate your xml file.
	Staff Course Records XML Example V2 - valid beginning 1/18/2013
	Student Course Records Submission
	Document Download:
	Student Course Records XML Example V2 - valid beginning 1/18/2013
	Student Course Records Field Definitions and Validations V2 - valid beginning 1/18/2013
	Student Course Records XSD File V2 - valid beginning 1/18/2013
	download this file to help create and validate your XML file.

Step 3. Generate XML Files within Campus

Once an XML validation software is installed and state schema file(s) have been locally saved, users are now ready to generate and save Campus-generated XML files.

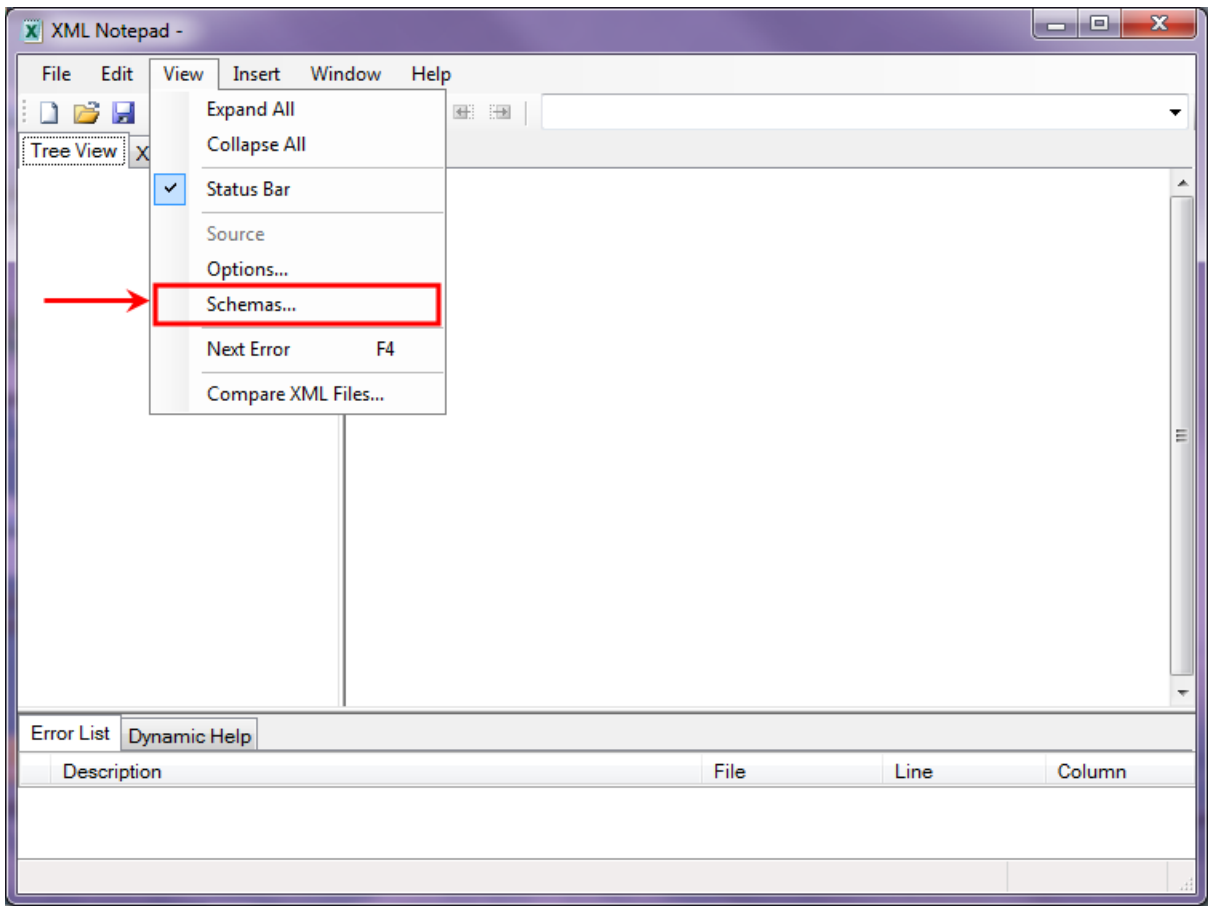
In the example below, the user is generating and saving the [MCCC Staff Course Record XML](#) file within Campus.



