ECDL / ICDL Using Databases
Syllabus Version 5.0

Purpose

This document details the syllabus for *ECDL / ICDL Using Databases*. The syllabus describes, through learning outcomes, the knowledge and skills that a candidate for *ECDL / ICDL Using Databases* should possess. The syllabus also provides the basis for the theory and practice-based test in this module.

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ECDL / ICDL Using Databases

This module sets out essential concepts and skills relating to understanding the concept of a database and demonstrating competence in using a database.

Module Goals

Successful candidates will be able to:

- Understand what a database is and how it is organized and operated.
- Create a simple database and view the database content in various modes.
- Create a table, define and modify fields and their properties; enter and edit data in a table.
- Sort and filter a table or form; create, modify and run queries to retrieve specific information from a database.
- Understand what a form is and create a form to enter, modify and delete records and data in records.
- Create routine reports and prepare outputs ready for distribution.

CATEGORY	SKILL SET	REF.	TASK ITEM
1 Understanding Databases	*1.1 Key Concepts*	1.1.1	Understand what a database is.
		1.1.2	Understand the difference between data and information.
		1.1.3	Understand how a database is organized in terms of tables, records and fields.
		1.1.4	Know some of the common uses of large-scale databases like: airline booking systems, government records, bank account records, hospital patient details.
	1.2 Database Organization	1.2.1	Understand that each table in a database should contain data related to a single subject type.
		1.2.2	Understand that each field in a table should contain only one element of data.
		1.2.3	Understand that field content is associated with an appropriate data type like: text, number, date/time, yes/no.

CATEGORY	SKILL SET	REF.	TASK ITEM
		1.2.4	Understand that fields have associated field properties like: field size, format, default value.
		1.2.5	Understand what a primary key is.
		1.2.6	Understand what an index is. Understand how it allows for faster data access.
	1.3 Relationships	1.3.1	Understand that the main purpose of relating tables in a database is to minimize duplication of data.
		1.3.2	Understand that a relationship is built by matching a unique field in one table with a field in another table.
		1.3.3	Understand the importance of maintaining the integrity of relationships between tables.
	1.4 Operation	1.4.1	Know that professional databases are designed and created by database specialists.
		1.4.2	Know that data entry, data maintenance and information retrieval are carried out by users.
		1.4.3	Know that a database administrator provides access to specific data for appropriate users.
		1.4.4	Know that the database administrator is responsible for recovery of a database after a crash or major errors.
2 Using the Application	*2.1 Working with Databases*	2.1.1	Open, close a database application.
		2.1.2	Open, close a database.
		2.1.3	Create a new database and save to a location on a drive.
		2.1.4	Display, hide built-in toolbars. Restore, minimize the ribbon.
		2.1.5	Use available Help functions.

CATEGORY	SKILL SET	REF.	TASK ITEM
	2.2 Common Tasks	2.2.1	Open, save and close a table, query, form, report.
		2.2.2	Switch between view modes in a table, query, form, report.
		2.2.3	Delete a table, query, form, report.
		2.2.4	Navigate between records in a table, query, form.
		2.2.5	Sort records in a table, form, query output in ascending, descending numeric, alphabetic order.
3 Tables	*3.1 Records*	3.1.1	Add, delete records in a table.
		3.1.2	Add, modify, delete data in a record.
	3.2 Design	3.2.1	Create and name a table and specify fields with their data types like: text, number, date/time, yes/no.
		3.2.2	Apply field property settings: field size, number format, date/time format, default value.
		3.2.3	Create a validation rule for number, date/time, currency.
		3.2.4	Understand consequences of changing data types, field properties in a table.
		3.2.5	Set a field as a primary key.
		3.2.6	Index a field (with, without duplicates allowed).
		3.2.7	Add a field to an existing table.
		3.2.8	Change width of columns in a table.
4 Retrieving Information	*4.1 Main Operations*	4.1.1	Use the search command for a specific word, number, date in a field.
		4.1.2	Apply a filter to a table, form.

CATEGORY	SKILL SET	REF.	TASK ITEM
		4.1.3	Remove the application of a filter from a table, form.
	4.2 Queries	4.2.1	Understand that a query is used to extract and analyse data.
		4.2.2	Create a named single table query using specific search criteria.
		4.2.3	Create a named two-table query using specific search criteria.
		4.2.4	Add criteria to a query using one or more of the following operators: = (Equal), <> (Not equal to), < (Less than), <= (Less than or equal to), > (Greater than), >= (Greater than or equal to).
		4.2.5	Add criteria to a query using one or more of the following logical operators: AND, OR, NOT.
		4.2.6	Use a wildcard in a query, * or %, ? or __.
		4.2.7	Edit a query: add, modify, remove criteria.
		4.2.8	Edit a query: add, remove, move, hide, unhide fields.
		4.2.9	Run a query.
5 Objects	*5.1 Forms*	5.1.1	Understand that a form is used to display and maintain records.
		5.1.2	Create and name a form.
		5.1.3	Use a form to insert new records.
		5.1.4	Use a form to delete records.
		5.1.5	Use a form to add, modify, delete data in a record.
		5.1.6	Add, modify text in headers, footers in a form.
6 Outputs	*6.1 Reports, Data Export*	6.1.1	Understand that a report is used to print selected information from a table or query.

CATEGORY	SKILL SET	REF.	TASK ITEM
		6.1.2	Create and name a report based on a table, query.
		6.1.3	Change arrangement of data fields and headings within a report layout.
		6.1.4	Present specific fields in a grouped report by sum, minimum, maximum, average, count, at appropriate break points.
		6.1.5	Add, modify text in headers, footers in a report.
		6.1.6	Export a table, query output in spreadsheet, text (.txt, .csv), XML format to a location on a drive.
	6.2 Printing	6.2.1	Change the orientation (portrait, landscape) of a table, form, query output, report. Change paper size.
		6.2.2	Print a page, selected record(s), complete table.
		6.2.3	Print all records using form layout, specific pages using form layout.
		6.2.4	Print the result of a query.
		6.2.5	Print specific page(s) in a report, print complete report.