AI-powered Development
Automating Error Resolution

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Agenda

- Define Validation Rules for Project
- Create and Customize Quick Fixes
- Automatically Correct Validation Errors
- Fix all Errors from Project
- Use AI to Fix Validation Errors

Validation Rules for Project

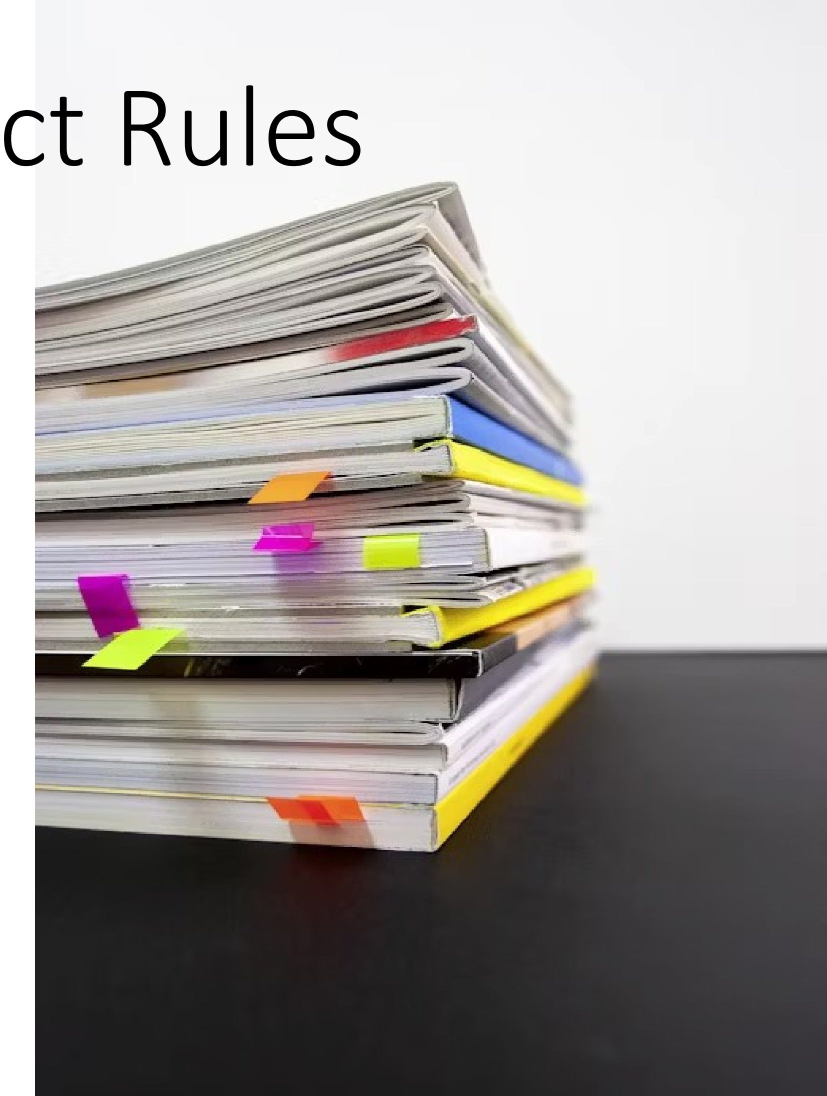
- Define validation rules for your project to:
  - Maintain the accuracy and consistency of data
  - Conform to specific industry standards or organizational guidelines
  - Detection of errors during the authoring or editing process
  - Validation rules facilitate automation
  - Rules enhances the overall quality of the content

Example of Rules in a Dita Project

- Verify that specific DITA elements are used correctly. For example, a `title` element must always be present in a `topic`, `task`, or `concept`
- Check that attributes contain only permissible values. For example, the `@outputclass` attribute should only contain predefined classes that are meaningful within your organization
- Ensure that cross-references and links point to valid targets within the DITA project
- Verify that metadata elements such as `keywords` or `author` are consistently used throughout all topics for better content management and discovery.

Implementation of Project Rules

- Schema validation - ensure compliance using XSD, DTD, or RNG
- Custom project rules - implement with Schematron for specific checks
- Terminology checker



Question: Do you use validation rules for you project?

- ❑ Yes. Using a schema (such as XSD, DTD, RNG)
- ❑ Yes. Custom rules using Schematron
- ❑ Yes. Terminology Checker
- ❑ Yes. Custom implementation
- ❑ No. I do not impose validation rules

Validation in Oxygen

- Manual Schema Validation: Execute validation manually using a specified schema.
- Schema Association: Link a schema directly within the document for automatic validation.
- Validation Scenarios:
  - Associate scenarios with specific files or folders.
  - Apply scenarios based on document type.

