



Australian Government

ICTPRG524 Develop high-level object-oriented class specifications

Release: 1

ICTPRG524 Develop high-level object-oriented class 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 analyse requirements and produce a set of high-level object-oriented class specifications.

It applies to individuals who are required to develop object designs as part of the systems design process.

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. Analyse the behaviour of objects	1.1 Analyse behaviour scenarios and the prepare documentation, according to standards 1.2 Identify classes, objects and abstract data types, according to requirements 1.3 Prepare class, object, module and process diagrams, according to specifications
2. Prepare a state model	2.1 Analyse data requirements and iterate data flows 2.2 Prepare state-transition diagrams, according to standards 2.3 Improve the abstract data types and specifications

ELEMENT	PERFORMANCE CRITERIA
3. Describe the roles and responsibilities of classes	3.1 Review the functional requirements, assign responsibilities and update class structures 3.2 Specify the interface and class communication requirements 3.3 Prepare the interaction diagrams, according to standards
4. Iterate and review the object model	4.1 Review the current object model, class functionality and data transformation 4.2 Identify and develop class relationships, priorities, and the inheritance hierarchy 4.3 Review the class-service requirements and initial test criteria 4.4 Identify object processes and reuse classes 4.5 Document the model and forward it to the appropriate person

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	1.3, 4.1, 4.2	Interprets, and analyses, complex technical documentation
Writing	1.1, 1.3, 2.2, 3.3, 4.5	- Accurately records and completes documentation according to organisational formats and protocols - Writes and edits documents to ensure accuracy and consistency of information, and clarity of meaning
Interact with others	4.5	Shares knowledge, information and experience openly, liaising with colleagues to achieve the best possible outcome
Get the work done	1.3, 3.1, 3.2, 4.1, 4.2, 4.3, 4.4	- Uses a range of digitally-based technologies to access, extract and share relevant information, in order to achieve the required outcomes - Identifies technical or conceptual issues, and applies analytical processes, to resolve these issues - Uses analytical and lateral thinking to review current practices, and to develop new or improved software or systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTPRG524 Develop high-level object-oriented class specifications	ICAPRG524A Develop high-level object-oriented class 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 ICTPRG524 Develop high-level object-oriented class specifications

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Performance Evidence

Evidence of the ability to:

- specify and model abstract data types
- specify the interface between classes and objects
- document the 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:

- outline configuration management
- outline current industry-accepted object-oriented methodologies
- outline current program development methodologies
- describe data modelling techniques
- describe object-oriented analysis tools
- describe quality assurance practices.

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 business, system and user requirement
- a unified modelling language (UML) modelling tool
- the appropriate learning and assessment support, when required.

Assessors must satisfy NVR/AQTF assessor requirements.

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