

Database Assignment

by Carys Rees

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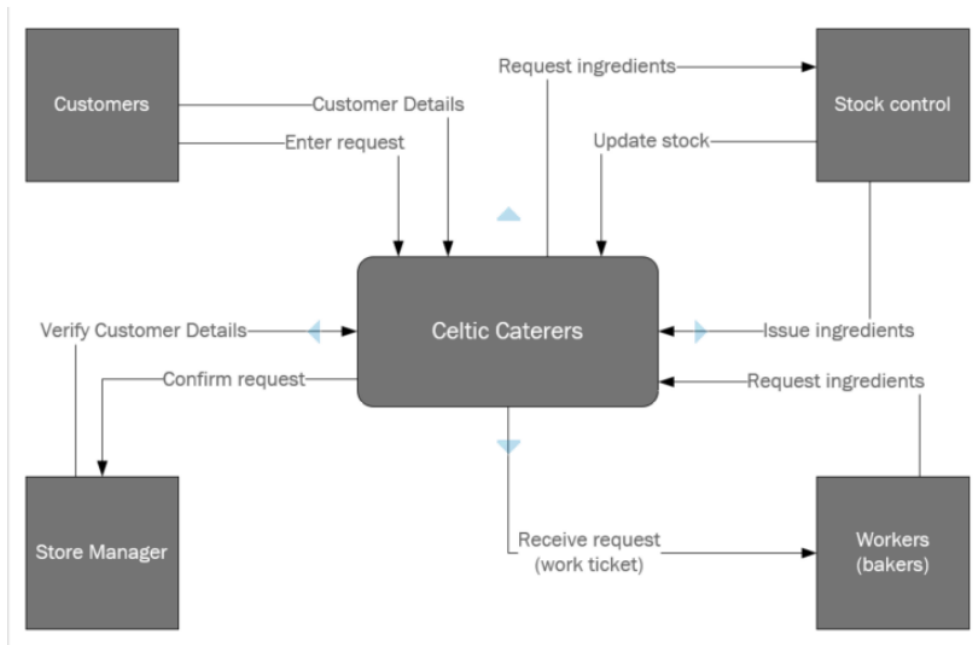