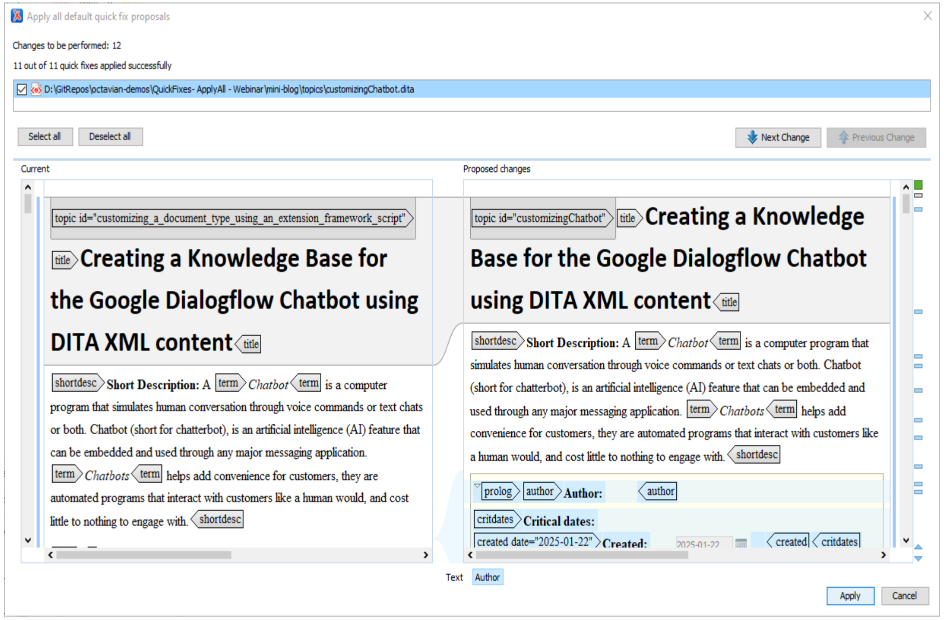
oxygenxml.com/doc/ug-editor/topics/dg-validation-scenarios.html

Define Fixes for Validation Rules

- Simplifies Error Resolution: Enables users to rectify validation issues swiftly without extensive manual edits.
- Ensures Consistency: Maintains uniformity in how validation problems are addressed across different documents and users.
- Enhances Efficiency: Reduces time spent on troubleshooting by offering immediate solutions.
- Reduces Learning Curve: Assists new users by guiding them through standard correction procedures.
- Minimizes User Error: Provides predefined solutions that reduce the chance of introducing new errors during manual fixes.

Apply All Quick Fixes

- Efficiency: Manual correction is time-consuming
- Batch Resolution: correct all validation issues in a document
- Preview and Confirmation: Check the modifications before they are applied
- Page Flexibility: Works in both Text and Author modes



Apply all default quick fix proposals

Changes to be performed: 12

11 out of 11 quick fixes applied successfully

☑ D:\GitRepos\octavian-demos\QuickFixes- ApplyAll - Webinar\mini-blog\topics\customizingChatbot.dita

Current

topic id="customizing_a_document_type_using_an_extension_framework_script"

Creating a Knowledge Base for the Google Dialogflow Chatbot using DITA XML content

Short Description: A *Chatbot* is a computer program that simulates human conversation through voice commands or text chats or both. Chatbot (short for chatterbot), is an artificial intelligence (AI) feature that can be embedded and used through any major messaging application. *Chatbots* helps add convenience for customers, they are automated programs that interact with customers like a human would, and cost little to nothing to engage with.

Proposed changes

topic id="customizingChatbot"

