

Pete Holdstock Database Assignment

by Peter Francis Holdstock

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Peter Holdstock

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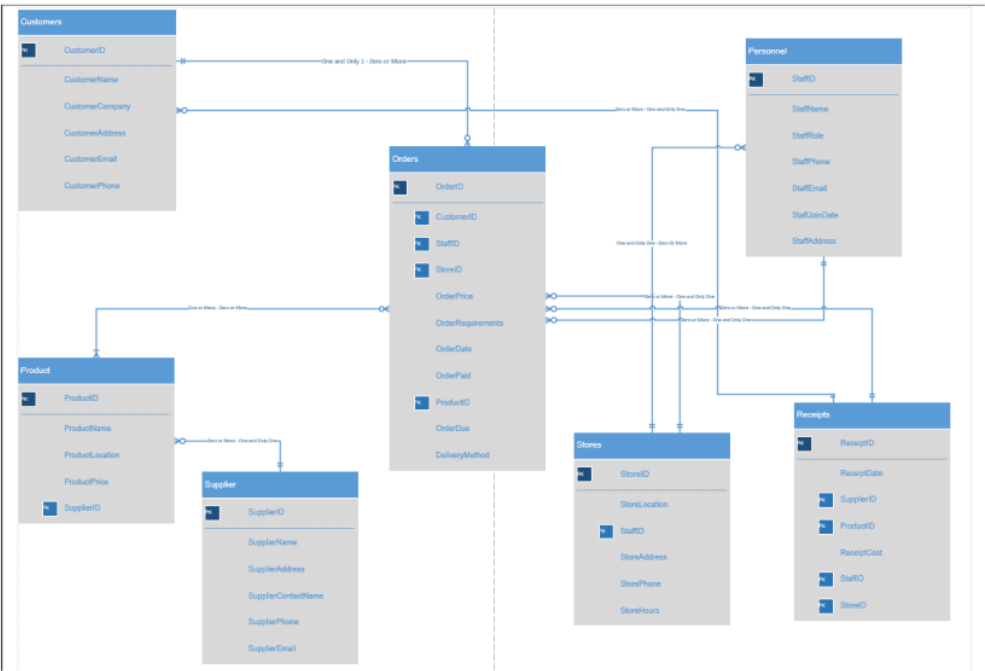
BSC-PT Computing (Computer Networks & Cybersecurity)