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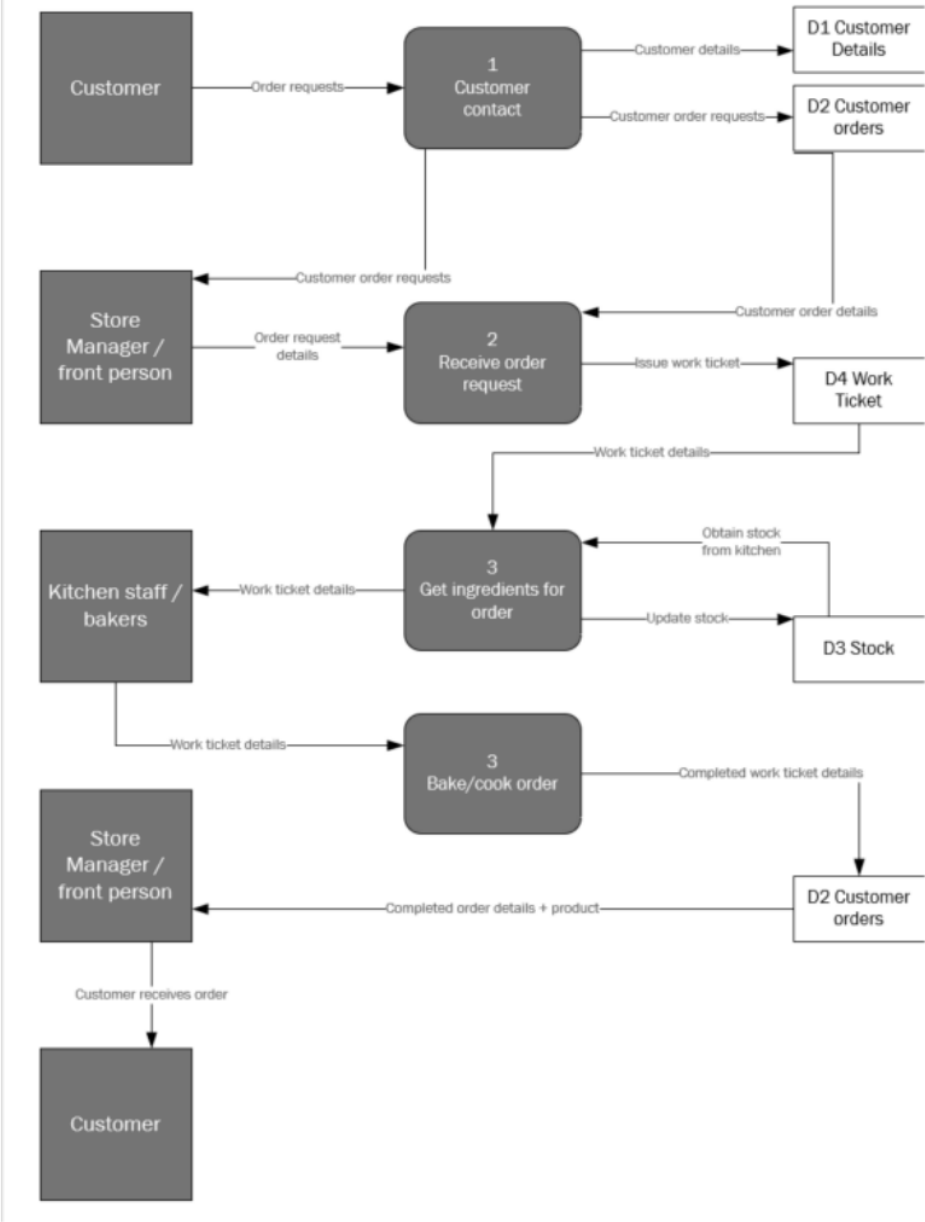
Introduction