Step 4. Load the Schema into the XML Validation Software

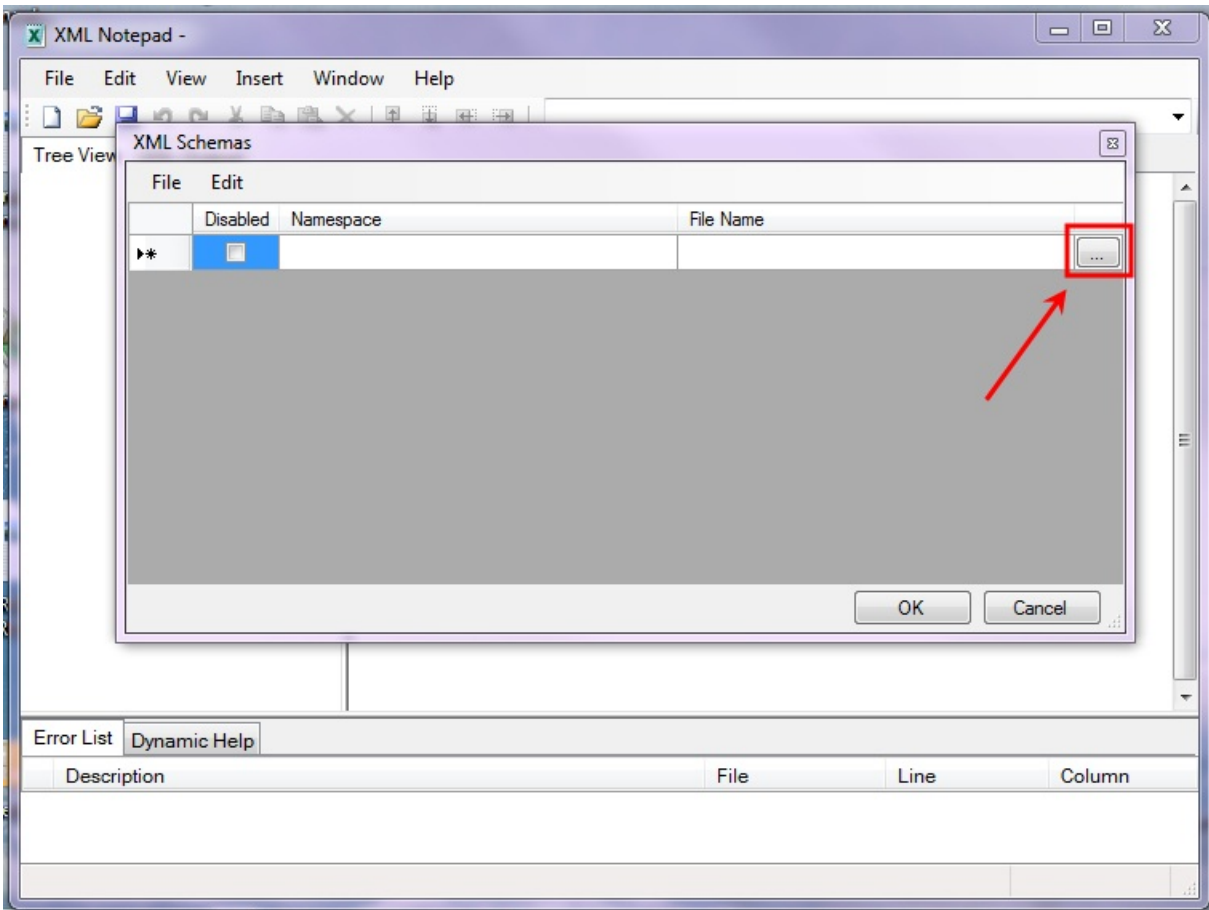
Now that XML validation software is installed, state schema file(s) are downloaded and Campus-generated XML files have been saved, users are now ready to load the state schema into the XML validation software.