**L4 - Introduction to Web and Database Concepts
(ACCA4023)**

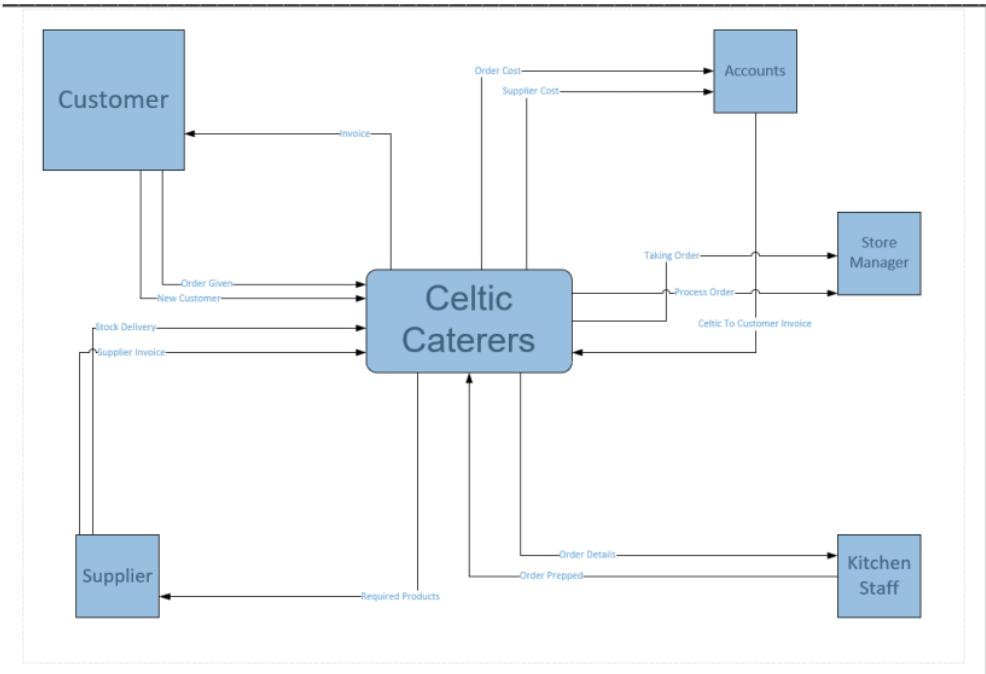
Contents

Entity Relationship Diagram	3
Context Diagram	3
Data Flow Diagram.....	4
Access Tables.....	5
Access Relationship	7
Access Macro.....	7
Access Report.....	9
Access Forms	10
Customer	10
Orders.....	10
Personnel	11
Products	11
Receipts.....	12
Stores	12
Suppliers.....	13
Main Menu.....	13
ERD in Visio	14
User Guide	14
References.....	15
Link to Visio Documents (If Required).....	15
Link to Access Document (If Required)	15

