000007   Develop a software solution for an organisation

Kaupae | Level	5
Whiwhinga | Credit	15
Whāinga | Purpose	This skill standard is for people who want to learn how to develop software solutions in organisational contexts. It is for computer technicians, help desk and technical support officers, and anyone else employed in roles that involve Information Technology (IT) technical support. It can be used in the New Zealand Diploma in Information Technology Technical Support (Level 5) [ref. 2596]

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

Hua o te ako | Learning outcomes	Paearu aromatawai | Assessment criteria
1. Demonstrate problem-solving skills in specific IT contexts to develop a simple software solution	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 OOP concepts.
2. Create applications using an appropriate programming language with supporting technical documentation.	a. Apply SDLC concepts to plan, analyse, design, test, implement and deploy software solutions.
	b. Apply programming knowledge in developing an application and utilise software development tools.
3. Create technical documentation for applications	a. Create code documentation outlining the requirements, concepts, design, and code
	b. 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.

To complete this standard, you must observe expected standards of behaviour for IT practitioners in New Zealand. The IT Professionals New Zealand Code of Ethics provides a guideline for these behaviours

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

Rauemi | Resources

- The IT Professionals New Zealand Code of Ethics is available at https://itp.nz/practice-guidelines.

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
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	<type here>	[dd mm yyyy]	[dd mm yyyy]
Arotakenga | Review	<type here>	[dd mm yyyy]	[dd mm yyyy]
Kōrero whakakapinga | Replacement information	<type here>		
Rā arotake | Planned review date	[dd mm yyyy]		

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