ICTPRG403 Develop data-driven applications

Release: 1

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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 create data-driven applications that access data from a range of sources, such as databases, object data sources or eXtensible markup language (XML).

It applies to individuals who may work as programmers or database application developers and who are responsible for data-access coding.

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
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Select data-access layer (DAL)	1.1 Review function of DAL in multi-layer application model 1.2 Determine data-access application programming interface (API) for connecting to various data sources
2. Establish connection with data source	2.1 Create and manage connection strings 2.2 Connect to data source by using different data providers 2.3 Create code to handle connection exceptions
3. Execute commands and return results from data source	3.1 Query data from data source 3.2 Retrieve data from data source as result sets

ELEMENT	PERFORMANCE CRITERIA
	3.3 Manage result sets
	3.4 Manage exceptions when retrieving data
4. Modify data in data source	4.1 Insert, update or delete data
	4.2 Manage data integrity
	4.3 Manage exceptions when modifying data
5. Manage disconnected data	5.1 Research disconnected data management strategy
	5.2 Ensure that application can deal with disconnected data
6. Document data-access layer	6.1 Document code
	6.2 Document database connectivity

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	1.2, 3.1, 5.1	• Interprets complex technical documents to ensure outcomes are met
Writing	2.3, 3.1, 4.1, 4.3, 6.1, 6.2	• Completes workplace documentation accurately and in an appropriate format
Get the work done	1.1, 1.2, 2.1, 2.2, 2.3, 3.1, 3.3, 3.4, 4.1, 4.2, 4.3, 5.1, 5.2	• Uses digitally based technologies and systems to design and create complex models and codes • Identifies technical or conceptual issues and applies analytical processes to resolve these issues • Recognises opportunities to investigate potential new techniques to access data from various resources

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTPRG403 Develop data-driven applications	ICAPRG403A Develop data-driven applications	Updated to meet Standards for Training Packages. Minor change to PC 1.1 to align with AQF level.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2