

# DB DATA MANAGER

---

## INTRODUCTION

---

DB Data Manager is built using Microsoft Excel and allows data from database tables to be viewed, added and edited using Excel Worksheets. Database table schema details can also be viewed.

DB Data Manager is distributed in the hope that it will be useful for assisting with database systems administration and legacy application automation (e.g., for regression testing).

**Important:** All data changes are always the responsibility of the user(s) and must be checked thoroughly by the user(s), both before being applied to the database and after the databases updates have been completed. It is strongly recommended that data backups are taken before any data changes are applied.

DB Data Manager is free and open-source software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

DB Data Manager is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

The project files with source code can be found at [https://github.com/christyler80/DB\\_DataManager](https://github.com/christyler80/DB_DataManager).

DB Data Manager requires Microsoft Excel 2016 or later and supports SQL Server, SQLite, ODBC (32bit) and Microsoft Access.

Basic testing has been undertaken using the Northwind and Pubs databases running on [SQL Server](#), [SQLite](#), [MySQL/MariaDB](#) and [Microsoft Access](#).

Where possible, please use Northwind or Pubs database examples to report any errors and/or feature requests.

**Important:** At this time:

- PuttyDriver will only work with 32-bit versions of Microsoft Excel 2016 or later.
- Microsoft Excel 64-bit versions are not currently supported.
- 32-bit or 64-bit versions of Microsoft Windows 10 or Windows 11 operating system are supported.
- Most text and numeric field data types are supported.
- Binary data and other non-text or non-numeric field types are not supported.
- Data must be entered with correct formatting and numeric scale/precision (e.g., number of decimal places).
- DB Data Manager should work on Windows 7, but this has not been tested.
- Other operating systems (e.g., Apple, Linux) are not supported.

## FUTURE VERSIONS

---

Planned future enhancements for DB Data Manager include support for other DB servers (e.g., Oracle, Postgres), deeper database schema integration and equivalent VB.NET and C# programs.

Please provide feedback via GitHub and/or by contacting me using the details below.

Chris Tyler, October 2022

[chris@christyler.uk](mailto:chris@christyler.uk)

[www.christyler.uk](http://www.christyler.uk)

## GETTING STARTED

- Before using DB Data Manager, ensure that all required database connectivity software (e.g., 32-bit ODBC drivers for the target databases and servers) is installed and connections to the target database(s) are working correctly.
- Using an empty worksheet, confirm that Excel will connect to the target database(s), using Excel's own built in data tools.
- Download DB\_DataManager.xlsb workbook from [https://github.com/christyler80/DB\\_DataManager](https://github.com/christyler80/DB_DataManager) copy into a folder and rename if desired.
- Open the Excel workbook and ensure that Excel macros are enabled.
- The examples in this document show data from a Microsoft Access Northwind database running on the local machine.