This document will contain the relevant data that illustrates the completed database for Celtic Caterers. It will include screenshots of the tables, queries, forms, and reports along with a simple explanation of each. Which will include a justification of why certain file types and sizes were chosen, along with input masks, primary keys, and relationships.

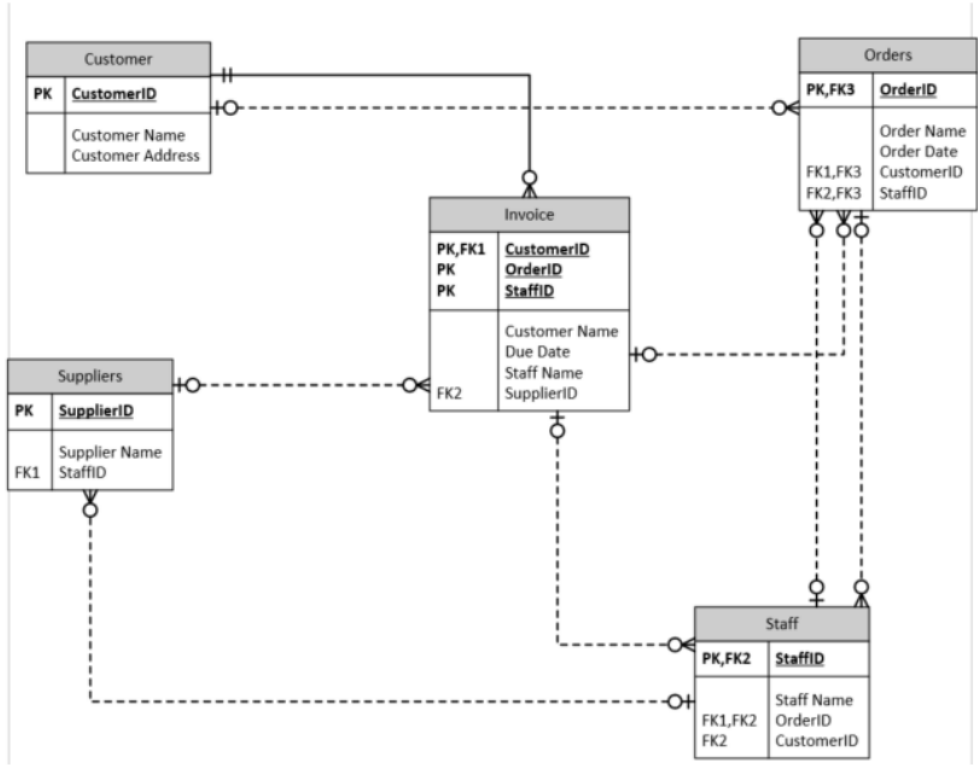
Context Diagram



Level 0 DFD



Entity Relationship Diagram



This is the entity relationship diagram. It is a visual description of the relationships between the tables, showing the primary and foreign keys in each table. This shows how all of the tables are linked via one table: the invoice table. This is because it is taking the data needed from the different tables, which are the customer details, order details, staff details and the supplier details. The reason for this is that the invoice form needs to have the customer ID and names, the order ID and name and due date, the staff that completed the order; Staff ID and name along with the supplier ID, so that stock can be ordered immediately to ensure that their stock levels do not decrease significantly.

Tables

Customer Details Table

CustomerID	First Name	Surname	Date of Birth	AddressNum	Address	Postal Code	Email address	Telephone Number	Order ID
1	Jane	Doe	01/01/2021	70	Swansea	SA15 0DH	janeDoe@gmail.com	(+44)7558392785	1
10	Claire	Lewis	02/02/2002	91	Neath	SH39 7HD	clairelewis@hotmail.com	(+44)9849890280	10
11	Peter	Richards	03/03/2003	873	Llanelli	HD08 7HF	peterRichards@hotmail.co.uk	(+44)9945897390	11
2	Carys	Rees	29/08/2002	58	Glyn Road	SA18 1ST	caryser@hotmail.co.uk	(+44)7577804507	40
3	John	Jones	01/02/2021	71	Carmarthen	GH54 7GY	johnjones@gmail.com	(+44)0388291930	2
4	Ffion	Smith	01/03/2021	72	Ammanford	DF26 7YF	ffionsmith@hotmail.com	(+44)0385308301	3
5	Manon	Evans	02/02/1932	73	Cross Hands	HD92 7HD	manonevans@hotmail.co.uk	(+44)3088400183	4
6	Melanie	Davies	04/01/4211	74	Llanelli	HF03 8HF	melaniedavies@icloud.com	(+44)8638193741	5
7	Llian	Rees	13/06/3829	77	Neath	HF92 8FJ	llianRees@gmail.com	(+44)0938580802	6
8	Joe	Caines	22/05/2984	88	Carmarthen	JH23 9FH	joecaines@hotmail.com	(+44)7365839204	7
9	Elizabeth	Owen	31/12/1984	34	Cross Hands	HD39 4HD	elizabethowen@gmail.co.uk	(+44)7537927394	8
9	Katherine	George	01/01/2001	88	Swansea	SA16 9GH	katherinegeorge@icloud.com	(+44)0384979289	9

Invoice Table

CustomerID	OrderID	FirstName	LastName	OrderName	Price
1	1	Jane	Doe	Victoria Cake	£22.00
10	10	Claire	Lewis	Thai	£50.00
11	11	Peter	Richards	Mexican	£35.00
2	2	John	Jones	Cupcakes	£30.00
3	3	Ffion	Smith	Sponge	£20.00
4	4	Manon	Evans	Chocolate	£25.00
5	5	Melanie	Davies	Vanilla	£75.00
6	6	Llian	Rees	Raspberry	£70.00
7	7	Joe	Caines	Buffet	£40.00
8	8	Elizabeth	Owen	Indian	£40.00
9	9	Katherine	George	Chinese	£35.00

