

40044**Develop a software 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 develop software solutions 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. Apply problem-solving skills in specific IT contexts to develop a simple application.	a. Apply mathematical and logical techniques to solve computational problems.
	b. Develop a flowchart, pseudo code, and algorithm to develop a solution for an identified problem within an organisation.
	c. Apply problem-solving skills in developing the software solution using procedural programming and Object-Oriented Programming (OOP) concepts.
2. Create an application using an appropriate programming language with supporting technical documentation.	a. Apply software development life cycle (SDLC) concepts to plan, analyse, design, test, implement and deploy application.
	b. Use an appropriate programming language to develop an application and utilise software development tools.
	c. Create technical documentation outlining the application requirements, concepts, design, and code.
	d. Create a testing document that outlines the software functions and the selected testing approach.

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.

For the purposes of this standard, a simple software solution or application refers to a minimum viable product.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

- Flowchart, pseudocode, and algorithms
- Programming Principles
- Object-Oriented Programming (OOP) in software development
- Procedural programming
- Software development tools, including IDE and version control
- Software documentation
- Testing documentation
- Software development methodologies, including Agile, Scrum, and RAD
- 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
 - And 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 > Software Development - Programming
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.