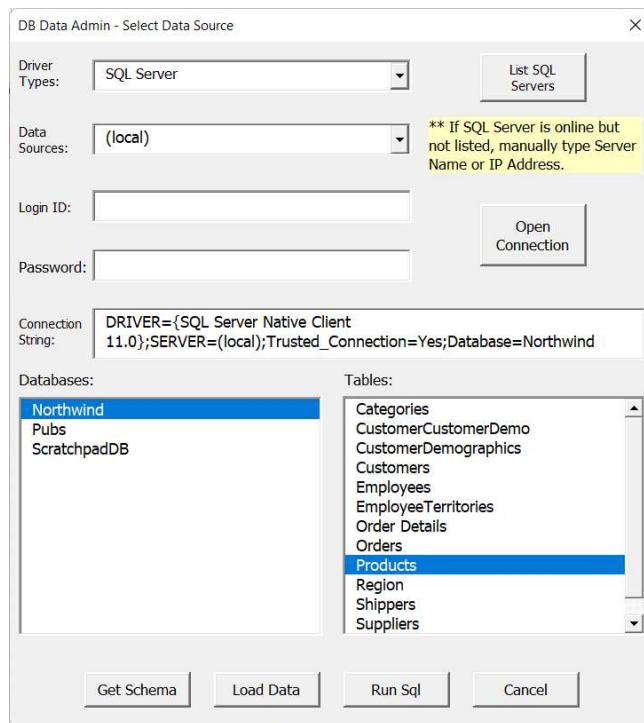
Supplier IDs

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Data Sources:	Microsoft Access	Provider:=Microsoft.Ace.Oledb.12.0; Data Source=C:\Development\DBDataManager\Northwind.accdb;			Data Source	Get Schema	Get Data	Check DB		Checks On	New Sheet			
2	Data Table:	Products			adWChar	adCurrency	adSmallInt	adInteger	adWChar		adBoolean	adSmallInt	adWChar		
3	adWChar	adInt	adBoolean	adWChar	adCurrency	adSmallInt	adInteger	adWChar		adBoolean	adSmallInt	adWChar	adWChar		
4	Primary Key	ID	auto increment	data	data	data	data	data	data	data not null	data	Minimum	Reorder Quantity	Category	Attachments
5	Supplier IDs	Product ID	Product Name	Description	Standard Cost	List Price	Reorder Level	Target Level	Quantity Per Unit	Discontinued					
6	4	1	NWTB-1	Northwind Traders Chai	£13.50	£18.00	10	40	10 boxes x 20 bags	FALSE	10	Beverages			
7	10	3	NWTCO-3	Northwind Traders Soya Milk	£7.50	£10.00	25	100	12 - 500 ml bottles	FALSE	25	Condiments			
8	10	4	NWTO-4	Northwind Traders Cajun Seasoning	£10.00	£20.00	10	40	12 - 6 oz jars	FALSE	10	Condiments			
9	10	5	NWTO-5	Northwind Traders Olive Oil	£16.01	£21.35	10	40	36 boxes	FALSE	10	Oil			
10	2-6	6	NWTP-6	Northwind Traders Raspberry Spread	£18.50	£25.00	25	100	12 - 8 oz jars	FALSE	25	Jams, Preserves			
11	2	7	NWDFN-7	Northwind Traders Dried Pears	£22.50	£30.00	10	40	12 - 1 lb pkgs	FALSE	10	Dried Fruit & Nuts			
12	8	8	NWDFN-8	Northwind Traders Dried Apricots	£30.00	£40.00	10	40	12 - 12 oz jars	FALSE	10	Dried Fruit & Nuts			
13	2-6	9	NWDFN-9	Northwind Traders Walnuts	£17.44	£22.50	10	40	12 - 16 oz pkgs	FALSE	10	Dried Fruit & Nuts			
14	6	17	NWFCV-17	Northwind Traders Fruit Cocktail	£29.25	£39.00	10	40	15 250 mL cans	FALSE	10	Canned Fruits & Vegetables			
15	1	19	NWTBM-19	Northwind Traders Chocolate Biscuits Mix	£6.90	£9.20	5	20	10 boxes x 12 pieces	FALSE	5	Baked Goods & Mixes			
16	2-6	20	NWTFP-6	Northwind Traders Marmalade	£60.75	£81.00	10	40	30 gift boxes	FALSE	10	Jams, Preserves			
17	1	21	NWTBM-21	Northwind Traders Scones	£7.50	£10.00	5	20	24 pkgs, x 4 pieces	FALSE	5	Baked Goods & Mixes			
18	4	34	NWTS-34	Northwind Traders Peppermint	£10.00	£15.00	15	60	12 - 4 oz bottles	FALSE	15	Beverages			
19	7	40	NWFCM-40	Northwind Traders Crab Meat	£13.80	£18.40	30	120	24 - 8 oz tins	FALSE	30	Canned Meat			
20	6	41	NWTS-41	Northwind Traders Clam Chowder	£7.24	£9.65	10	40	12 - 12 oz cans	FALSE	10	Soups			
21	3-4	43	NWTB-43	Northwind Traders Coffees	£34.50	£46.00	25	100	16 - 500 g tins	FALSE	25	Beverages			
22	10	48	NWTCF-48	Northwind Traders Chocolate	£9.56	£12.75	25	100	10 plgs	FALSE	25	Candy			
23	2	51	NWDFN-51	Northwind Traders Dried Apples	£95.75	£130.00	10	40	30 - 500 g pkgs	FALSE	10	Dried Fruit & Nuts			
24	1	52	NWTS-52	Northwind Traders Long Grain Rice	£5.50	£7.00	20	100	10 kg bags	FALSE	25	Grains			
25	1	56	NWTP-56	Northwind Traders Gnocchi	£28.50	£38.00	30	120	24 - 250 g pkgs	FALSE	30	Pasta			
26	1	57	NWTP-57	Northwind Traders Ravioli	£14.63	£19.50	20	80	24 - 250 g pkgs	FALSE	20	Pasta			
27	8	65	NWTS-65	Northwind Traders Hot Pepper Sauce	£15.79	£21.05	10	40	32 - 8 oz bottles	FALSE	10	Sauces			
28	8	66	NWTS-66	Northwind Traders Tomato Sauce	£12.75	£17.00	20	80	24 - 8 oz jars	FALSE	20	Sauces			
29	5	72	NWDFD-72	Northwind Traders Mozzarella	£5.50	£7.50	30	100	40 - 100 g pkgs	FALSE	10	Dairy Products			
30	2-6	74	NWFTC-74	Northwind Traders Almonds	£7.50	£10.00	5	20	5 kg pkgs	FALSE	5	Dried Fruit & Nuts			
31	10	77	NWTC-77	Northwind Traders Mustard	£9.75	£13.00	15	60	12 boxes	FALSE	15	Condiments			
32	2	80	NWDFN-80	Northwind Traders Dried Plums	£3.00	£3.60	60	75	1 lb bag	FALSE	25	Dried Fruit & Nuts			
33	3	81	NWTFB-81	Northwind Traders Green Tea	£20.00	£29.99	100	120	20 bags per box	FALSE	25	Beverages			
34	1	82	NWTS-82	Northwind Traders Tea	£2.00	£3.00	20	100	100 plgs	FALSE	25	Cereal			
35	9	83	NWTS-83	Northwind Traders Potato Chips	£0.50	£1.80	30	200		FALSE	5	Chips, Snacks			
36	1	85	NWTBM-85	Northwind Traders Brownie Mix	£9.00	£12.49	10	20	3 boxes	FALSE	5	Baked Goods & Mixes			
37	1	86	NWTBM-86	Northwind Traders Cake Mix	£10.50	£15.99	10	20	4 boxes	FALSE	5	Baked Goods & Mixes			
38	7	87	NWTFB-87	Northwind Traders Tea	£2.00	£4.00	20	50	100 count per box	FALSE	5	Beverages			
39	6	88	NWTS-88	Northwind Traders Years	£1.00	£1.30	10	40	15 250 mL cans	FALSE	10	Canned Fruits & Vegetables			
40	6	89	NWFCV-89	Northwind Traders Pineapples	£1.00	£1.50	10	40	15 250 mL cans	FALSE	10	Canned Fruits & Vegetables			
41	6	90	NWTCF-90	Northwind Traders Pineapple	£1.00	£1.80	10	40	15 250 mL cans	FALSE	10	Canned Fruits & Vegetables			
42	6	91	NWTCF-91	Northwind Traders Cherry Pie Filling	£1.00	£2.00	10	40	15 250 mL cans	FALSE	10	Canned Fruits & Vegetables			
43	6	92	NWTCF-92	Northwind Traders Green Beans	£1.00	£1.20	10	40	14.5 OZ	FALSE	10	Canned Fruit & Vegetables			
44	6	93	NWTFB-93	Northwind Traders Corn	£1.00	£1.20	10	40	14.5 OZ	FALSE	10	Canned Fruit & Vegetables			
45	6	94	NWTS-94	Northwind Traders Canned Corn	£1.00	£1.50	10	40	14.5 OZ	FALSE	10	Canned Fruit & Vegetables			
46	7	95	NWTCM-95	Northwind Traders Tuna Fish	£0.50	£2.00	30	50	5 oz	FALSE	10	Canned Meat			
47	7	96	NWTCM-96	Northwind Traders Smoked Salmon	£2.00	£4.00	30	50	5 oz	FALSE	10	Canned Meat			
48	1	97	NWTC-92	Northwind Traders Hot Cereal	£3.00	£5.00	50	200		FALSE	10	Cereal			
49	6	98	NWTS-98	Northwind Traders Vegetable Soup	£1.00	£1.89	100	200		FALSE	10	Soups			
50	6	99	NWTS-99	Northwind Traders Chicken Soup	£1.00	£1.95	100	200		FALSE	10	Soups			

