

40039**Create a database solution for an organisation**

Kaupae Level	5
Whiwhinga Credit	15
Whāinga Purpose	<p>This skill standard is for people who want to learn how to create a database solution in organisational contexts.</p> <p>It contributes to a broad understanding of core concepts and practical skills in Information Technology (IT) and is for those employed or seeking employment in technical support roles such as computer technicians and help desk and technical support officers.</p> <p>It can be used in programmes leading to the New Zealand Diploma in Information Technology Technical Support (Level 5) [Ref: 2596].</p>

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Plan, design, and implement a database that meets organisational requirements.	a. Use data modelling tools and techniques to plan and design a database implementing an organisation's business requirements.
	b. Implement design concepts, best practices, and tools, to administer a database.
2. Troubleshoot, maintain and secure a database to meet organisational requirements.	a. Identify, formulate, and test a solution to resolve database-related issues.
	b. Implement backup and recovery techniques to maintain a database.
	c. Apply authentication, authorisation, and encryption methods to develop a secure database.
3. Evaluate and optimise database performance using appropriate tools and techniques.	a. Apply database optimisation techniques to improve database performance.
	b. Use appropriate database optimisation tools to improve database performance.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria*Assessment specifications:*

The assessment must take place in a realistic practical setting which incorporates industry standard technologies relevant to current practice.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

- Database planning, design and implementation
- Database management system (DBMS) installation and configuration
- Database administration tasks and procedures
- Database maintenance and database security
- Structured query language (SQL) commands
- Data modelling
- Database optimisation including the use of database optimisation tools e.g., SQL Server Profiler, Index Advisor, MySQL Query Analyser, MySQL Workbench).
- Expected standards of behaviour for IT practitioners in New Zealand as outlined in the IT Professionals New Zealand Code of Ethics.

Rauemi | Resources

- The IT Professionals New Zealand Code of Ethics is available at <https://itp.nz/practice-guidelines>.
- Relevant legislation, accessible at <https://legislation.govt.nz>, includes but is not limited to:
 - Copyright Act 1994
 - Copyright (New Technologies) Amendment Act 2008
 - Electronic Transactions Act 2002
 - Harmful Digital Communications Act 2015
 - Health and Safety at Work Act 2015
 - Privacy Act 2020
 - Unsolicited Electronic Messages Act 2007
 - Any subsequent amendments.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Toi Mai Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Computing and Information Technology > Computing > Generic Computing
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0099

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	26 April 2024	N/A
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	31 December 2028		

Please contact Toi Mai Workforce Development Council at qualifications@toimai.nz to suggest changes to the content of this skill standard.