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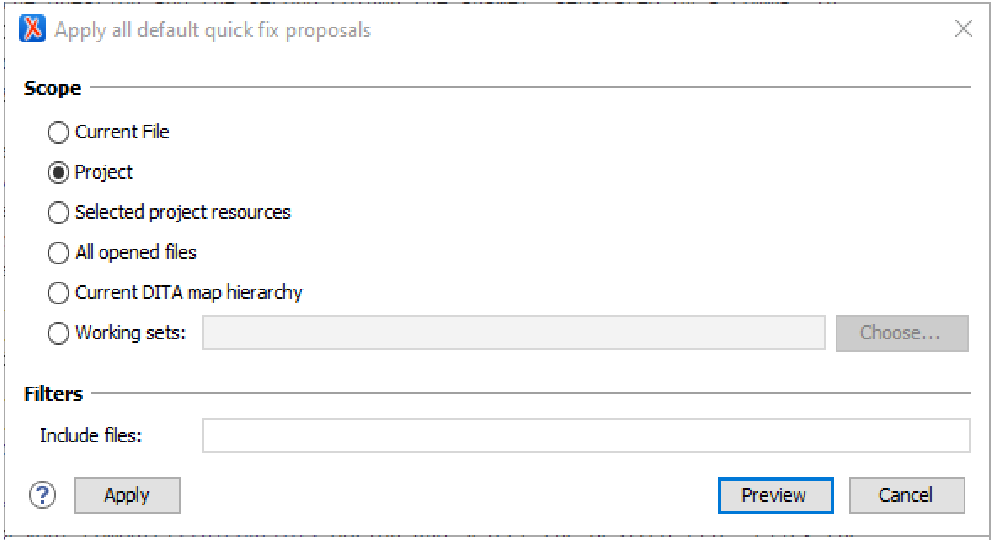
Author:

Critical dates:

created date="2025-01-22" Created: 2025-01-22

Apply Fixes from Project

- Address all validation issues across the entire project.
- Resolve all validation problems within a DITA map.
- Choose specific documents to target and correct validation errors.



Apply all default quick fix proposals

Scope

○ Current File
● Project
○ Selected project resources
○ All opened files
○ Current DITA map hierarchy
○ Working sets:

Filters

Include files:

Use AI for Fix Resolution

- Use AI to correct specific problems
  - Generate short description from the file content
  - Generate index terms
  - Create an alternate text by reading the image
  - Add an output class by detecting from code

Quick Fix With AI

- Call AI from a quick fix action
- Solve a specific issue using AI
- Control the content that is send to the AI
- Control the content that is modified by the AI
- Apply AI batch on specific content

AI Positron Fix Action

- Generate the fix from the validation message
- Can be user for any type of schema validation
- Uses the custom messages from Schematron

AI Positron Fix

- Advantages:
  - No need to create a fix action
  - A fix is generated automatically from each validation message
  - Reduces the complexity of the project
- Challenges
  - The message need to be as concise as possible so that the AI can use
  - Sometimes you need to change the context for the fix or perform different operations

Use AI to Fix all Validation Problems

- Fix Validation Problems action – validate the content of the document and fix any reported validation issues using AI
- Apply “Fix Validation Problems” on an entire project

Conclusion

- Defining validation rules for a project is important for ensuring content quality and compliance
- Quick fix actions enable fast and consistent resolution of issues
- Applying fixes for all validation problems simultaneously enhances efficiency
- Using AI for fix actions facilitates the execution of complex corrections
- AI-powered solutions streamline the correction of validation problems

Future Plans

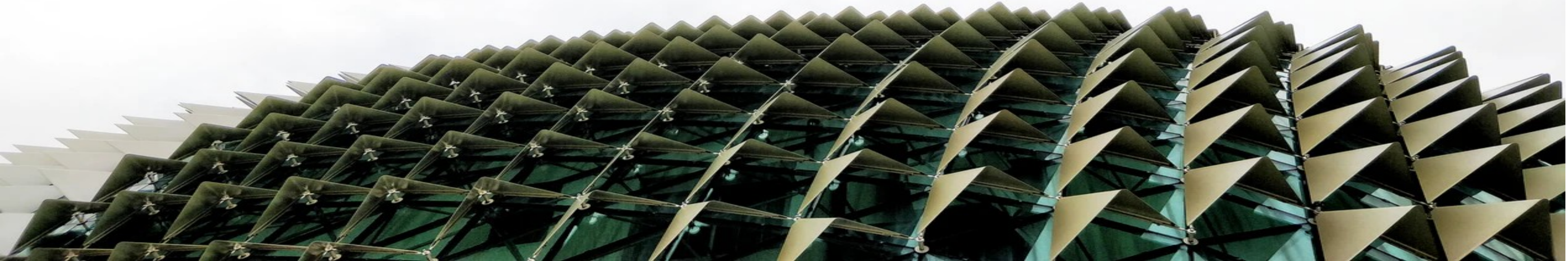
- Apply All Quick Fix action available from scripting
- Improve “AI Positron Fix” action
- Improve “Fix Validation Problems” action
- *feedback is welcome*

Question: What future developments would you like to see?

- ❑ Apply All Quick Fix action available from scripting
- ❑ Improve “AI Positron Fix” action
- ❑ Improve “Fix Validation Problems” action
- ❑ Other (use the question panel)

Resources

- oxygenxml.com/ai_positron_assistant.html
- http://schematron.com/
- http://schematron-quickfix.github.io/sqf



Questions?

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