



UOW COLLEGE AUSTRALIA

PATHWAYS TO UNIVERSITY OF WOLLONGONG

DPIT128: Introduction to Web Technology (Spring 2023)

Assignment 3 (10%) due by Friday 18th of August 2023 at 11:55 PM

Learning Outcomes

- Ability to develop well-formed and valid XML documents
- Experience defining XML validation schemas using contemporary approaches (*namely DTD and XSD*)
- Ability to use XSLT to display XML data in a more natural and meaningful format
- Ability to validate XML documents against internal and external schemas using online validation services

Submission Instructions

You will need to submit a total of 5 files using the “Assignment 3” submission facility on Moodle. Please see the table below for an overview of the files (*including their names and extensions*) that are required for each task.

Task	Files Required	
1	A3_TASK1.xml	
2	A3_TASK2.xml	
3	A3_TASK3.xsd	
4	A3_TASK4.xml	A3_TASK4.xsl

Assignments are marked using the **Google Chrome** browser. Check all work in this same browser prior to submission.

Please be aware of the following:

1. Late submissions will incur an awarded mark deduction of 10% for **each day late**.
2. Submissions more than 3 days late will **not** be marked (a zero will be automatically awarded).
3. Please apply for academic consideration if you need an extension. The UOW College “Academic Consideration Policy” can be found at the following URL:
<https://www.uowcollege.edu.au/about/governance/policies-procedures/>
4. Plagiarism is treated seriously! If we suspect that work has been copied, **ALL** students involved are likely to be awarded a mark of zero for the entire assessment.
5. This assignment is scheduled to be marked during Weeks 8 & 9.

There are 4 tasks in this assignment.

Task 1: Download and extend the “A3.xml” file available on Moodle (*also available [here](#)*) to include all the information provided in the following table. The first hotel has already been inserted to demonstrate the structure that should be used for each record.

Name	Stars	Reviews	Score
Novotel Wollongong Northbeach	4	3303	7.7
Sage Hotel Wollongong	4	3941	7.4
Adina Apartment Hotel Wollongong	4	1169	8.4
Quality Suites Pioneer Sands	4	610	8.2
Mantra Wollongong	4	1045	7.2
Boat Harbour Motel	3	1757	7.9

Information obtained from Hotels Combined on the 20th of June 2023.

Please Note:

- Save your completed file as “A3_TASK1.xml”.
- This will be the first of 5 *separate files* that you must submit for this assignment.
- Check that your XML is well-formed by using the validation service available at the following URL:
<https://www.xmlvalidation.com>

This task is worth 1 mark.

Task 2: Create a copy of your XML file from the previous task and rename that copy to “A3_TASK2.xml”. You are now required to add an *internal DTD* to your “A3_TASK2.xml” file. This DTD should define the legal building blocks for your XML code structure.

Please Note:

- You must define all relevant elements and attributes within your DTD.
- You should consider all attributes as ‘required’.
- Save your completed file as “A3_TASK2.xml”.
- This will be the second of 5 *separate files* that you must submit for this assignment.
- Check that your XML file is valid by using the validation service available at the following URL:
<https://www.xmlvalidation.com>

This task is worth 2 marks.

Task 3: Create an XML Schema Definition file named “**A3_TASK3.xsd**”. Use this file to define the legal building blocks for your XML code via XML Schema. Keep in mind that this comprehensive alternative to DTD is rapidly becoming the preferred method for describing XML structures.

Please Note:

- You must define all relevant elements and attributes within your XSD.
- You should consider all attributes as ‘required’.
- Carefully consider the data type that best applies to each value.
- Save your completed file as “**A3_TASK3.xsd**”.
- This will be the third of 5 *separate files* that you must submit for this assignment.
- Check that your XSD validates the “**A3_TASK1.xml**” file by using the validation service available at the following URL: <https://www.xmlvalidation.com>

This task is worth 2 marks.

Task 4: Create a copy of your XML file from **Task 1** and rename that copy to “**A3_TASK4.xml**”. You are now required to complete the XSL template available on Moodle (*also available [here](#)*) and link it with your XML code. The resulting XSLT output must have the same layout and inclusions as shown below.

Hotel Comparison Table			
Search Location: Wollongong			
Hotel Name	Star Rating	Total Reviews	Overall Score
Novotel Wollongong Northbeach	4	3,303	7.7
Sage Hotel Wollongong	4	3,941	7.4
Adina Apartment Hotel Wollongong	4	1,169	8.4
Quality Suites Pioneer Sands	4	610	8.2
Mantra Wollongong	4	1,045	7.2
Boat Harbour Motel	3	1,757	7.9
This information was obtained from Hotels Combined on 20/06/2023.			

Design Requirements:

- The heading text should be displayed within an `h2` element. ✓
- The sub-heading text must be displayed within a `caption` element. ✓
- The caption should have a font size of 20px and a bottom padding value of 10px specified *inline*. !!
- A border that matches the above illustration must be included (see “*Design Resources*”). !!

- The table should utilise `th` and `td` elements where appropriate. ✓
- The background colour for all `th` elements must be specified *internally* (see “**Design Resources**”). ✓
- All `th` and `td` elements should have a padding value of 10px and a font size of 20px. ✓
- An `:nth-child()` pseudo-class must be applied to shade even table rows (see “**Design Resources**”). ✓
- A matching alignment for all numerical columns should be specified *internally* using a ‘class’ selector. ?
- All “Total Reviews” and “Overall Score” values must be presented as shown. ✓
- Each “Overall Score” background colour should be specified *internally* using a ‘class’ selector. !
- The text shown beneath the table must be displayed within an `h3` element. ✓
- The “Hotels Combined” hyperlink should display its destination in a new window/tab. !
- The date must be presented in an Australian format (specifically as DD/MM/YYYY). !
- An XSL `for-each` element should be used to iterate through the list of hotels. ✓
- An XSL `choose` element must be used to decide which “Overall Score” background colour to apply. ✓
- The `test` attribute conditions and hexadecimal colour values are provided in the table below.

Score < 7.5	7.5 ≤ Score < 8.0	Otherwise
#ff9999	#ffdb99	#99cc99

Design Resources:

Border Effect	1px solid #808080
Background (<code>th</code>)	#b9b9b9
Background (<code>:nth-child</code>)	#e0e0e0

Please Note:

- You must use all of the attribute values contained within the XML file.
- Each of the CSS rules provided in the template should be used within your final design.
- Be sure to include an appropriate/descriptive name for each of your ‘class’ selectors.
- Use indentation within your code to improve its overall readability.

You will need to submit both the “**A3_TASK4.xml**” file and the XSLT file, which should be named “**A3_TASK4.xsl**”, to the submission facility on Moodle for this task. These will complete the set of 5 *separate files* that you must submit for this assignment.

Please ask your teacher if you are uncertain about the submission requirements for this assignment.

This task is worth 3 marks.

The following applies to all relevant components of your submission:

Additional Marking Criteria	Available Marks
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- DPIT128 Assignment 3 Specification -

XML documents validate <u>without issue(s)</u> using the specified validation service	1.0
XSL file displays XML content correctly and <u>without issue(s)</u> in Google Chrome	0.5
All code is neat and suitably indented (<i>2 Spaces Only</i>)	0.25
Documents contain explanatory commenting where appropriate	0.25

- THIS IS THE END OF THE ASSIGNMENT -

Version 1.0 by Jason Rodriguez