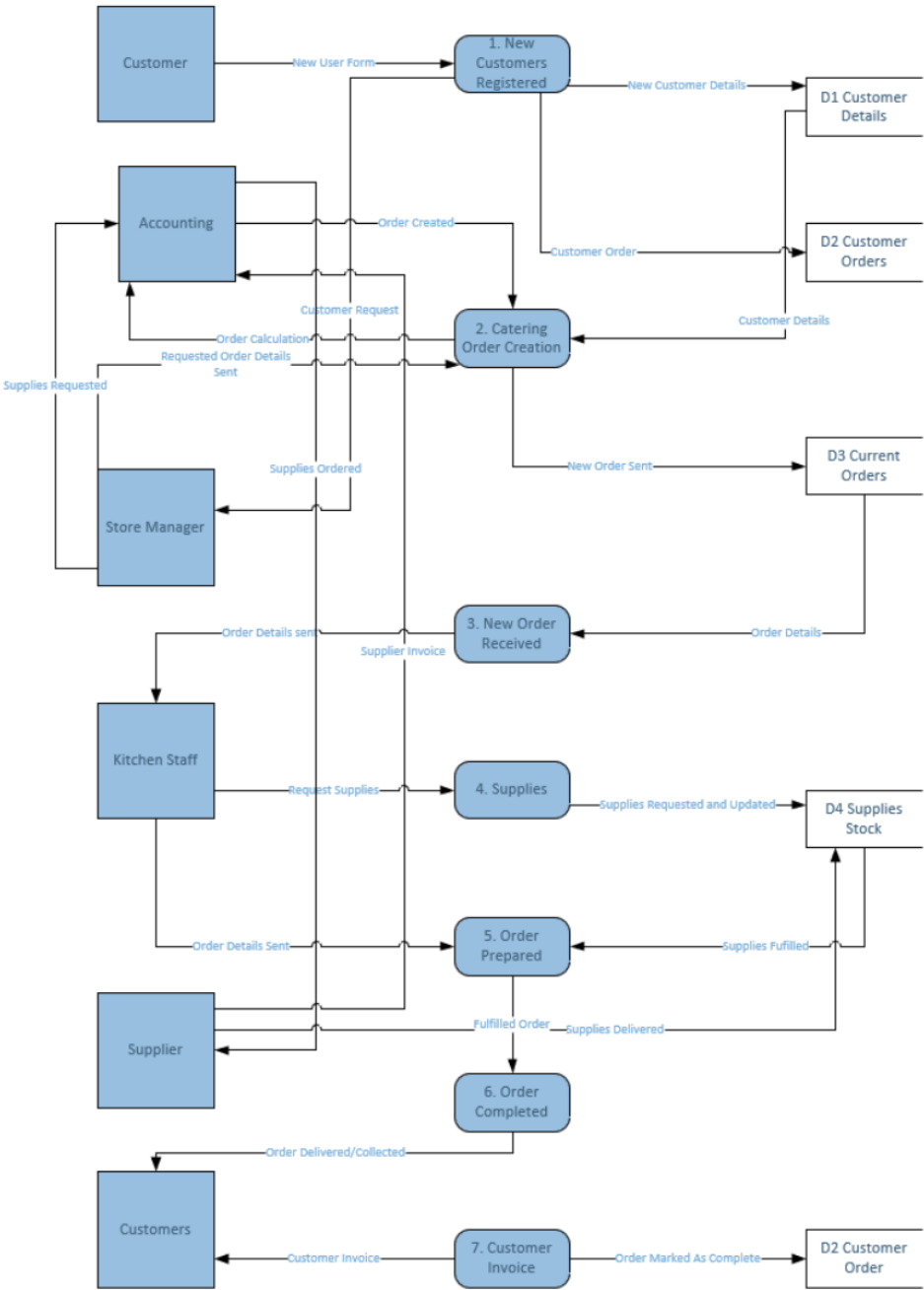
Entity Relationship Diagram



Context Diagram



Data Flow Diagram



The screenshot shows the Microsoft Access 2017 interface. The 'Tables' ribbon is active, displaying various tools for creating and managing tables. The 'Table Design' view is open for the 'Customers' table. The table structure is as follows:

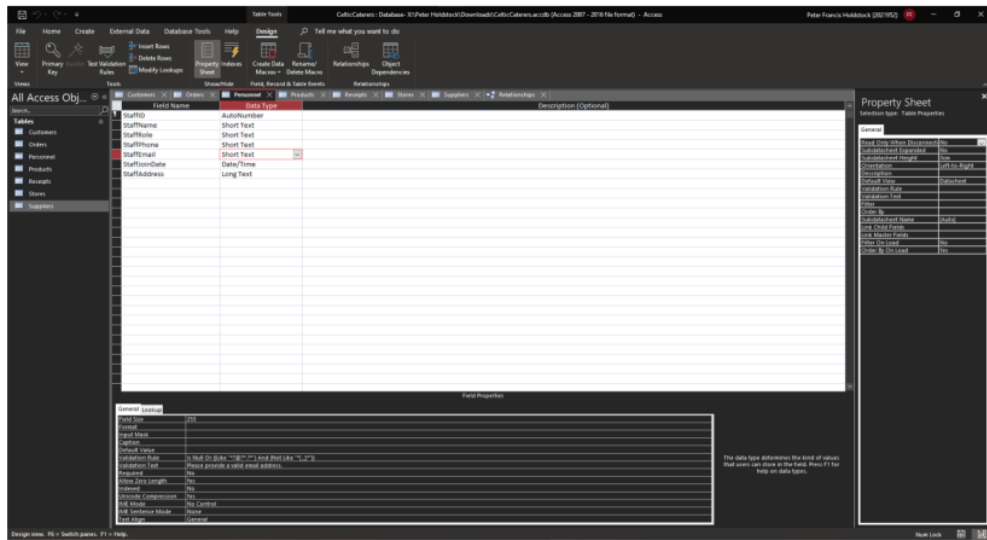
Field Name	Data Type	Description (Optional)
CustomerID	Number	
StaffID	Number	
InvoiceID	Number	
OrderPrice	Currency	
OrderRequirements	Long Text	
OrderDate	Date/Time	
OrderPaid	Yes/No	
ProductID	Number	
OrderDue	Date/Time	
DeliveryMethod	Short Text	

The 'Property Sheet' on the right shows the 'Table' tab with various properties. The 'Table Name' is 'Customers', and the 'Table Type' is 'Table'. The 'Table Properties' section is also visible.

The screenshot displays the Microsoft Access application window. The title bar indicates the database is 'C:\Users\... \Database - 31-Peter Heston's Dinning\31-Peter Heston's Dinning.accdb'. The ribbon at the top includes 'Home', 'Create', 'External Data', 'Database Tools', and 'Help'. The 'Home' tab is active, showing options for 'Find', 'Sort & Filter', 'Records', and 'Find'. The 'Customers' table is selected in the left-hand pane. The data is displayed in a grid with columns for OrderID, CustomerID, StaffID, StoreID, OrderPrice, OrderRegul, OrderDate, OrderPaid, ProductID, OrderDue, and DeliveryMile. The total row shows a sum of 6560.00 for OrderPrice.

