

Title	Create a simple computer program to meet a set brief		
Level	2	Credits	3

Purpose	People credited with this unit standard are able to: plan a simple computer program to meet the specifications of a set brief; create draft code; and evaluate the program against the brief for fitness for purpose.
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Classification	Computing > Software Development - Programming
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Available grade	Achieved
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Entry information	
Recommended skills and knowledge	Unit 18739, <i>Create and use simple command sequences in a computer language</i> , or demonstrate equivalent knowledge and skills.

Explanatory notes

- 1 For the purposes of this unit standard, the level of programming skill required is not intended to indicate programming ability at professional or commercial levels.
- 2 For the purposes of this unit standard, the user of the program created is a non-skilled user who will not be required to read the source code. Where possible, for moderation purposes, the programme should be saved as an executable file. Where this is not possible an assessor attestation clearly indicating how the assessment judgement was made, along with any supporting evidence, must be supplied.
- 3 A *brief* is defined as a clear description of both the desirable outcomes sought and the constraints to be met by the solution. It contains specifications against which the success or otherwise of the programme can be evaluated. The brief for the program will be supplied by the candidate's tutor, teacher or assessor.
- 4 A *plan* outlines how the requirements of the brief will be realised. For this unit standard, the plan may be informal, and may be modified during the task and changes justified. It may be appropriate to produce some evidence of it during task completion rather than prior to starting the task or project. Evidence of planning may be oral, written, and/or graphic.
- 5 Definition
Internal documentation means documentation included as comments within the programme code, rather than documentation created separately.

- 6 Legislation relevant to this unit standard includes but is not limited to the:
 Copyright Act 1994
 Copyright (New Technologies) Amendment Act 2008
 Harmful Digital Communications Act 2015
 Health and Safety at Work Act 2015
 Privacy Act 1993
 and any subsequent amendments.
 Current legislation and regulations can be accessed at <http://legislation.govt.nz>.
- 7 References
ACC5637 Guidelines for Using Computers - Preventing and managing discomfort, pain and injury. Accident Compensation Corporation - Department of Labour, 2010; available from Worksafe New Zealand, at [http://www.business.govt.nz/worksafe/information-guidance-all-guidance-items/guidelines-for-using-computers](http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/guidelines-for-using-computers).
 Parsons, D and Haden, P; *Parson's programming puzzles*, Otago Polytechnic, Dunedin; Proceeding ACE '06 Proceedings of the 8th Australasian Conference on Computing Education - Volume 52, Pages 157-163 available at <http://dl.acm.org/citation.cfm?id=1151890>
- 8 An assessment resource to support computing unit standards (levels 1 to 4) can be found on the NZQA website at www.nzqa.govt.nz/asm.
 'The Computing Process - a clarification document' contains further information and can be found on the [NZQA website](#).

Outcomes and evidence requirements

Outcome 1

Plan a simple computer program to meet the specifications of a set brief.

Evidence requirements

- 1.1 A plan is developed to meet the specifications of the given brief.
- Range milestones, resources, stakeholder consultations, testing procedures.
- 1.2 The plan outlines a logical design or model to be used as a basis to code the program.
- Range the design or model includes but is not limited to – purpose, structure and specifications of the program.
 Specifications may include but are not limited to – computer language to be used, input and output requirements, outline of the proposed testing procedures.

Outcome 2

Create draft code.

Range may include but is not limited to – sequence, selection, repetition, conditional execution, variables, labels, procedures and functions.
A minimum of four structural elements are required.

Evidence requirements

- 2.1 The code is created in accordance with the plan.
- 2.2 Internal names are applied to all user-defined elements of the program code to facilitate understanding of the program.
- 2.3 The draft code is internally documented according to the requirements of the brief.

Range each section of code must contain sufficient comments to explain its purpose.

Outcome 3

Evaluate the program against the brief for fitness for purpose.

Evidence requirements

- 3.1 The program is tested for compliance with the brief and modified as required.
- 3.2 The evaluation verifies that the operation of the program realises the specifications set out in the brief.

Planned review date	31 December 2021
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 October 2002	31 December 2013
Revision	2	16 July 2004	31 December 2013
Review	3	22 May 2009	31 December 2013
Revision	4	18 February 2011	31 December 2015
Rollover and Revision	5	19 September 2013	31 December 2019
Review	6	19 January 2017	N/A

Consent and Moderation Requirements (CMR) reference	0226
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact NZQA National Qualifications Services nqs@nzqa.govt.nz if you wish to suggest changes to the content of this unit standard.