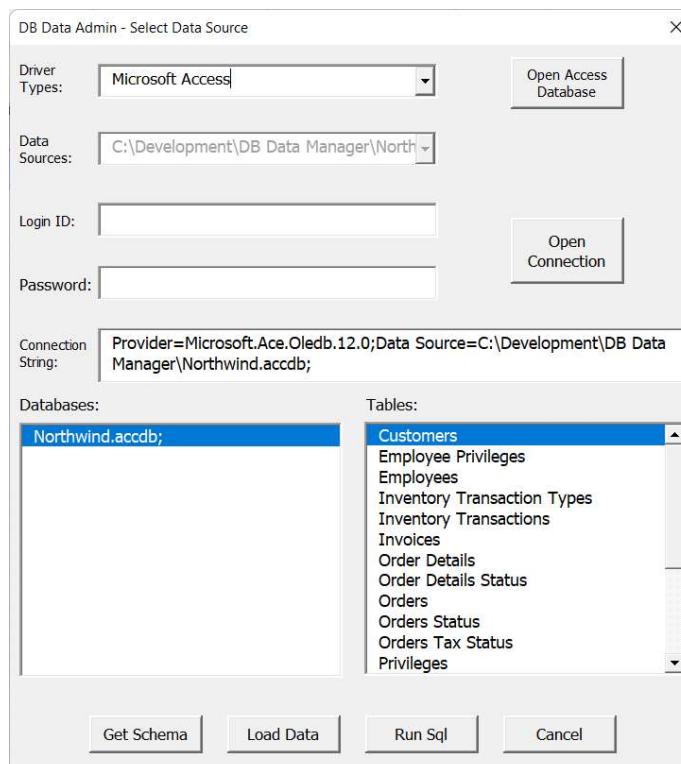
- Database connection details are shown in row 1.
- Table information including field names and data type details are shown in rows 2 to 5.
- This information in rows 1 to 5 is read-only and should not be changed or overwritten manually.
- Table data in row 6 and below can be changed using standard Excel functionality.
- Editing numeric and text data types is supported.
- Binary data (e.g., pictures) and other non-text or non-numeric data types are not currently supported.
- Primary, Unique and Foreign keys and unsupported data types are highlighted in row 4. Data in these columns is read only for existing records.
- Always use the 'New Sheets' button to create new DB Data Manager worksheets.

