



Australian Government

ICTPRG546 Validate application designs against specifications

Release: 1

ICTPRG546 Validate application designs against specifications

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to check software application designs against specifications and to apply validation techniques across the system's life cycle.

It applies to who work in the area of software development, including software project managers, testers, software engineers, system analysts and software developers, and are responsible for verifying and validating software design specifications.

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 software requirement specifications	1.1 Identify existing software specifications from organisational documents 1.2 Evaluate existing software against requirements and determine and document alignment 1.3 Validate software requirement specifications document with required personnel
2. Create proof of concept prototype	2.1 Create prototype system using rapid application development tools (RAD) according to specifications 2.2 Present and demonstrate prototype system to required personnel 2.3 Seek and respond to presentation feedback from required personnel

ELEMENT	PERFORMANCE CRITERIA
	2.4 Validate the proof of concept according to organisational policies and procedures
3. Evaluate software design	3.1 Determine design completeness, accuracy and consistency according to proof of concept prototype 3.2 Validate software design document according to organisational policies and procedures 3.3 Validate database structure, elements and user interface 3.4 Validate code and software consistency according to design document
4. Evaluate the testing requirements	4.1 Review and validate test plans and cases according to organisational requirements 4.2 Document review and validation outcomes 4.3 Submit documentation to required personnel and seek and respond to feedback

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Numeracy	Uses mathematical formulae to calculate required equipment, undertake measurements and determine response times
Oral communication	Articulates information and requirements, using effective communication techniques and industry standard technical language intended for audience and environment
Reading	Interprets and critically analyses complex software-requirement specifications
Writing	Prepares complex workplace documentation detailing processes and outcomes using required structure, layout and technical programming language
Planning and organising	Takes audience, purpose and contextual factors into account, when making decisions about what to communicate, with whom, why, and how
Problem solving	- 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,

SKILL	DESCRIPTION
	establishing the criteria for deciding between options, and evaluating options against the criteria
Self-management	• Takes full responsibility for identifying relevant organisational protocols and requirement
Technology	• Understands the key principles and concepts underpinning the design, and operation, of digital systems and tools

Unit Mapping Information

Supersedes and is equivalent to ICTPRG520 Validate an application design against specifications.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTPRG546 Validate application designs against specifications

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- interpret software specifications and validate software design, source code and testing requirements on at least one occasion.

In the course of the above, the candidate must:

- document processes and outcomes.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- database design and implementation relevant to validating application designs
- business and technical modelling using UML tools at intermediate level
- industry standard software development methodologies applicable to validating application designs
- system development life cycle (SDLC)
- language used in object-oriented programming
- open-source development tools
- software-testing techniques relevant to validating application designs.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- tools to create prototype systems
- static analysis tools

- test plan and test cases.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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