



Australian Government

ICTPRG520 Validate an application design against specifications

Release: 1

ICTPRG520 Validate an application design against specifications

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 check a software application design against the specifications, and to apply validation techniques across the system's life cycle.

It applies to individuals employed in the area of software development who are responsible for verifying and validating software design specifications. They may be software project managers, testers, software engineers, system analysts or software developers.

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. Evaluate the software requirement specifications	1.1 Review the software requirement specifications document prior to design, to ensure that it is complete and correct 1.2 Validate the software requirement specifications document
2. Create a proof of concept prototype	2.1 Use rapid application development tools (RAD) to create a prototype system 2.2 Present the prototype system for demonstration to the appropriate person 2.3 Validate the proof of concept
3. Evaluate the software	3.1 Determine if the design is complete, accurate, consistent and

ELEMENT	PERFORMANCE CRITERIA
design	feasible 3.2 Validate the software design document 3.3 Validate the database structure and its elements 3.4 Validate the user interface (UI) 3.5 Review the software risk analysis
4. Evaluate the source code	4.1 Validate the consistency between the code and the software design document 4.2 Validate logical structure and syntax, using static analysis tools
5. Evaluate the testing requirements	5.1 Review and validate the test plans 5.2 Review and validate the test cases
6. Document the validation	6.1 Document the results of the validation exercise 6.2 Recommend the current software design, or itemise the required alterations 6.3 Submit the report to the appropriate person for action

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
Reading	1.1	Interprets and critically analyses complex software-requirement specifications
Writing	6.1	Prepares documents using required structure, layout, and conventions
Interact with others	2.2, 6.3	Takes audience, purpose and contextual factors into account, when making decisions about what to communicate, with whom, why, and how
Get the work done	All	- Sequences and schedules complex activities, monitors implementation and manages relevant communication - Takes responsibility for decisions about when, and how, to complete tasks and coordinate with others - Uses analytical processes to decide on a course of action, establishing the criteria for deciding between options, and evaluating options against the criteria

		Understands the key principles and concepts underpinning the design, and operation, of digital systems and tools
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTPRG520 Validate an application design against specifications	ICAPRG520A Validate an application design against specifications	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 ICTPRG520 Validate an application design against specifications

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Performance Evidence

Evidence of the ability to:

- interpret and check software requirement specifications documents
- use rapid application development (RAD) tools to create and present a validated proof of concept prototype
- validate the software design, source code and testing requirements and document the results
- report on results of validation, including recommended actions.

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:

- explain the database design and implementation
- describe business and technical modelling using UML tools at intermediate level
- outline current software development methodologies
- describe, in detail, the system development life cycle (SDLC)
- explain object-oriented programming
- describe open-source development tools
- describe software-testing techniques.

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:

- tools to create prototype systems
- static analysis tools
- test plan and test cases.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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