OrderID	CustomerID	StaffID	StoreID	OrderPrice	OrderRegul	OrderDate	OrderPaid	ProductID	OrderDue	DeliveryMile
1	1	1	2	\$35.00	No Fish	01/04/2021		1	11/12/2021	Delivery
2	2	2	3	\$40.00	N/A	02/05/2021		2	20/05/2021	Collection
3	4	2	3	\$75.00	No Butter	14/04/2021		3	16/05/2021	Delivery
4	10	2	5	\$275.00	NO HAM TO BE	09/05/2021		4	16/05/2021	Delivery
5	7	0	0	\$0.00				0		
6	9	2	3	\$200.00	N/A	01/05/2021		5	16/05/2021	Collection
(New)	0	0	0	\$0.00				0		
Total				\$560.00						

Above is the data view of the orders table

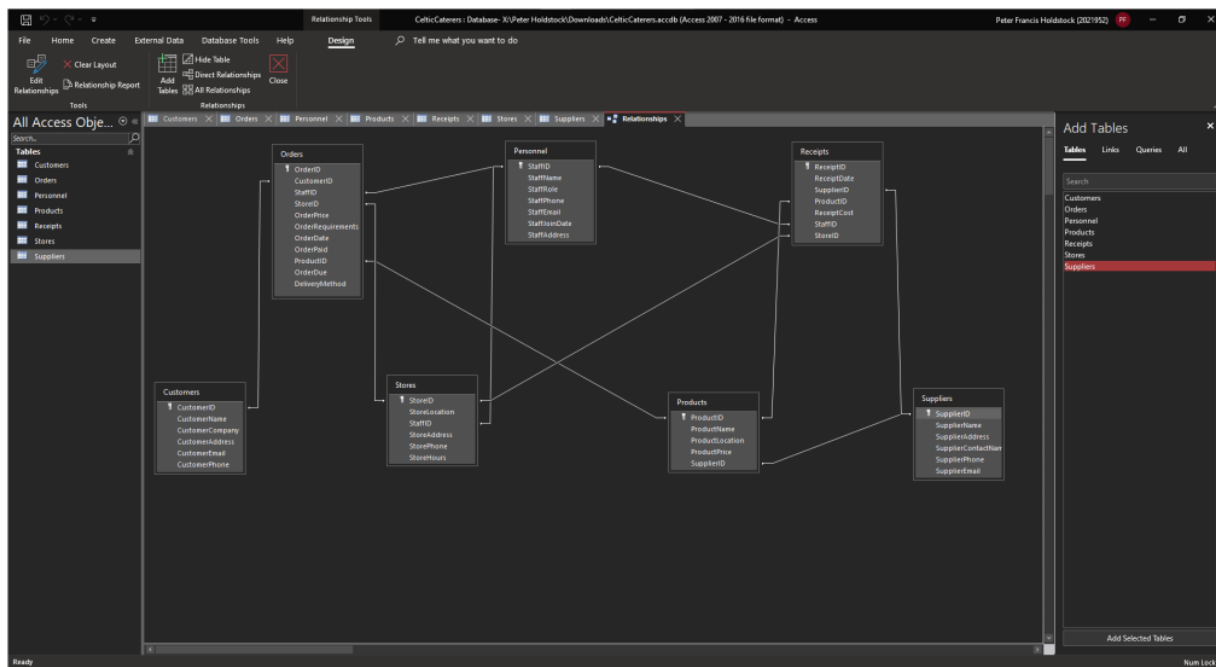


Above is the design view of the personnel Table

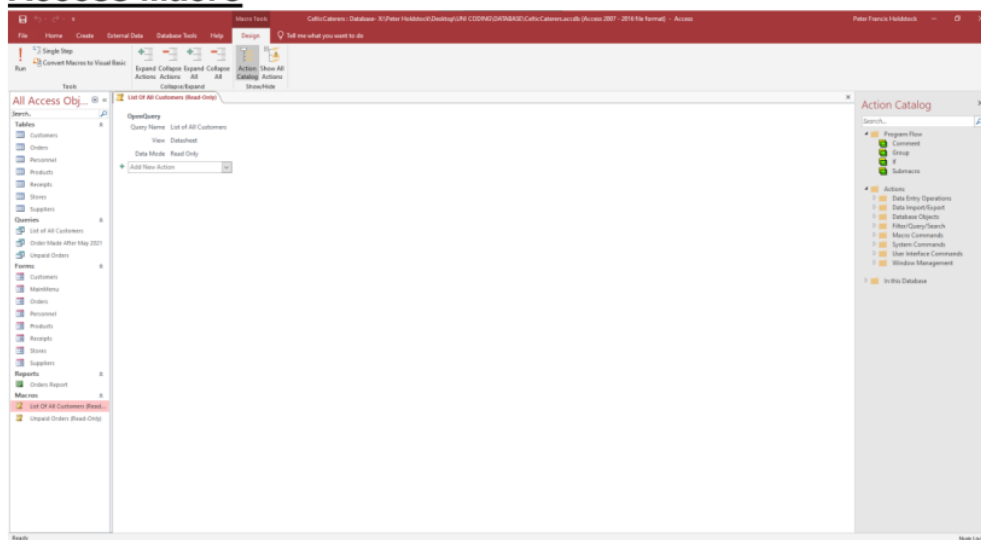
StaffID	StaffName	StaffRole	StaffEmail	StaffJoinDate	StaffAddress
1	Chelsea Burns	Store Manager	07947750988	C.Burns@cellocustomers.com	06/01/2020 Bryn Reulog, Bryson Road, Penyrhys, SA0 1Y1
2	Jeri Halliwell	Store Staff	07912947128	J.Halliwell@cellocustomers.com	06/01/2020 Fromling, Dymard Fath Road, Pontyberem, SA33 3JW
3	Tam Macfarland	Mk	07761338366	T.Macfarland@cellocustomers.com	06/01/2020 23 Clungbarn, Clungbarn, SA33 4ND
