



Australian Government

Department of Education, Employment and Workplace Relations

ICAB4169B Use development software and IT tools to build a basic website

Release: 1

ICAB4169B Use development software and IT tools to build a basic website

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit defines the competency required to build a basic website that is consistent with design and technical requirements, and business expectations.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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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. Select and analyse website structure and development tools	1.1. Analyse business <i>specification</i> and select appropriate <i>software</i> 1.2. Identify technical needs for the website and select appropriate <i>software tools</i> 1.3. Identify site structure and navigation flow and demonstrate understanding of functionality 1.4. Review design <i>documentation</i> and integrate design work with site structure and navigation, in accordance with <i>web development standards</i>
2. Begin site construction	2.1. Take action to ensure <i>user</i> input during website construction 2.2. Validate existing information and basic content when incorporating data on website 2.3. Apply consistent design <i>specifications</i> to all aspects of the website 2.4. Gather feedback from <i>user</i> on web design, content, accessibility and structure, using appropriate feedback mechanism
3. Complete and validate website construction and content	3.1. Undertake an evaluation of the website against technical requirements and design <i>specification</i> 3.2. Test each function and process of the website 3.3. Conduct navigation tests and HTML compliance with website standards 3.4. Stress test the website to meet design criteria and <i>user</i> load 3.5. Record testing results to ensure website meets <i>user</i> requirements 3.6. Obtain sign-off/approval of <i>user</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Using appropriate development software and tools
- HTML development
- Debugging and error handling techniques
- Troubleshooting basic web links and HTML code errors

REQUIRED SKILLS AND KNOWLEDGE**Required knowledge**

- Website design
- SGML and the associated standards
- Basic design principles
- Web-specific technical attributes
- Reading and interpretation of design specifications and guidelines
- Appropriate software and tools that meet required technical specifications
- Understanding of best practice communication, accessibility and equity principles when building for diverse users

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> Assessment must verify the ability to build a basic website. All development work is done in a manner that accurately reflects the website specifications. The development is audited against the business requirements and design needs prior to task completion and sign-off. <p>To demonstrate competency in this unit the person will require access to:</p> <ul style="list-style-type: none"> Website development software and tools Basic website specifications and guidelines
Context of and specific resources for assessment	<p>Development software for website development simplifies the underlying code creation routine. Website development has moved beyond the mainstream commercial domain as more small companies, individuals and community groups need and use websites for a range of commercial and other purposes.</p> <p>Creating websites with development software from text only to full-blown Integrated Development Environments allows for flexibility in development styles, complexity of website and performance.</p> <p>Determining which development software to use will be dependent on complexity and availability of software. The selected development environment should be flexible enough to allow for the creation of specialised programs for clients or for making available to contributors the underpinning code as part of an open source project.</p> <p>The breadth, depth and complexity of knowledge and skills in this competency would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine.</p>

EVIDENCE GUIDE

Leadership and guidance would be involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Assessment must ensure:

- Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills would be characteristic.
- Applications may involve responsibility for, and limited organisation of, others.

The scope and complexity of knowledge and skills is dependent on the tasks undertaken as part of a provided specification.

EVIDENCE GUIDE	
Method of assessment	<p>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.</p> <ul style="list-style-type: none"> • 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. • The assessment of this unit of competency will usually include observation of code generation and the code results. • 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	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p> <p>An individual demonstrating this competency would be able to:</p> <ul style="list-style-type: none"> • Demonstrate understanding of a broad knowledge base incorporating some theoretical concepts • Apply solutions to a defined range of unpredictable problems • Identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas

EVIDENCE GUIDE

	<ul style="list-style-type: none"> • Identify, analyse and evaluate information from a variety of sources • Take responsibility for own outputs in relation to specified quality standards • Take limited responsibility for the quantity and quality of the output of others • Maintain knowledge of industry products and services <p>Additionally, an individual demonstrating this competency would be able to:</p> <ul style="list-style-type: none"> • Use development software and build a website to specification • Apply solutions to a variety of predictable problems • Interpret available information and request clarification where needed
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Range Statement

RANGE STATEMENT	
<p>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.</p>	
<p><i>Specification</i> may include but is not limited to:</p>	<ul style="list-style-type: none"> • technical requirements • user problem statement • current system functionality
<p><i>Documentation</i> may follow:</p>	<ul style="list-style-type: none"> • ISO/IEC/AS standards • audit trails • naming standards • version control • project management templates • report writing protocols
<p><i>User</i> may include:</p>	<ul style="list-style-type: none"> • a person within a department • a department within the organisation • a third party

RANGE STATEMENT	
<i>Software</i> may include but is not limited to:	<ul style="list-style-type: none"> • text editors such as Word pad • Notepad • commercial software applications • Dreamweaver • Golive • Fireworks • NetObjects Fusion • Bluefish
<i>Software tools</i> may include but is not limited to:	<ul style="list-style-type: none"> • Macromedia • FTP programs • FrontPage • HotDog
<i>Web development standards</i> may include:	<ul style="list-style-type: none"> • Web content accessibility guidelines 1.0 (WCAG) • Authoring tool accessibility guidelines 1.0 (ATAG)

Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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