



Australian Government

ICTDBS507 Integrate databases with websites

Release: 1

ICTDBS507 Integrate databases with websites

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 integrate a database with a website.

It applies to those employed as web software and database developers and responsible for creating data-driven web applications.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Database

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.Prepare to connect database	1.1 Determine organisational and user input database data requirements 1.2 Identify technical upgrades and requirements 1.3 Determine and document database integration plan according to organisational requirements 1.4 Submit documentation to required personnel and seek and respond to feedback
2. Connect to the database	2.1 Setup database credentials and establish database connection 2.2 Connect to database from web application using web development language 2.3 Transfer data according to database integration plan 2.4 Test database connection according to organisation and technical requirements

ELEMENT	PERFORMANCE CRITERIA
3. Retrieve and display data	3.1 Retrieve data and use structured query language (SQL) 3.2 Display data using required control 3.3 Format data according to organisational requirements
4. Update database data	4.1 Update existing user input data 4.2 Insert data in the database with user-supplied input 4.3 Identify and delete data stored in database 4.4 Validate data and check for errors

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Oral communication	• Articulates requirements and responsibilities clearly and distinctively, using industry standard technical language intended for audience and environment
Reading	• Interprets textual information from the sources in order to identify relevant and key information
Writing	• Writes and edits code and technical data in a logical manner using correct syntax and accuracy
Planning and organising	• Operates from a broad conceptual plan, developing the operational detail in stages, regularly reviewing priorities and performance during implementation, and identifying and addressing issues
Problem solving	• Uses systematic, analytical processes in complex, non-routine situations, setting goals, gathering relevant information, and identifying, and evaluating options against agreed criteria • Uses analytical processes to decide on a course of action, and establishes the criteria for deciding between different options
Self-management	• Takes full responsibility for identifying and considering relevant organisational protocols and requirements
Technology	• Identifies principles, concepts, language and practices associated with the digital world, and uses these to connect to a database from a web application, retrieving, displaying and updating data

Unit Mapping Information

Supersedes and is equivalent to ICTDBS504 Integrate database with a website.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTDBS507 Integrate databases with websites

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- integrate, access, connect and update a database on at least one occasion.

In the course of the above, the candidate must:

- retrieve and display web-based data on at least two different browsers.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- industry standard database structures
- industry standard internet technology for databases
- database programming control structures, object-oriented programming and database interfaces including:
 - structured query language (SQL)
 - NoSQL programming interfaces
- web programming concepts, including:
 - authentication and web security
 - hypertext transfer protocol (HTTP)
 - session management
 - principles of stateless programming.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- industry standard hardware and software required for database integration activities
- industry standard software packages
- organisational deliverables
- organisational policies and procedures that may impact on database integration activities
- web server
- database
- web development environment
- different browsers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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