## SELECT DATA SOURCE

- Press the 'Data Source' button and the Select Data Source form should open. Connection details will be populated automatically when worksheet data has previous been loaded using DB Data Manager.



- Select the required Driver Type and Data Source.
- Enter Login ID and Password, else leave blank if Windows Authentication is to be used.
- Press the 'Open Connection' button, to list available databases and tables. Select the required database and table.
- Press 'Load Data' button to load data from the selected table. When this exceeds 250 records, a form will appear allowing SQL to be used to filter the data being loaded into Excel. It is recommended to keep the number of records being loaded for editing to less than 250 in any single session.



# DATA EDITING

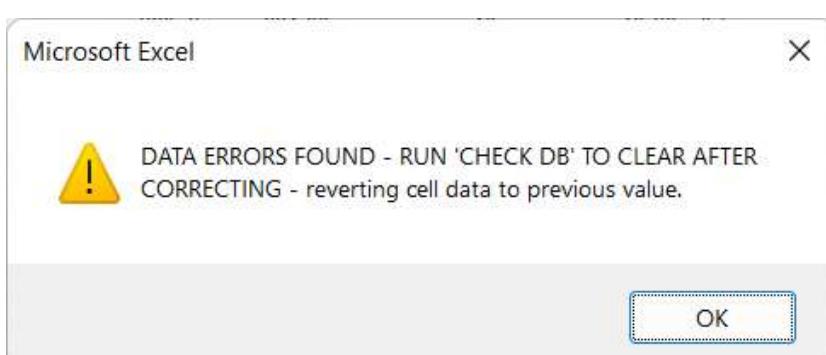
**Important:** All data changes are always the responsibility of the user(s) and must be checked thoroughly by the user(s), both before being applied to the database and after the databases updates have been completed. It is strongly recommended that data backups are taken before any data changes are applied.

- Database and Table information in rows 1 to 5 is read-only and should not be changed or overwritten manually.
- Table data in row 6 and below can be changed using standard Excel functionality.
- Valid worksheet data changes will be highlighted automatically after each change when the 'Checks On' button is displayed. When 'Checks Off' is displayed, data changes are highlighted without any validation checks.