The first step in the process is to go to **View > Schemas...** (see the image below).

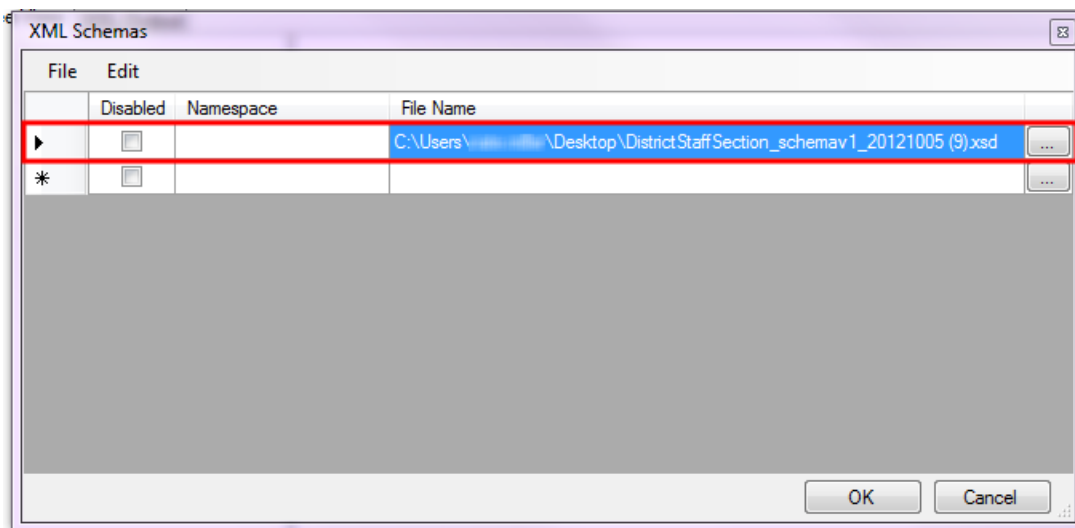


Select the ... box in the right-hand corner of the XML Schemas editor. The program will prompt you to locate the state schema file saved on your computer (or network).

Once the file has been selected, click the **Open** button.



Once the schema file has been located and added, the schema file will appear within the XML Schemas editor (see the image below). This indicates the schema is now ready to validate against XML files.



