



Australian Government

Department of Education, Employment and Workplace Relations

ICAWEB504A Build a document using eXtensible markup language

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to design and build a valid eXtensible markup language (XML) document to suit a specified requirement.

Application of the Unit

This unit applies to those in a development role in a variety of information technology areas who are required to use XML to build documents.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Plan process	1.1 Review specified requirements 1.2 Produce a plan to analyse the specified requirements 1.3 Plan the design and build of valid <i>XML</i> documentation allowing for iterative development
2. Analyse specified requirements	2.1 Determine and document the purpose, expectations and functionality of the XML document 2.2 Determine the <i>hardware, software and tools</i> needed to design the document 2.3 Determine the requirements for the document 2.4 Determine appropriate design methodologies, including using software engineering life cycle
3. Design and develop document	3.1 Decide on document type definition (DTD), if required 3.2 Define required entities, elements and their attributes 3.3 Produce the document following appropriate <i>standards</i> and declaring DTD, required entities, elements and their attributes, including associated graphics or sounds
4. Test document	4.1 Test document off-line against specifications and confirm document's validity 4.2 Test, where appropriate, the document online against specifications and with a representative audience 4.3 Analyse test results and confirm document's validity

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to analyse document requirements and data environment
- communication skills to liaise with clients
- literacy skills to read required documents
- problem-solving skills to address issues in design
- technical skills to:
 - collect and disseminate data
 - use XML during development.

Required knowledge

- Copyleft and Free Software Foundation
- copyright and intellectual property
- document object model
- introductory knowledge of business process and information modelling
- meta-modelling
- standard generalised markup language (SGML)
- United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) modelling methodology
- unified-modelling language
- web technologies
- XLT and XSLT.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • respond to requirements • produce a valid XML document • test the XML document • evaluate the test results.
Context of and specific resources for assessment	Assessment must ensure access to: • appropriate learning and assessment support when required • modified equipment for people with special needs • client or business requirements • XML parser or IE5 • XML authoring tool.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • evaluation of candidate's XML document • review of candidate's test results and test analysis • verbal or written questioning to determine candidate's knowledge of requirements, XML and testing.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>XML</i> may include:	• electronic business using eXtensible markup language (ebXML).
<i>Hardware</i> may include:	• modems and other connectivity devices, such as asymmetric digital subscriber line (ADSL) modems • networks • personal computers • remote sites • servers • workstations.
<i>Software</i> may include:	• commercial software applications • in-house or customised software • organisation-specific software • packaged software.
<i>Tools</i> may include:	• Easy XML 1.0 • eXml Editor • QuickSilver 1.0 XML Suite • XML Bean Suite • XML Pro 2.0.
<i>Standards</i> may include:	• W3C DOM specification, XML 1.0 (current edition), W3C XML instances, W3C XML DTDs, W3C XML DTDs, and ISO SGML meta-DTDs • ebXML repository and registry specification • ebXML requirements specification version 1.0 • ebXML technical architecture specification • ebXML transport, routing and packaging specification • ISO 10646 Character encoding • ISO 11179/3 Metadata repository • ISO 8601:2000 Date/time/number data typing • ISO/IEC 14662 Open-Edi Reference Model • OASIS registry/repository technical specification • RFC 2119 Keywords for use in RFCs to indicate requirement levels • UN/CEFACT modelling methodology (UMM) • W3C XML v1.0 second edition specification.

Unit Sector(s)

Web