The screenshot shows a Microsoft Excel spreadsheet titled 'DB\_DataManager.xlsx'. The active sheet is 'Products'. At the top, there are several validation controls: 'Data Sources' (Microsoft Access Provider=Microsoft.Ace.Oledb.12.0; Data Source=C:\Development\Northwind.accdb), 'Data Table: Products', 'Check DB' (highlighted in green), and 'Update DB'. Below these, the first five rows of the table are read-only, while rows 6 and onwards are editable. The table has columns for Product ID, Product Name, Standard Cost, List Price, Reorder Level, Target Level, Quantity Per Unit, Discontinued, Minimum Reorder Quantity, Category, and Ad Hoc Attachments. The 'Category' column contains values like 'Beverages', 'Condiments', 'Oil', etc. The 'Ad Hoc Attachments' column is highlighted in red.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Data Sources: Microsoft Access Provider=Microsoft.Ace.Oledb.12.0; Data Source=C:\Development\Northwind.accdb;	Data Table: Products	DATABASE UPDATES PENDING												
2	adVarChar	adInteger	adWChar	adCurrency	adSmallInt	adBoolean	adSmallInt	adWChar	adBoolean	adSmallInt	adWChar	adChar	adWChar		
3	ukkey*	adInteger	adWChar	adCurrency	adSmallInt	adBoolean	adSmallInt	adWChar	adBoolean	adSmallInt	adWChar	adChar	adWChar		
4	id	pk auto not null	data	adCurrency	adSmallInt	adBoolean	adSmallInt	adWChar	adBoolean	adSmallInt	adWChar	adChar	adWChar		
5	Supplier ID	ID	Product Code	Product Name	Standard Cost	List Price	Reorder Level	Target Level	Quantity Per Unit	Discontinued	Minimum Reorder Quantity	Category	adWChar	ukkey	
6	4			Northwind Traders Chai	£13.50	£18.00	10	40	10 boxes x 20 bags	FALSE	10	Beverages			
7	10			Northwind Traders Syrup	£7.50	£10.00	25	100	12 - 500 ml bottles	FALSE	25	Condiments			
8	10			Northwind Traders All Spice Seasoning	£16.00	£22.00	10	40	10 jars	FALSE	10	Condiments			
9	10			Northwind Traders Olive Oil	£16.01	£21.35	10	40	36 boxes	FALSE	10	Oil			
10	2,6			Northwind Traders Boysenberry Spread	£18.75	£25.00	25	100	12 - 8 oz jars	FALSE	25	Jams, Preserves			
11	2			Northwind Traders Dried Pears	£22.50	£30.00	10	40	12 - 1 lb pkgs.	FALSE	10	Dried Fruit & Nuts			
12	8			Northwind Traders Canned Sauce	£30.00	£40.00	10	40	12 - 12 oz jars	FALSE	10	Sauces			
13	2,6			Northwind Traders Beef Jerky	£17.50	£27.00	10	40	12 - 100 g pkgs.	FALSE	10	Dried Fruit & Nuts			
14	6			Northwind Traders Fruit Cocktail	£29.25	£39.00	10	40	15 25 oz	FALSE	10	Canned Fruit & Vegetables			
15	1			Northwind Traders Chocolate Biscuits Mix	£6.90	£9.20	5	20	10 boxes x 12 pieces	FALSE	5	Baked Goods & Mixes			
16	2,6			Northwind Traders Marmalade	£60.75	£81.00	10	40	30 gift boxes	FALSE	10	Jams, Preserves			
17	1			Northwind Traders Scallops	£7.50	£10.00	5	20	24 pkgs x 4 pieces	FALSE	5	Baked Goods & Mixes			
18	4			Northwind Traders Sardines	£10.50	£14.00	15	60	24 - 12 oz bottles	FALSE	30	Beverages			
19	7			Northwind Traders Crab Meat	£13.75	£18.00	10	60	24 - 8 oz cans	FALSE	30	Canned Meat			
20	6			Northwind Traders Clam Chowder	£7.24	£9.69	10	40	12 - 12 oz cans	FALSE	10	Soups			
21	3,4			Northwind Traders Coffee	£34.50	£46.00	25	100	16 - 500 g tins	FALSE	25	Beverages			
22	10			Northwind Traders Chocolate	£9.56	£12.75	25	100	10 pkgs	FALSE	25	Candy			
23	2			Northwind Traders Dried Apples	£43.00	£53.00	10	40	50 - 300 g pkgs.	FALSE	10	Dried Fruit & Nuts			
24	1			Northwind Traders Long Grain Rice	£2.70	£3.20	25	100	24 - 1 kg bags	FALSE	25	Rice			
25	1			Northwind Traders Gnocchi	£28.50	£38.00	30	120	24 - 200 g pkgs.	FALSE	30	Pasta			
26	1			Northwind Traders Ravioli	£14.63	£19.50	20	80	24 - 250 g pkgs.	FALSE	20	Pasta			
27	8			Northwind Traders Hot Pepper Sauce	£15.79	£21.05	10	40	32 - 8 oz bottles	FALSE	10	Sauces			
28	8			Northwind Traders Tomato Sauce	£12.75	£17.00	20	20	24 - 8 oz jars	FALSE	20	Sauces			
29	5			Northwind Traders Spaghetti	£26.50	£34.00	10	60	24 - 200 g pkgs.	FALSE	10	Dairy Products			
30	2,6			Northwind Traders Alfredo	£7.50	£10.00	5	20	5 1kg bags	FALSE	10	Dried Fruit & Nuts			
31	10			Northwind Traders Mustard	£9.75	£13.00	15	60	12 boxes	FALSE	15	Condiments			
32	2			Northwind Traders Dried Plums	£3.00	£3.60	50	75	1 lb bag	FALSE	25	Dried Fruit & Nuts			
33	3			Northwind Traders Green Tea	£2.00	£2.99	100	120	20 bags per box	FALSE	25	Beverages			
34	1			Northwind Traders Oregano	£2.00	£4.00	20	100	100 g jars	FALSE	10	Cereals			
35	9			Northwind Traders Potato Chips	£0.50	£1.00	30	200	200 g bags	FALSE	20	Chips, Snacks			
36	1			Northwind Traders Brownie Mix	£9.00	£12.49	10	20	3 boxes	FALSE	5	Baked Goods & Mixes			
37	1			Northwind Traders Cake Mix	£10.50	£15.99	10	20	4 boxes	FALSE	5	Baked Goods & Mixes			
38	7			Northwind Traders Tea	£2.00	£4.00	20	50	100 count per box	FALSE	10	Beverages			
39	6			Northwind Traders Peas	£1.00	£1.30	10	40	15 25 oz	FALSE	10	Canned Fruit & Vegetables			
40	6			Northwind Traders Peaches	£1.00	£1.30	10	40	15 25 oz	FALSE	10	Canned Fruit & Vegetables			
41	6			Northwind Traders Pineapple	£1.00	£1.80	10	40	15 25 oz	FALSE	10	Canned Fruit & Vegetables			
42	6			Northwind Traders Cherry Pie Filling	£1.00	£2.00	10	40	15 25 oz	FALSE	10	Canned Fruit & Vegetables			
43	6			Northwind Traders Green Beans	£1.00	£1.20	10	40	14.5 oz	FALSE	10	Canned Fruit & Vegetables			
44	6			Northwind Traders Corn	£1.00	£1.20	10	40	14.5 oz	FALSE	10	Canned Fruit & Vegetables			
45	6			Northwind Traders Peas	£1.00	£1.50	10	40	14.5 oz	FALSE	10	Canned Fruit & Vegetables			
46	7			Northwind Traders Smoked Fish	£0.50	£2.00	30	30	30 g cans	FALSE	10	Canned Fish			
47	7			Northwind Traders Smoked Salmon	£2.00	£4.00	30	50	5 oz	FALSE	10	Canned Meat			
48	1			Northwind Traders Hot Cereal	£3.00	£5.00	50	200	100 g	FALSE	10	Cereal			
49	6			Northwind Traders Vegetable Soup	£1.00	£1.89	100	200	100 g	FALSE	10	Soups			
50	6			Northwind Traders Chicken Soup	£1.00	£1.95	100	200	100 g	FALSE	10	Soups			