4	Justin Case	Store Staff	07609648055	J.Case@cellocustomers.com	06/01/2020 Glenapent Manor, Capel Iwan, SA33 9LS
5	Adam Mewar	Store Manager	07482234039	A.Mewar@cellocustomers.com	06/01/2020 Tynhodd, Fendri Warren, Newport, SA42 9R2
6	Jana Halliwell	Store Manager	07585117883	J.Halliwell@cellocustomers.com	06/01/2020 34 Brooklyn Gardens, Port Talbot, SA3 3PQ
7	Ben Crobberry	Store Manager	07976128811	B.Crobberry@cellocustomers.com	06/01/2020 443 Trevellyn Road, Morriston, SA6 7QH
8	Carrie Oakley	Store Manager	07674767292	C.oakley@cellocustomers.com	06/01/2020 278 Penard Green Road, Penard Green, SA7 9BB
9	Rob Banks	Accounting	07585134803	R.banks@cellocustomers.com	06/01/2020 17 West Street, Penrhynde, SA7 4ET

Above is the data view of the personnel table.

Access Relationship



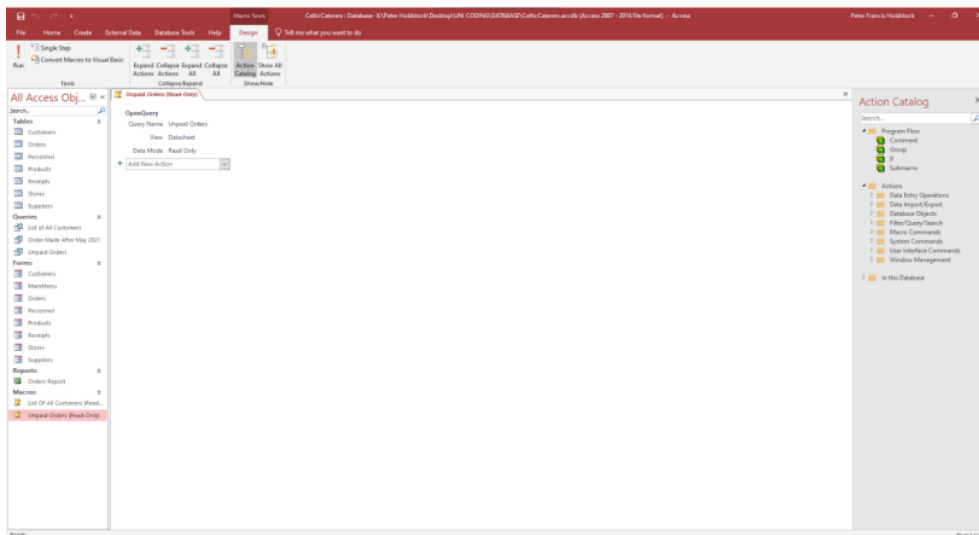
Access Macro



This is the first of two macros that I have used. They have been used to view the information in "read-only" mode, which allows for no data to be deleted for modified

