



Australian Government

Department of Education, Employment and Workplace Relations

ICAB5228B Maintain functionality of legacy code programs

Release: 1

ICAB5228B Maintain functionality of legacy code programs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to maintain the functionality of legacy code programs. The following unit is linked and forms an appropriate cluster: • ICAB5320B Maintain custom software 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		
	ICAB4222C	Apply introductory programming skills in another language

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. Determine functional changes required	1.1.Consult user to determine and document the functional change required 1.2.Clarify impact of changes with operational personnel, to ensure understanding
2. Review legacy language	2.1.Identify the basic structures of the legacy language 2.2.Review the data storage of the legacy language with regard to global variables, modularisation, cohesion and coupling 2.3.Review the basic algorithms of the legacy language
3. Identify and isolate change	3.1.Review the technical documentation for the system to determine modules to change 3.2.Review source code to determine program logic and flow 3.3.Update the technical documentation to reflect current state of program
4. Determine framework for change	4.1.Determine the change approach to be used to implement the change 4.2.Ascertain and detail the risks for each approach 4.3.Determine the personnel who will make the changes
5. Design change	5.1.Develop the changes required , considering the impact of the changes on other parts of the system 5.2.Document the changes in accordance with change management standards
6. Code change	6.1.Identify and obtain appropriate hardware and software for the change 6.2.Write code in accordance with programming standards 6.3.Compile and unit test the changes 6.4.Document the changes in accordance with programming standards
7. Test change	7.1.System test the changes and record outcomes 7.2.Perform user acceptance testing and record outcomes 7.3.Sign off change request
8. Archive system	8.1.Create new version of software in accordance with configuration management standards 8.2.Archive the development system, including source code, compilers and test data

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Intermediate analysis in relation to a software design
- Decision making in relation to areas of software design
- Problem solving skills
- Clear and precise communication
- Interpretation of user manuals and help functions
- Interpretation of organisational standards and procedures

Required knowledge

- Technical terminology in relation to reading help files and manuals
- Operational procedures on the required operating system
- Organisational standards for software development
- Security, viruses, privacy legislation, copyright
- Types of software

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 ensure the ability to read legacy language, identify and isolate the change, and implement the change via the chosen technique.

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

- Access to documents detailing organisational standards for software development

Context of and specific resources for assessment

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 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.

Work is carried out with limited supervision.

EVIDENCE GUIDE**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, for example:

- ICAB5230B Maintain custom software

An individual demonstrating this competency would be able to:

- 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

EVIDENCE GUIDE

	• 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 knowledge by recall of key design alternatives • Demonstrate practical skills in analysis relevant to the change • Modify programs in the legacy language • Compile and test programs under the relevant operating system • Follow procedures for change management and configuration management
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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.

User may include:	• a person within a department • a department within the organisation • a third party
Technical documentation may include:	• project specifications • reports • help references • technical manuals • training materials and self-paced tutorials

RANGE STATEMENT	
	• on-line help • user guides • brochures
Change approach may include:	• implementing the changes in the legacy language • implementing a new layer (or replacing an existing layer) to the architecture of the system • implementing wrappers to the legacy code
Hardware may include but is not limited to:	• workstations • 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

Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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