



Australian Government

Department of Education, Employment and Workplace Relations

ICAB5161B Build a document using extensible mark-up language

Release: 1

ICAB5161B Build a document using extensible mark-up language

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to design and build a valid extensible markup language (XML) document to suit a specified requirement. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan process	1.1. Produce a plan to analyse the specified requirements and design and build valid <i>extensible mark-up language</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</i> and <i>software</i> and tools needed to design the document 2.3. Determine the requirements for the document 2.4. Determine appropriate design methodologies, such as utilising software engineering life-cycle
3. Design and develop document	3.1. Decide on document type definition (DTD), if required 3.2. Define the required entities, elements and their attributes 3.3. Produce the document, declaring the DTD, the required entities, elements and their attributes, including associated graphics or sounds, following appropriate <i>standards</i>
4. Test document	4.1. Test document off-line against specifications and confirm the document's validity 4.2. Test, where appropriate, the document on-line against specifications and with a representative audience

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- HTML development
- Design and problem solving skills
- Basic analysis skills
- Data collection and dissemination techniques

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- SGML
- Unified modelling language
- Introductory knowledge of business process and information modelling
- UN/CEFACT modelling methodology
- Meta modelling
- XLT and XSLT
- Document object model
- Copyright and intellectual property
- Copyleft and Free Software Foundation
- Web technologies

Evidence Guide

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 following is essential:

- Assessment must confirm the ability to produce a valid XML document.

To demonstrate competency in this unit the person will require access to:

- XML parser or IE5
- An XML authoring tool

Context of and specific resources for assessment

XML is extensible mark-up language. It is designed to improve the functionality of the web by providing more flexible and adaptable information identification.

XML is not a fixed format like HTML (a single, predefined mark-up language). Instead, XML is a 'metalanguage', a language for describing other languages.

XML can do this because it is written in SGML, the international standard metalanguage for text mark-up systems (ISO 8879).

The breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination would be characteristic.

Assessment must ensure:

- The demonstration of competency may also require self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for

EVIDENCE GUIDE	
	self and others. Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may also be involved.
Method of assessment	The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1. - Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency. - Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. An individual demonstrating this competency would be able to:

EVIDENCE GUIDE

	• Demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas • Analyse and plan approaches to technical problems or management requirements • Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations • Evaluate information, using it to forecast for planning or research purposes • Take responsibility for own outputs in relation to broad quantity and quality parameters • Take some responsibility for the achievement of group outcomes • Maintain knowledge of industry products and services Additionally, an individual demonstrating this competency would be able to: • Demonstrate understanding of XML incorporating theoretical concepts • Apply XML solutions to a defined range of problems • Identify and apply XML knowledge to a wide variety of solutions • Identify, analyse and evaluate information from a variety of sources
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Range Statement**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.

Extensible mark-up language
may include:

- XML
- ebXML

Hardware may include but is not

- workstations

RANGE STATEMENT	
limited to:	• personal computers • modems and other connectivity devices • networks • remote sites • servers • DSL modems
Software may include but is not limited to:	• commercial software applications; organisation-specific software, packaged software, in-house or customised software
Tools may include	• Easy XML 1.0 • EXml Editor • QuickSilver 1.0 XML Suite • XML Bean Suite • XML Pro 2.0
Standards	W3C DOM specification, extensible mark-up language (XML) 1.0 (Current Edition), W3C XML instances, W3C XML DTDs, W3C XML DTDs, ISO SGML meta-DTDs. • ISO/IEC 14662: Open-edition Reference Model • ISO 11179/3 Metadata repository • ISO 10646: Character encoding • ISO 8601:2000 Date/time/number data typing • 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 • ebXML Requirements specification version 1.0 • ebXML Technical architecture specification • ebXML Repository and registry specification • ebXML Transport, routing and packaging specification

Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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