- The 'Check DB' button can be used at any time to compare the entire worksheet data with the current database records. It is recommended that this is always used before the 'Update DB' button is used.
- 'Cancel All' button will refresh the worksheet with data from the database and all changes will be lost.
- 'Update DB' button will be shown when a) one or more valid data changes have been made to the worksheet data that have not yet been written to the database and b) no data integrity errors are found e.g., text typed into a numeric field and individual errors will be highlighted
- A message will appear when an invalid data type has been entered e.g., text typed into a numeric field and the changes will be discarded automatically.



## DATA EDITING continued,

- Pressing the 'Checks On/Off' button can be used to turn automatic data validation checking On or Off.
- Data changes made to the worksheet with 'Checks Off' selected will be highlighted in yellow as 'Unverified'.

The screenshot shows a Microsoft Excel spreadsheet titled 'DB\_DataManager.xlsxb'. The ribbon is visible at the top with the 'Home' tab selected. In the 'Editing' section of the ribbon, the 'Checks Off' button is highlighted. The main area of the spreadsheet displays data from the 'Products' table of the Northwind database. A data validation error 'Invalid Value' is highlighted in yellow in cell E53, which contains the value '£1.00'. The rest of the data in the table appears to be valid, with no other errors highlighted.

- The 'Check DB' button can be used at any time to compare the entire worksheet data with the current database records. Invalid data types such as text in a numeric field, will be highlighted in 'Red'.
- 'Cancel All' button will refresh the worksheet with data from the database and all changes will be lost.

