



**Australian Government**

# **ICTPRG432 Develop data-driven applications**

**Release: 1**

## ICTPRG432 Develop data-driven applications

### Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

### Application

This unit describes the skills and knowledge required to create data-driven applications that access data from a range of sources, including databases, object data sources and extensible mark-up language (XML).

It applies to those who 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
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish task requirements and select data-access layer (DAL)	1.1 Identify data and application requirements according to organisational procedures 1.2 Review function of required DAL in multi-layer application model 1.3 Determine data-access application programming interface (API) according to task requirements
2. Establish connection with data source	2.1 Create and manage connection strings according to task requirements 2.2 Connect data source using different data providers according to organisational procedures 2.3 Handle connection exceptions using code
3. Execute commands and return	3.1 Query data from data source according to task

results from data source	requirements 3.2 Retrieve and manage results sets from data source 3.3 Manage exceptions when retrieving data
4. Modify and manage data in data source	4.1 Insert, update and delete data according to task requirements 4.2 Confirm data integrity 4.3 Manage exceptions when modifying data 4.4 Research disconnected data management strategy 4.5 Confirm application can manage disconnected data according to organisational procedures 4.6 Document code and database connectivity according to organisational 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	<ul style="list-style-type: none"> <li>Interprets complex technical documents and confirms outcomes are met</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Prepares documentation outlining changes according to organisational requirements</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Identifies opportunities to investigate potential new techniques and accesses data from various resources</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>Identifies technical and conceptual issues and applies analytical processes in resolving issues</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Designs and creates complex models and codes using digitally based technologies and systems</li> </ul>

## Unit Mapping Information

Supersedes and is equivalent to ICTPRG403 Develop data-driven applications.

## Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>