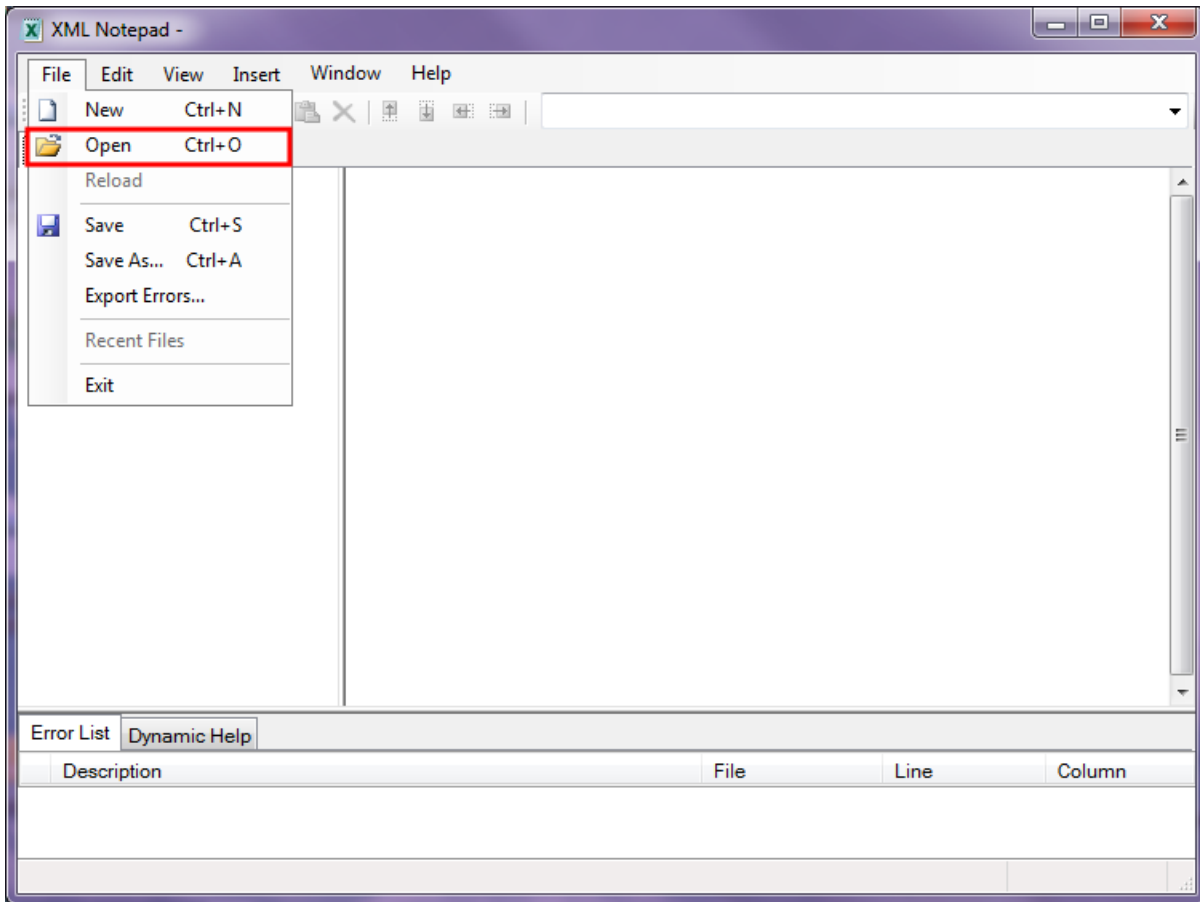
Step 5. Validate an XML File Against a Schema File

Now that the state schema file has been loaded into the XML Notepad 2007 program, you can now

