Title	**Use the main features and functions of a database application to create and test a database**		
Level	**2**	**Credits**	**3**

Purpose	People credited with this unit standard are able to use the main features and functions of a database application to create and test a database. This unit standard has been developed primarily for assessment as an option within programmes leading to the New Zealand Certificate in Computing (User Fundamentals) (Level 2) [Ref: 2591].

Classification	Computing > Generic Computing

Available grade	Achieved

Explanatory notes

1 Assessment, where applicable, will be conducted in and for the context of real or realistic situations and/or settings, and be relevant to current and/or emerging practice. The assessor may gather evidence over time from a range of scenarios rather than using one assessment where the learner has to demonstrate all of the required skills.

2 A *brief* for the database will be supplied to the learner, and unformatted data files may also be provided. It must clearly identify the outcomes required from the database, against which the success or otherwise of the database can be evaluated. The brief will include at least – the target users, the specification which includes the table fields and required attributes, layout requirements for input forms, output queries and reports, and a testing plan. The testing plan will be provided to the learner and include the functions and features that need to be tested (such as reports, queries input forms, formulas, validation), data integrity, and the expected outcome for each test. Planning is not required to be assessed as part of this standard however it is good practice to develop a simple conceptual layout design prior to beginning creation of the database.

3 Definitions

Conceptual design is a representation clearly indicative of the final product.

Data integrity procedures and practices refer to the maintenance of accurate and consistent data via procedures which control the input, update, and deletion of data, and verification of data correctness in the database.

Data type is the type of data stored in a field. Data types at this level must include text, date, and number fields.

Database application refers to a program that enables a user to create, store, modify, access and extract data from a repository commonly referred to as a database. The capabilities of the database required for this standard need only allow for single-table (flat file database), with single-user updates, typically installed on a PC as part of a productivity software package.

Good practice in this context refers to selecting and using the appropriate feature or function to enable correct use of the database, applying standard naming conventions to database objects, and ensuring data integrity by applying data input constraints (data validation techniques).

4 Techniques

The set of techniques to be applied in database software may include but are not limited to:

- creating flat file database structures, setting and modifying field properties including name, data type, size and format
- creating simple validation rules (such as format, field range, titles), entering, editing and deleting records
- creating queries, filters, forms and reports (can use wizards)
- using filters, queries and sorts to retrieve relevant information (can use wizards).

5 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
Unsolicited Electronic Messages Act 2007
and any subsequent amendments.
Current legislation and regulations can be accessed at http://legislation.govt.nz.

6 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.

Outcomes and evidence requirements

Outcome 1

Use the main features and functions of a database application to create and test a database.

Evidence requirements

1.1 User interface of a database application is navigated effectively according to good practice.

Range must include but not limited to – shortcuts, screen display options, finding help.

1.2 Main features and functions of a database application are used to create, format, edit, print, save and share data, using techniques and good practice in accordance with the given brief.

Range *create* includes – entering data, creating fields and validation rules, formulas, queries, simple forms and reports (may use wizards);
format includes – text and number formats;
edit includes but is not limited to – sort, move, copy, insert, delete, undo/redo, search and replace, data added, formulas amended, naming database components/objects;
print includes – headers, data records, selected records, hard or soft copy;
save and share includes – naming; saving (including as a new file, in logical structures, to local and shared folders, and/or to the cloud); managing data records.

1.3 A database is created with flat file (single-table) database structure, setting and modifying field properties in accordance with the given brief.

Range a minimum of four fields of three different data types must be specified, with input validation rules specified where appropriate; *field properties* include but are not limited to – data type, required, size (range), format.

1.4 Database records are sorted/filtered to meet the requirements of the given brief.

Range includes but is not limited to – alphabetic, numeric, date.

1.5 The database is tested for correct content, function and data integrity in accordance with the test plan specifications in the brief.

Range *data integrity and testing procedures* may include but are not limited to – checking the database queries, forms and reports display correctly; data accuracy for consistency with test plan.

Replacement information	This unit standard replaced unit standard 2786

Planned review date	31 December 2021

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 January 2017	N/A

Consent and Moderation Requirements (CMR) reference	0226

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.