This screenshot shows the same Microsoft Excel spreadsheet as the previous one, but with a different focus. The 'View' tab is selected in the ribbon. The 'Check DB' button, located in the 'Window' group, is highlighted. The data in the 'Products' table is identical to the previous screenshot, with cell E53 containing the invalid value '£1.00' highlighted in red. This indicates that the 'Check DB' operation has identified a discrepancy between the worksheet data and the database records.

# SAVING DATA CHANGES TO THE DATABASE

- 'Update DB' button will be visible when a) one or more valid data changes have been made to the worksheet data that have not yet been written to the database and b) no data integrity errors are found e.g., text typed into a numeric field and individual errors will be highlighted.

The screenshot shows a Microsoft Excel spreadsheet titled 'DB\_DataManager.xlsx'. The ribbon is visible at the top with tabs like File, Home, Insert, Page Layout, Formulas, Data, Review, View, Developer, Help, and Easy Document Creator. The 'View' tab is selected. The main area displays a table of data from the 'Products' table of the 'Northwind' database. The table includes columns such as Product ID, Product Name, Unit, Price, and Category. A 'Supplier IDs' column is present, which contains multiple supplier IDs separated by commas. The 'Check DB' button is located in the ribbon under the 'View' tab. The status bar at the bottom shows 'Ready Calculate' and 'Accessibility: Investigate'.

- Pressing the 'Update DB' button will update existing database records with any data changes in the worksheet.
- DB updates will be cancelled automatically if an error is encountered. Successful updates will be highlighted in 'Blue'

This screenshot is identical to the previous one, showing the same Excel spreadsheet and Northwind database data. The 'Check DB' button remains visible in the ribbon. The status bar at the bottom shows 'Ready Calculate' and 'Accessibility: Investigate'.

# TABLE SCHEMA INFORMATION

- ‘Get Schema’ button will list Microsoft ActiveX Data Objects (ADO) schema information for the current data table including data types and index information.

Screenshot of the Microsoft Access ribbon showing the ‘DB\_DataManager.xlsb’ database. The ‘Developer’ tab is selected. A context menu is open over the ‘Products’ table, with the ‘Show Other Tables’ option highlighted.

The ‘Get Schema’ button is located in the ‘Data’ tab group.

The ‘Products’ table schema is displayed in the table below:

	A	B	C	D	E	F	G	H	I	J	K	L	
1	Data Source: Microsoft Access Products	Provider: Microsoft.Ace.Oledb.12.0; Data Source=C:\Development\DB Data Manager\Northwind.accdb;	adSchemaTables	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME	TABLE_TYPE	TABLE_GUID	DESCRIPTION	TABLE_PROPID	DATE_CREATED	DATE_MODIFIED	
16						Products	TABLE				13/04/2022 11:28	13/04/2022 11:28	
45													
50													
51	adSchemaPrimaryKeys	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	COLUMN_GUID	COLUMN_PROPID	ORDINAL	PK_NAME				
52				Products	ID				1 PrimaryKey				
53													
54													
55	adSchemaIndexes	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME	INDEX_CATALOG	INDEX_SCHEMA	INDEX_NAME	PRIMARY_KEY	UNIQUE	CLUSTERED	TYPE	FILL_FACTOR	
56				Products			Attachments_4962043875874	FALSE	TRUE	FALSE	1	100	
57				Products			PrimaryKey	TRUE	TRUE	FALSE	1	100	
58				Products			Supplier IDs_CF83D08C7138	FALSE	TRUE	FALSE	1	100	
59				Products			Product Code	FALSE	FALSE	FALSE	1	100	
60													
61	62	adSchemaForeignKeys	PK_TABLE_CATALOG	PK_TABLE_SCHEMA	PK_TABLE_NAME	PK_COLUMN_NAME	PK_COLUMN_GUID	PK_COLUMN_PROPID	FK_TABLE_CATALOG	FK_TABLE_SCHEMA	FK_TABLE_NAME	FK_COLUMN_NAME	FK_COLUMN_GUID
63	Primary Table				Products	ID					Inventory Transactions	Product ID	
64					Products	ID					Purchase Order Details	Product ID	
65					Products	ID					Order Details	Product ID	
66													
67	68	adSchemaForeignKeys	Foreign Table										
69													
70													
71	adSchemaColumns	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME	COLUMN_NAME	COLUMN_GUID	COLUMN_PROPID	ORDINAL_POSITION	COLUMN_HASDEFAULT	COLUMN_DEFAULT	COLUMN_FLAGS	IS_NULLABLE	
72				Products	Attachments							234	TRUE
73				Products	Category							106	TRUE
74				Products	Description							234	TRUE
75				Products	Discontinued							90	FALSE
76				Products	UnitPrice							90	FALSE
77				Products	List Price							90	FALSE
78				Products	Minimum Reorder Quantity							122	TRUE
79				Products	Product Code							106	TRUE
80				Products	Product Name							106	TRUE
81				Products	Product Unit							106	TRUE
82				Products	Reorder Level							122	TRUE
83				Products	Standard Cost							122	TRUE
84				Products	Supplier IDs							234	TRUE
85				Products	Target Level							122	TRUE
86													
87	88	ADO Recordset	Field Properties		BASETABLENAME	BASECOLUMNNAME	ISAUTOINCREMENT	COLLATINGSEQUENCE					
89					Products	Attachments	FALSE	1033					
90					Products	Category	FALSE	1033					
91					Products	Description	FALSE	1033					
92					Products	Discontinued	FALSE	1033					
93					Products	ID	TRUE	1033					
94					Products	List Price	FALSE	1033					
95					Products	Minimum Reorder Quantity	FALSE	1033					
96					Products	Product Code	FALSE	1033					
97					Products	Quantity Per Unit	FALSE	1033					
98					Products	Reorder Level	FALSE	1033					
99					Products	Standard Cost	FALSE	1033					
100					Products	Supplier IDs	FALSE	1033					
101					Products	Target Level	FALSE	1033					
102													