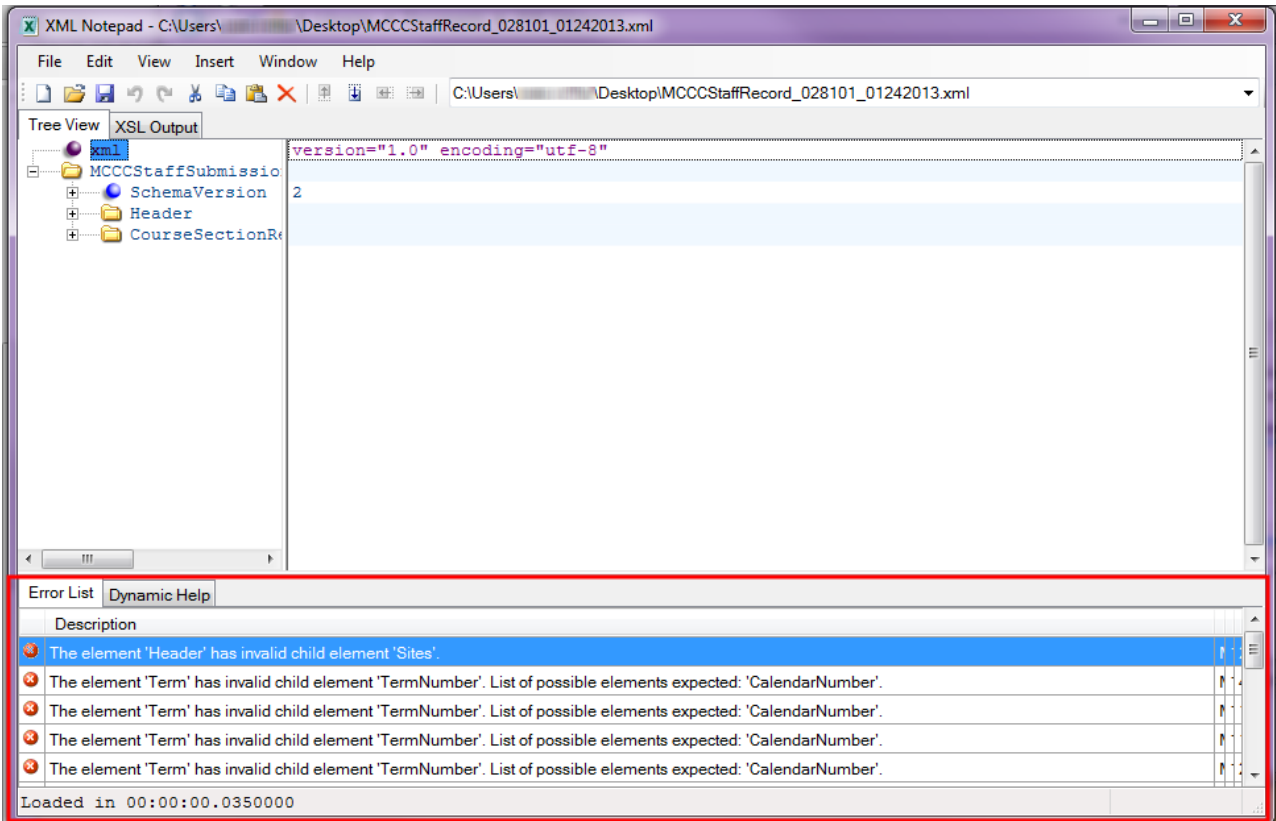
validate the XML file.

To validate the file, go to File > Open. The program will prompt you to locate the XML file saved on your computer (or network).

Once the file has been selected, click the **Open** button.

