



Australian Government

Department of Education, Employment and Workplace Relations

ICAPRG512A Prepare for the build phase of an IT system

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to prepare the development environment for the build phase and actual coding of the IT system.

Application of the Unit

This unit applies to individuals in software development environments who are required to organise documents, environments and tools for the build phase of the software development.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

1. Identify best development platform for project	1.1 Identify requirements of the development platform using the detailed technical specifications 1.2 Match the technical specification of the development platform with the technical specification of the project and quality standards
2. Identify best development tools for project	2.1 Identify functional requirements for development tools using the detailed technical specifications and other program documentation 2.2 Evaluate development tools for match with requirements and document evaluation outcomes 2.3 Select appropriate development tools
3. Prepare development environment	3.1 Obtain components for development platform, development tools and required hardware 3.2 Install, configure and test development platform and tools 3.3 Document the configuration of the development platform

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify, analyse and evaluate a range of solutions
- literacy skills to:
 - read and correctly interpret technical design documentation
 - write quality-related software documentation
- planning and organisational skills to complete the preparation tasks according to project timescales
- research skills to identify best development tools for project
- technical skills to install, configure and test a variety of development tools and platforms.

Required knowledge

- client business domain
- current industry-accepted coding methods and standards in a recognised language and database management system (DBMS) modelling techniques
- processes and techniques related to software and database design, architectures and their technical requirements
- quality assurance practices.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • meet technical requirements by successfully preparing the development environment.
Context of and specific resources for assessment	Assessment must ensure access to: • design specification • software requirement specifications • system requirements • technical specifications • version control standards • appropriate learning and assessment support when required • modified equipment for people with special needs.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • evaluation of candidate's completed development environment • review of candidate's documented configuration • verbal or written questioning to assess candidate's knowledge of software development environments.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Requirements may relate to:	• application • business • database • network • people in the organisation • platform • system.
Development platform may include:	• computer language used • development methodology • development tools • operating systems • target environments • version control systems.
Technical specification may include:	• system functionality • technical requirements • user problem statement.
Quality standards include:	• AS3925.1-1994 Software quality assurance - plans • AS4042-1992 Software configuration management plans • AS4043-1992 Software configuration management • AS/NZS 14102:1998 Information technology - guideline for evaluation and selection of CASE tools • AS/NZS4258:1994 Software user documentation process • AS/NZS ISO/IEC 12207:1997 Information technology - Software life cycle processes Note: International and Australian standards are updated and changed on a regular basis. It is therefore important to check the Standards Australia website on a regular basis for new standards.
Program documentation may include:	• architecture documentation • code comments • design documents • in-code documentation • internal module documentation • release documents • requirement documents

	• test documents • user manuals.
Development tools may include:	• computer-aided software engineering (CASE) tools • fourth-generation language • program generator • screen generator.
Components may include:	• CD and DVD drives • central processing unit (CPU) • complementary metal oxide semiconductor (CMOS) battery • CPU upgrades • drives • fax or modem cards • interface cards • motherboards • random access memory (RAM) upgrades.
Hardware may include:	• modems and other connectivity devices, such as asymmetric digital subscriber line (ADSL) modems • networks • personal computers • remote sites • servers • workstations.

Unit Sector(s)

Programming and software development