The status bar shows: < > DB Errors Log | DB Updates Log | Northwind MS Access | ADO Data Types +

- Pressing the ‘Get Data’ button will retrieve data records for the current table (e.g., ‘Products’ in the example below).

Screenshot of the Microsoft Access ribbon showing the ‘DB\_DataManager.xlsb’ database. The ‘Developer’ tab is selected. A context menu is open over the ‘Supplier IDs’ table, with the ‘Show Other Tables’ option highlighted.

The ‘Get Data’ button is located in the ‘Data’ tab group.

The ‘Supplier IDs’ table data is displayed in the table below:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Data Source: Microsoft Access Products	Provider: Microsoft.Ace.Oledb.12.0; Data Source=C:\Development\DB Data Manager\Northwind.accdb;	adSchemaTables	45 RECORDS LOADED	adWChar	adChar	adCurrency	adCurrency	adSmallInt	adInteger	adWChar	adBoolean	adSmallInt	adWChar	adWChar
2															
3	adVarChar	adInteger	adWChar												
4	adWChar	adInteger	adChar												
5	adVarChar	adInteger	adChar												
6	Supplier IDs	ID	Product Name												
7	1	1	Northwind Traders Chai												
8	10	3	NWTCO-3												
9	10	4	NWTCO-4												
10	10	5	NWTCO-5												
11	2	6	NWTFP-6												
12	8	7	NWTFP-7												
13	2	8	NWTFP-8												
14	6	9	NWTFP-9												
15	1	10	NWTFP-10												
16	2	20	NWTFP-20												
17	1	21	NWTFP-21												
18	4	34	NWTFP-34												
19	7	40	NWTFP-40												
20	6	41	NWTSO-41												
21	3,4	43	NWTSO-43												
22	10	51	NWTSO-51												
23	2	52	NWTG-52												
24	1	55	NWTG-55												
25	1	56	NWTG-56												
26	1	57	NWTG-57												
27	8	58	NWTG-58												
28	8	66	NWTS-66												
29	5	72	NWTS-72												
30	2,6	74	NWTFN-74												
31	10	77	NWTCO-77												
32	2	78	NWTCO-78												
33	3	81	NWTC-81												
34	1	82	NWTC-82												
35	9	83	NWTC-83												
36	1	85	NWTBM-85												
37	1	87	NWTBM-87												
38	7	88	NWTCV-88												
39	6	89	NWTCV-89												
40	6	90	NWTCV-90												
41	6	91	NWTCV-91												
42	6	92	NWTCV-92												
43	6	93	NWTCV-93												
44	6	94	NWTCV-94												
45	7	95	NWTCM-95												
46	7	96	NWTCM-96												
47	1	97	NWTCM-97												
48	6	98	NWTCM-98												
49	6	99	NWTCM-99												

The status bar shows: < > DB Errors Log | DB Updates Log | Northwind MS Access | ADO Data Types +