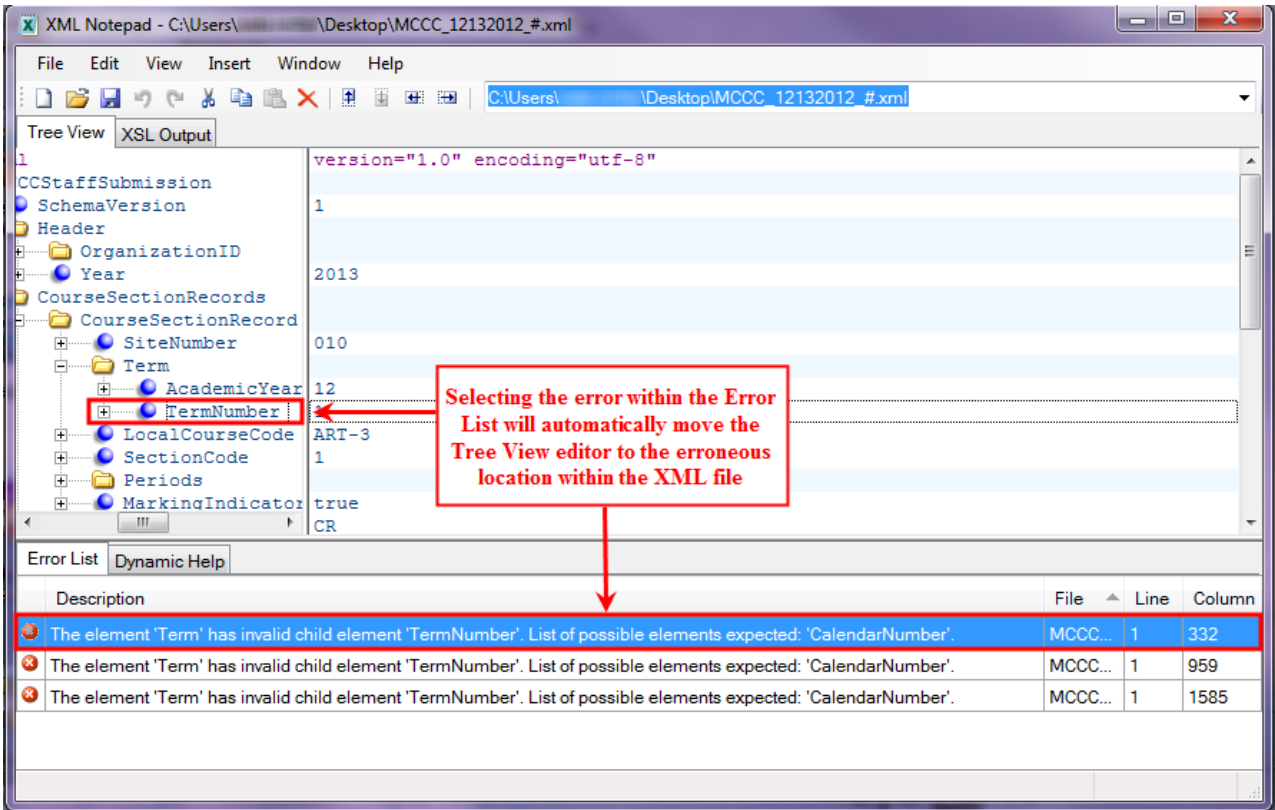


The XML file will automatically begin validating against the schema file with errors populating the Error List window (see the image below). You are now ready to begin analyzing XML file data errors.



Step 6. Analyze XML Validation Errors

Once the XML file has been validated against the schema, users need to analyze the errors within the Error List and rectify data issues. The most effective way to understand and correct XML file errors is to compare the error message against the file specifications and determine where in the Campus the affected data is entered and stored.



For example in the image below, the error message is indicating that the TermNumber element is reporting where the CalendarNumber element should be reporting data. This error is occurring because the CalendarNumber field has no data entered in Campus thus, XML logic removes the blank element from the XML file and the TermNumber element becomes the next element to report data.

XML Notepad - C:\Users\... \Desktop\MCCC_12132012_#.xml

File Edit View Insert Window Help

Tree View XSL Output

1
CCStaffSubmission
SchemaVersion
Header
OrganizationID
Year
CourseSectionRecords
CourseSectionRecord
SiteNumber
Term
AcademicYear
TermNumber
LocalCourseCode
SectionCode
Periods
MarkingIndicator

version="1.0" encoding="utf-8"

1
2013
010
12
1
ART-3
1
true
CR

Error List Dynamic Help

Description	File	Line	Column
The element 'Term' has invalid child element 'TermNumber'. List of possible elements expected: 'CalendarNumber'.	MCCC...	1	332
The element 'Term' has invalid child element 'TermNumber'. List of possible elements expected: 'CalendarNumber'.	MCCC...	1	959
The element 'Term' has invalid child element 'TermNumber'. List of possible elements expected: 'CalendarNumber'.	MCCC...	1	1585

Calendar Number	Description	Numeric, 3 digits	Calendar.number	System Administration > Calendar > Schedule Structure > MCCC Calendar/Schedule ID
	The unique number assigned to the calendar by the Minnesota Department of Education.			

Index Search Help

2013-14 Cooper Credit Recovery

Calendar Grade Levels Schedule Structure Terms Periods Days Overrides

New Save Delete

Schedule Structures Editor

Name
Main

Schedule Structure Detail

Structure ID
742

MCCC Calendar/Schedule ID

Name
Main

To correct this issue, the CalendarNumber element is identified in the file layout which indicates the Campus field location. As the image shows, the MCCC Calendar/Structure ID field used for reporting data in the CalendarNumber element has no data entered within Campus.

Once the user enters and saves the appropriate MCCC Calendar/Schedule ID for this calendar, the XML file will meet the state schema's requirements and no longer generate the error for the calendar.