CustomerID	CustomerName	CustomerCompany	CustomerAddress	CustomerEmail	CustomerPhone
1	Oliver Smith	Smith & Co.	2 Cefn Penant, Penryn, Cornwall, TR15 9TB	Smith.Oliver@hotmail.com	07700900113
2	Dawn Fabson	Fabson Heavy LTD.	12 New Street, Llandovery Castle, LD10 9EA	Swart.dawn@gmail.com	07700900098
3	Matthew Newells	about media	3 School Street, Estanton, CF42 1DU	Matthewnewells@yahoo.com	07605117152
4	Beth Townsend	Beth's Weddings LTD.	66 Penarth Road, Cardiff, CF11 0NG	Btownsend@gmail.com	07605127937
5	Courtney Madlen	Hammerton Express	20 Fford Vale, North, SA13 7BA	Courtney1234@yahoo.com	07605551793
6	Molly Norris	Norris Carpets	104 Portkerry Road, Barry, CF62 7XR	Mnorris127610@gmail.com	0755532676
7	Matthew Russell	North Wales Informatics	16 dyffordian Crescent, Tynyforgan, SA6 6JB	Matt_Russell@gmail.com	07355578476
8	Nathan Terry	Cardiff Blue Rugby Club	25 Gert W Tregil, Barry Port, SA34 9PT	Terry123456@outlook.com	07235554486
9	Zara Larsson	Zara's Music and Dance	20 Palace Avenue, Uffelford, SA13 1NA	ZaraLarsson@gmail.com	07355588643
10	Elise Hill	Hill & Family	2 Lock Cottages, Ystradgynlais, SA9 3RS	E.Hill@yahoo.com	07355529578

This is what is produced when the macro is run



Above is the second macro in the design view

OrderID	CustomerID	CustomerName	StoreID	StoreLocation	OrderPaid	CustomerPhone	OrderDue
1	1	Oliver Smith	2	North	☐	0770000133	11/12/2021
2	7	Matthew Russell	4	Llanelli	☐	07200138676	30/05/2021
4	10	Ease Hill	5	Cardarffon	☐	07200124078	26/05/2021
7	10	Ease Hill	3	Port Talbot	☐	07200129578	

Above is the results provided from running the second macro

Access Report

OrderDate by Month	OrderID	StaffID	StoreID	OrderPrice	OrderDate	OrderDue/DeliveryMethod
	7	2	3	£5.00		
	5	0	0	£5.00		
Summary for 'OrderDate' = 11/12/2021 (2 detail records)						
Sum				£5.00		
Avg				£5.00		
Standard				0.00%		
April 2021	1	1	3	£15.00	01/04/2021	11/12/2021 Delivery
	3	2	3	£75.00	14/04/2021	14/04/2021 Delivery
Summary for 'OrderDate' = 14/04/2021 (2 detail records)						
Sum				£90.00		
Avg				£45.00		
Standard				15.84%		
May 2021	6	2	3	£206.00	01/05/2021	16/05/2021 Collection
	2	3	4	£40.00	01/05/2021	30/05/2021 Collection
	4	2	5	£275.00	01/05/2021	26/05/2021 Delivery
Summary for 'OrderDate' = 01/05/2021 (3 detail records)						
Sum				£521.00		
Avg				£173.67		
Standard				86.16%		
Grand Total				£960.00		

05 May 2021

Page 1 of 1

Access Forms

Customer

Customers

CustomerID	
CustomerName	Oliver Smith
CustomerCompany	Smith & Co.
CustomerAddress	2 Cefn Penual, Penryn, CF35 9TB
CustomerEmail	Smith.Oliver@hotmail.com
CustomerPhone	07700900133

