



Australian Government

ICTPRG510 Maintain custom software

Release: 1

ICTPRG510 Maintain custom software

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 maintain software so that it continues to meet client user requirements.

It applies to individuals who may work as programmers who are required to maintain existing software.

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 the software fault to be corrected	1.1 Collect and review the software fault details from sources 1.2 Obtain technical data to assist in identifying the problem 1.3 Clarify nature of the problem with appropriate person where necessary
2. Identify and isolate the fault	2.1 Review program documentation for specific modules in order to pinpoint problem areas 2.2 Review the source code for logic errors 2.3 Read manuals, help files and 'read me files' to determine if there is a known fix 2.4 Undertake additional testing to identify or duplicate fault

ELEMENT	PERFORMANCE CRITERIA
	2.5 Escalate the difficult faults that cannot be identified
3. Design a fix for the fault	3.1 Ensure that the requirements needed to fix the fault are understood by the client 3.2 Consider alternative options and choose the most effective solution 3.3 Consider the possible impact of the fix on other parts of the system 3.4 Document the changes according to the organisational guidelines
4. Carry out the fix to the software	4.1 Identify, and obtain, access to the appropriate software development tools, source code, and libraries 4.2 Construct the appropriate code to correct the fault, according to organisational and programming standards 4.3 Compile, or regenerate, the code for changed programs and the associated modules 4.4 Correct, and resubmit, the code until error free 4.5 Document the changes, according to organisational and programming standards
5. Test the fix and associated system areas	5.1 Check logic to ensure that it works with test data, corrects original fault, and does not cause problems elsewhere 5.2 Request users to perform acceptance testing and record outcomes
6. Hand over to systems operations area	6.1 Update the documentation to reflect all the changes made 6.2 Confirm acceptance by systems operations and arrange for sign-off, according to procedures

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, 1.2, 2.1, 2.2, 2.3	Analyses and interprets complex technical documents for specific information

Writing	3.4, 4.5, 5.2, 6.1	Completes workplace documentation using a tone and format appropriate to the end audience
Oral communication	1.3	Articulates issues in a clear and succinct manner using language appropriate to the audience
Navigate the world of work	4.2, 4.5, 6.2	Takes personal responsibility for following explicit and implicit policies, procedures and standards
Interact with others	1.3, 2.5, 3.1, 5.2, 6.2	Liaises with various stakeholders and negotiates mutually agreeable outcomes
Get the work done	2.4, 3.2, 3.3, 4.1, 4.2, 4.3, 4.4, 5.1, 6.2	- Identifies technical or conceptual issues, and applies analytical processes to resolve issues, with consideration of the possible impacts of various solutions - Uses a range of digital tools and sophisticated techniques to meet the desired outcomes - Takes responsibility for planning, sequencing and prioritising tasks to achieve deadlines

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTPRG510 Maintain custom software	ICAPRG510A Maintain custom software	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 ICTPRG510 Maintain custom software

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Performance Evidence

Evidence of the ability to:

- effectively maintain custom software
- apply a fix that works
- deploy a possible range of solutions to produce the same results.

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 concepts relating to analysing a system performance compared with the system's current functionality
- describe the processes and procedures relating to testing software systems
- describe current industry-accepted hardware and software products, as they relate to system maintenance
- specify the programming code required for the project
- describe the program documentation required
- describe the impact of changes on applications and systems
- identify and summarise the programming standards relating to custom software.

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 fault logs, and help-desk reports

- software development tools, documentation and environment
- source code and libraries
- the appropriate learning and assessment support.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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