



Australian Government

ICTPRG427 Use XML effectively

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to create extensible markup language (XML) documents, web-service applications, and client applications to consume web services.

It applies to individuals who are web developers, web programmers or application programmers, who build Windows or web-based applications that access data in XML format, or who develop and consume web services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Programming and software development

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Represent the structured data with XML	1.1 Gather information by analysing data, documents, and problem domains 1.2 Write a well-formed XML document by incorporating the appropriate structure and syntax 1.3 Validate the XML document using validation tools 1.4 Format the XML document using styling tools
2. Access and manipulate the XML document	2.1 Create a new XML document using an XML parser application programming interface (API)

ELEMENT	PERFORMANCE CRITERIA
	2.2 Access and traverse elements, and attributes, using an XML parser API 2.3 Modify elements and attributes using an XML parser API 2.4 Delete elements and attributes using an XML parser API 2.5 Transform the XML document into a data object, using an XML parser API 2.6 Transform the data object into an XML document, using an XML parser API
3. Create a service-oriented application using XML	3.1 Define the web-services architecture and platform elements 3.2 Develop and deploy web-service applications using a language 3.3 Develop a client application to consume web service, using a language

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1	Interprets and critically analyses, and applies the appropriate strategies, to construct meaning when gathering information by analysing data, documents and problem domains
Writing	1.2, 1.4, 2.1, 2.3, 2.5, 2.6	- Prepares documentation expressing ideas, explores complex issues, and is constructed logically, succinctly and accurately - Writes, and edits, computer code and technical data, ensuring the correct syntax and accuracy
Numeracy	1.2	Selects from, and applies, an expanding range of mathematical and problem-solving strategies in a range of contexts, identifying the order and position of elements in a sequence, when using XML
Get the work done	All	- Uses systematic, analytical processes in complex, non-routine situations, setting goals, gathering relevant information and identifying, and evaluating, options against the agreed criteria - Applies formal problem-solving processes when tackling

		an unfamiliar problem, breaking complex issues into manageable parts and identifying, and evaluating, several options for action • Utilises a broad range of features within applications to improve personal productivity, and optimising software functions for specific purposes
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Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Structure must include:	• child element • root element • sub-child element.
Syntax must use rules relating to:	• case sensitivity • closing tag • entity reference • proper nesting • quoted attribute values • single-root element.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTPRG427 Use XML effectively	ICAPRG427A Use XML effectively	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTPRG427 Use XML effectively

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Performance Evidence

Evidence of the ability to:

- gather relevant information and produce a well-formed, formatted and validated XML document
- use an XML parser to access, modify and transform the XML documentation
- create a service-oriented application using XML.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the hierarchy and tree structure
- explain the programming concept and language
- describe the main features and services of the world wide web (WWW)
- explain data modelling
- outline commonly used items in hypertext markup language (HTML)
- identify information system features
- identify source characteristics.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the programming and software development industry, and include access to:

- tools to access and develop a data source, such as an integrated development environment (IDE), a text editor and a web browser
- specific requirements, including client and functionality requirements

- a web server and software that hosts the services to deploy and test, the web-service application
- libraries to develop the web service and client applications.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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