Orders

Orders

OrderID	CustomerID	StaffID	StoreID	OrderPrice
				£15.00
OrderRequirements				
No Fish				
OrderDate	OrderProd	ProductID	OrderDue	
01/04/2021			11/12/2021	
DeliveryMethod				
Delivery				
CustomerName				
Oliver Smith				
CustomerAddress				
2 Cefn Penual, Penryn, CF35 9TB				
CustomerPhone				
07700900133				
ProductName				
Sandwich Platter				
ProductPrice				
£15.00				
ProductLocation				
Cupboard 1				
StoreLocation				
North				

The screenshot shows the Microsoft Access application window. The title bar indicates the file name is "Personnel.accdb". The ribbon at the top includes tabs for File, Home, Create, External Data, Database Tools, and Help. The "Form" view is active. On the left-hand side, there is a navigation pane with sections: All Access Objects, Tables (Customers, Orders, Personnel, Products, Receipts, Shelves, Suppliers), Queries (List of All Customers, Order Made After May 2021, Unpaid Orders), Forms (Customers, MonthMenu, Orders, Personnel - selected, Products, Receipts, Shelves, Suppliers), and Reports (Orders Report, MonthMenu, List Of All Customers (Prod...), Unpaid Orders (Prod Only)). The main area displays the "Personnel" form for the record where StaffID is 1. The fields shown are: StaffID (1), StaffName (Celine Bunce), StaffPhoto (empty), Store Manager (checkbox, unchecked), StaffPhone (07947750968), StaffEmail (C.Bunce@celticcatenars.com), StaffJoinDate (06/01/2020), and StaffAddress (Bryn Meurig, Brecon Road, Penycae, SA5 1TY). At the bottom, a status bar shows "Record: 1 of 9" and search filters.

The screenshot displays the Microsoft Access application window. The title bar indicates the database is 'CaféCaterers - Database'. The ribbon at the top includes 'File', 'Home', 'Create', 'External Data', 'Database Tools', and 'Help'. The 'Database Tools' tab is active, showing options like 'Filter', 'Sort & Filter', 'Find', and 'Text Formatting'. The 'Tables' task pane on the left lists various tables, with 'Products' highlighted in red. The main window shows the 'Products' table in 'Table View'. The table structure is as follows:

ProductID	ProductName	SandwichPlatter	ProductLocation	Cupboard	ProductPrice	SupplierID
1	Sandwich Platter				€13.00	3

The status bar at the bottom shows 'Record: 1 of 1' and 'Show Filter'.

The screenshot displays the Microsoft Access application window. The title bar indicates the database is 'Café/Caterers - Database'. The ribbon at the top shows the 'Database Tools' tab with various options like 'Filter', 'Sort & Filter', 'Find', and 'Text Formatting'. On the left, the 'Navigation Pane' shows a tree view of the database objects, with 'Receipts' selected under the 'Tables' category. The main area shows the 'Receipts' table in Datasheet View. The table structure is as follows:

ReceiptID	ReceiptDate	SupplierID	SupplierName	ProductID	ProductName	ReceiptCost	StaffID
1	06/09/2021		Castell Howell	1	Sandwich Platter	£280.00	
							Chelsea Bunce

At the bottom of the window, a status bar shows 'Records: 1 of 4' and a search bar.

The screenshot shows the Microsoft Access 2016 interface. The ribbon is set to the 'Table Tools' tab, specifically the 'Table Design' group. The 'Stores' table is open in Datasheet view. The table has the following fields: StoreID, StoreLocation, StoreSize, StoreID, StoreAddress, StorePhone, and StoreHours. The data for the first record is as follows:

StoreID	StoreLocation	StoreSize	StoreID	StoreAddress	StorePhone	StoreHours
				Carrollton Road Corridor Retail Park, Swanscoe SAS B2L	01760 79934	9am - 5pm

The left-hand pane shows the 'Navigation Pane' with the 'Stores' table selected. The bottom status bar indicates 'Records: 1 of 1'.

Suppliers

The screenshot shows the 'Suppliers' form in Microsoft Access. The form is titled 'Suppliers' and contains the following fields:

- SupplierID
- SupplierName: Castelli Howell
- SupplierAddress: Myrtle Hill, Pensarn, Carmarthen SA31 2NS
- SupplierContactName: Dave Ross
- SupplierPhone: 01267222022
- SupplierEmail: Ross.Dave@castellihowell.co.uk

The form is displayed in 'Form View' and is part of the 'CaféCaterers' database. The left-hand pane shows the 'All Access Objects' list, with 'Suppliers' selected under the 'Tables' category.

