



Australian Government

BSBITA411 Design and develop relational databases

Release: 1

BSBITA411 Design and develop relational databases

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to design and develop a multi-table relational database (including queries, forms and reports) to meet a defined need using existing data and available digital database applications/platforms.

It applies to individuals who may work independently or within an administrative support role, with the responsibility to develop and use databases to store and retrieve data using commercially available applications/platforms.

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

Unit Sector

Information and Communications Technology – IT Analysis and Design

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. Design database	1.1 Identify organisational and task requirements to confirm scope and functionality of database design, including data redundancy 1.2 Develop a logical data model to identify and classify data into types in accordance with organisational and task requirements 1.3 Select appropriate digital application/platform according to organisational and task requirements, available resources, and required scope and functionality of database 1.4 Create and document proposed database structure, and share with appropriate personnel in accordance with organisational policies and procedures

ELEMENT	PERFORMANCE CRITERIA
	1.5 Seek feedback on proposed database design from appropriate personnel
2. Develop database	2.1 Set field attributes according to data type and link databases by a common field in accordance with database application usage 2.2 Assign primary key to uniquely identify data 2.3 Assign foreign keys to establish associations between data, in accordance with organisational and task requirements 2.4 Use software functions and formulae to meet organisational and task requirements 2.5 Create password and access system according to organisational policies and procedures relating to data security 2.6 Access and use application help functions to overcome intermediate-level issues with database design and production, where required
3. Develop queries, forms and reports	3.1 Identify information output, database tables to be use and report layout, in accordance with task requirements 3.2 Identify data groupings, search and sort criteria, in accordance with task requirements 3.3 Run reports and queries to confirm that results and formulae produce required data 3.4 Modify reports to include or exclude additional requirements, where necessary
4. Test and finalise database	4.1 Populate database with sample dataset for testing, meeting organisational requirements for speed and accuracy 4.2 Assess and document effectiveness of data relationships, query forms and reports, assessing against organisational and task requirements 4.3 Document and address any errors in database design 4.4 Name and store database in accordance with organisational policies and procedures relating to data security, and exit the application without data loss or damage 4.5 Confirm database readiness with appropriate personnel

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	Comprehends the main messages in texts of varying complexity
Writing	- Uses basic models to produce a range of text types with formatting and font chosen appropriate to database design - Uses technical information and structure appropriate to the requirements of the audience and purpose
Oral Communication	Confirms requirements using industry-specific language
Numeracy	Extracts, interprets and comprehends routine formulae and digital application functions to establish data relationships
Navigate the world of work	Adheres to organisational policies and procedures relevant to own role
Get the work done	- Develops plans to manage relatively complex, non-routine tasks according to organisational requirements - Takes responsibility for the outcomes of routine decisions related directly to own role - Understands the purposes, specific functions and key features of common digital systems and tools and operates them effectively to design, develop and test database functions - Recognises and takes responsibility for addressing predictable database problems in familiar work contexts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBITA411 Design and develop relational databases	BSBITA401 Design databases	Updates to title, elements, performance criteria and assessment requirements	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBITA411 Design and develop relational databases

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Performance Evidence

Evidence of the ability to:

- produce a relational database, containing a minimum of THREE tables, which uses queries, reports and forms
- adhere to organisational requirements when inputting, amending and storing data, including using correct naming conventions
- adhere closely to task requirements, including:
 - following designated timelines
 - achieving required speed and accuracy
- communicate with relevant personnel to check database design against requirements
- distribute reports to appropriate personnel in appropriate format.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role.

- Key features of advanced functions of available database applications
- Key features of organisational policies relating to transfer and security of data
- Key features of organisational requirements relating to data entry, storage and presentation.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the information and communications technology – IT analysis and design field of work and include access to:

- office equipment and resources – including business technology
- workplace documentation and resources
- industry database applications/platforms
- sample data.

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

Links

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