



Australian Government

ICTPRG413 Use a library or pre-existing components

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 identify, evaluate and incorporate pre-existing (re-use) components from a library, or other source, as part of a software project.

It applies to individuals working in a programming role in a variety of information technology areas, who are required to use programming libraries to support their work.

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. Identify potential re-use units	1.1 Analyse the project design and functionality, to identify re-use components 1.2 Source re-use components with the desired functionality
2. Evaluate re-use components for suitability in parent project	2.1 Evaluate the re-use component, or libraries, for suitability for use within the parent software project 2.2 Compare the functionality of each potential re-use component to the functionality required by the parent project 2.3 Evaluate the cost of implementing the re-use component 2.4 Consider the technical impact on the parent project design 2.5 Consider re-use component vendor licensing issues

ELEMENT	PERFORMANCE CRITERIA
	2.6 Finalise the selection of re-use components 2.7 Document selection, evaluation and decision processes, as part of the parent project design documentation
3. Incorporate the re-use components	3.1 Configure the development environment to include re-use components during the build process 3.2 Construct test programs or use provided example programs, to become familiar with re-use components, in preparation for incorporation into the parent project 3.3 Add re-use components to the parent project incrementally 3.4 Resolve re-use component dependencies 3.5 Assemble and test the parent project, with a focus on the functionality provided by the re-use components

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
Writing	2.7	Displays a knowledge of structure and layout, employing a broad vocabulary, grammatical structure, and the conventions appropriate to text when preparing documentation
Numeracy	2.3	Selects from, and applies, an expanding range of mathematics and problem-solving, when evaluating costs
Get the work done	1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5	- Uses systematic analytical processes in complex non-routine situations, setting goals, gathering relevant information and identifying, and evaluating, options against the agreed criteria - Uses analytical processes to decide on a course of action, establishing the criteria for deciding between options - Utilises a broad range of features within applications to improve personal productivity, optimising software functions - Understands the key principles and concepts underpinning the design, and operation, of digital systems and tools, and applies these to troubleshoot technology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTPRG413 Use a library or pre-existing components	ICAPRG413A Use a library or pre-existing components	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 ICTPRG413 Use a library or pre-existing components

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Performance Evidence

Evidence of the ability to:

- identify, evaluate, and select the appropriate components that may be re-used
- modify and integrate the re-used components into a project
- document the selection and evaluation processes
- test the functionality of the re-used components.

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:

- define and prepare the contract's specifications
- outline, and apply, current industry development and design methodologies
- describe domain modelling
- recognise and apply generic specification
- define the content and structure of libraries
- select and apply the techniques for metrics collection
- recognise patterns, frameworks and idioms
- identify and apply repository tools.

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:

- the software development environment

- a reuse library
- the technical requirements.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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