Main Menu

The screenshot shows the 'Main Menu' form in Microsoft Access. The form is titled 'Main Menu' and contains the following buttons:

- Unpaid Orders (read-only)
- List Of All Customer (read-only)
- Orders Made After May 2021
- Order Report
- Orders
- Customers
- Staff
- Stores
- Receipts
- Products
- Suppliers

The form is displayed in 'Form View' and is part of the 'CaféCaterers' database. The left-hand pane shows the 'All Access Objects' list, with 'Main Menu' selected under the 'Forms' category.

This the form which the end-user is going to see immediately after they have opened the database.

ERD in Visio

For my final version of my entity-relationship diagram (ERD), I made it in software called Visio made by Microsoft.

The tables which I used for the ERD are:

- Customers
- Orders
- Personnel
- Products
- Receipts
- Stores
- Suppliers

What I have been able to achieve in Visio is excellent because it can show what the relationship between all the tables is. Overall, I have been able to display all the tables to see the relationships between them.

I am using a relational database compared to a flat database, the difference being a relational database uses relationships between multiple tables. In my database I have used, "One to Many" so data can be used within tables.

User Guide

To start, you would need to open the database. Once the database opened, you will see the Main Menu. This is what you will use to navigate to the different tables and results you need. This could be to add new orders or to add a new customer.

For example, if you select customers. You will be brought to the form where you can see all the customers in individual records. At the end of all the records, there will be the option to add a new customer. Once you have reached that section, fill in all the details about the customer, including their name, the company they could be working for, the customer's address, the customer's email and the customer's phone number.

This will be added into the database for all customers who have ordered from the business.

After the customer details have been entered, if you click on the main menu at the top of the form, it will take you back to where you started.

From there, you can pick another form like orders and make a new order, or you could use some of the other functions. A function that can be used is to check which customers still need to pay for their orders. This can be done by selecting the "Unpaid orders" on the left-hand side. This will bring you to all the orders that still need to be marked off as paid. Once you have completed all the work needed, you can navigate back to the main menu using the tab at the top of the screen.

Finally, if you are ready to close the database, then click on the red cross on the right-hand side. This is going to close the database.

References

[1]

L. Tutorials, *Tutorial: Creating a Context Diagram With Visio*. 2016.

[2]

ITsEasyTraining1st, *How to create report calculations in Microsoft Access*
. 2019.

[3]

LucidChart, *Entity Relationship Diagram (ERD) Tutorial - Part 1*. 2017.

[4]

B. Green, *Visio 2013 - Database Diagram (Crows Foot Notation)*. 2016.

[5]

databasedev.co.uk, "How to create a Microsoft Access macro that opens/runs a query:," N/A. <http://www.databasedev.co.uk/open-query-macro.html>.

[6]

E. Dedic, " How to Create a Main Menu in Access 2016, using VBA ," Oct. 18, 2017. <https://www.mydatacareer.com/how-create-main-menu-access-2016/>.

Link to Visio Documents (If Required)

ERD:

https://uwotds-my.sharepoint.com/:u:/g/personal/2021952_student_uwotds_ac_uk/EcNj8JNugwIAqlQs6BEVGgwB9-E22M3QtZZmHOZDIEutQ?e=hIb9IW

Context Diagram:

https://uwotds-my.sharepoint.com/:u:/g/personal/2021952_student_uwotds_ac_uk/EWXVrL3XMHBnqW806MnSQBsBcy2fmR4HymS7dAMxqFgY8Q?e=kDwthe

DFD:

https://uwotds-my.sharepoint.com/:u:/g/personal/2021952_student_uwotds_ac_uk/EaLzK3eRQolEqKy_AiFP69IBSSK5Zzpv0zEogzt_FdCQCw?e=INik1U

Link to Access Document (If Required)

https://uwotds-my.sharepoint.com/:u:/g/personal/2021952_student_uwotds_ac_uk/EU7apWuQ2tdNmWEcc2fnLIMBBaKme9KXKQK-I-1o2q3Uw?e=qLVfYn

Pete Holdstock Database Assignment

GRADEMARK REPORT

FINAL GRADE

/100

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15