



Australian Government

ICTPRG557 Develop applications using agile methods

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with the Information and Communications Technology Training Package Version 8.0. Supersedes and is equivalent to ICTPRG509 Build using rapid application development. Updated title to better reflect unit scope and current industry processes.

Application

This unit describes the skills and knowledge required to lead the rapid application development (RAD) process by analysing and adopting agile methods.

The unit applies to individuals who may work in programming roles and may be responsible for developing applications, using a range of agile information and communications technology (ICT) skills and knowledge.

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. Determine application development requirements	1.1 Confirm work brief and tasks according to organisational policies and procedures 1.2 Develop prioritised plan using series of recursive and iterative stages of build according to application development requirements 1.3 Identify and formally allocate prioritised responsibilities across required personnel 1.4 Plan and document endorsement of reviews, administration

ELEMENT	PERFORMANCE CRITERIA
	schedules, and development milestones
2. Design and create applications	2.1 Configure application software and hardware according to work brief and prioritised plan 2.2 Coordinate initial ideation sprint according to work brief 2.3 Develop ideas generated in initial ideation sprint in consultation with required personnel 2.4 Determine required application development and web services 2.5 Configure applications according to work brief 2.6 Conduct quality assurance (QA) testing and seek feedback from required personnel 2.7 Identify and rectify bugs and issues according to organisational policies and procedures
3. Deliver applications	3.1 Seek and implement feedback from required personnel 3.2 Develop and distribute application delivery instructions to users 3.3 Save and secure application according to organisational policies and procedures 3.4 Store application in required location according to organisational policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	• Interprets and analyses complex technical documents
Writing	• Documents technical processes and completes workplace documents, in a style and form appropriate to the audience
Oral communication	• Liaises with users, and manages changes in design by collaborating with different stakeholders in the development process
Problem solving	• Identifies technical and conceptual issues and applies analytical processes in order to resolve them • Uses analytical and lateral thinking to review practices and to suggest improvements

Unit Mapping Information

Supersedes and is equivalent to ICTPRG509 Build using rapid application development.

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 ICTPRG557 Develop applications using agile methods

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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:

- develop at least two different applications using agile methods.

In the course of the above, the candidate must:

- design applications and develop high quality codes
- provide quality assurance (QA) testing and monitoring during specified timelines
- demonstrate use of code optimisers using agile techniques
- accurately document completed work
- apply required organisational policies and procedures.

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:

- functions, features and components of agile rapid application development (RAD), including:
 - ideation sprints
 - web services
- purpose of QA practices required for agile RAD
- implications of agile methods used to develop applications on organisational considerations, including:
 - product cost

- product quality
- functions and features of industry-accepted prototyping and application design tools, including computer-aided software engineering (CASE) tools
- industry-recognised programming languages used in agile application development, including:
 - JavaScript
 - C++
 - C#
 - Python
- iterative and agile application development methodologies
- organisational formats for documentation
- organisational policies and procedures and legislative requirements relating to work tasks.

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:

- industry-accepted application design tools, code generator and prototyping software and tools
- detailed user requirements, application model and scope details
- opportunities for interaction with others
- work brief and organisational policies and procedures required to demonstrate the performance evidence.

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

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