Order Details Table

OrderID	Order Name	Order Price	DueDate	StaffID	Click to Add
1	Victoria Cake	£22.00	16/05/2021	3	
10	Thai	£50.00	23/05/2021	2	
11	Mexican	£35.00	23/05/2021	1	
2	Cupcakes	£30.00	29/05/2021	2	
3	Sponge	£20.00	27/05/2021	1	
4	Chocolate	£25.00	30/05/2021	2	
5	Vanilla	£75.00	29/05/2021	3	
6	Raspberry	£70.00	27/05/2021	1	
7	Buffet	£45.00	28/05/2021	2	
8	Indian	£40.00	28/05/2021	3	
9	Chinese	£35.00	14/05/2021	1	

Staff Details Table

StaffID	FirstName	LastName	DoB	Address	TelephoneN
1	Christina	Jones	31/08/1976	37 Fabian Way	(+44)73889023
2	Jimmy	Cross	23/11/2302	872 Hill	(+44)02840208
3	Sandra	Rees	15/07/1947	73 Road	(+44)04850490

Suppliers Table

StockID	Stock Supplier	Supplier ID	Supplier Name	Order Date	Quantity
1	Buffet Food	1234	British Foods	06/05/2021	3
2	Cupcakes	4568	Cupcake Land	05/05/2021	4
3	Victoria Sponge	9384	Cake Supplier	10/05/2021	8

Evaluation

The tables above show the different tables and the data that are contained in each. Most of it is self-explanatory, in terms of field types and sizes, for example the first name and surname will be short text, with space for 20 letters. Having small field sizes is beneficial to the business as it means that the user cannot enter anything irrelevant that could take up an awful lot of space and so that the file size is smaller and therefore easier to store, especially since they are growing as a business.

The first column IDs are auto number as it automatically adds on a number when a new record is added to the table, which makes it very useful if Celtic Caterers wanted to add more customers, orders, or staff.

For the telephone number field, an input mask has been added so that the start of the phone number is already there (+44), as this means it is a UK phone number. Then, there are enough spaces for the rest of the number, which is 10, not including the 0 as that is represented by (+44).

There is also an input mask on the Postal Code. This is a way of validating the data entered. So, if they tried entering a number first then they would be prompted to enter the data again. This is important so that Celtic Caterers can obtain relevant data of their customers and not fake data.

Primary keys have been added to the IDs as this is a way of avoiding duplication of the data. So, a customer can only have 1 ID, for example 12, meaning that the user will not be able to enter this number again. This is important for the business as they want to be able to identify their customers by the CustomerID without having to worry about two or more customers appearing.

Queries

All Orders Query

all orders ×						
CustomerID ▾	First Name ▾	Surname ▾	OrderID ▾	Order Name ▾	Order Price ▾	DueDate ▾
1	Jane	Doe	1	Victoria Cake	£22.00	16/05/2021
2	John	Jones	2	Cupcakes	£30.00	29/05/2021
3	Ffion	Smith	3	Sponge	£20.00	27/05/2021
4	Manon	Evans	4	Chocolate	£25.00	30/05/2021
5	Melanie	Davies	5	Vanilla	£75.00	29/05/2021
6	Llian	Rees	6	Raspberry	£70.00	27/05/2021
7	Joe	Caines	7	Buffet	£45.00	28/05/2021
8	Elizabeth	Owen	8	Indian	£40.00	28/05/2021
9	Katherine	George	9	Chinese	£35.00	14/05/2021
10	Claire	Lewis	10	Thai	£50.00	23/05/2021
11	Peter	Richards	11	Mexican	£35.00	23/05/2021

Orders due before the 23rd of May 2021 (parameter)

orders due before 23/05/2021 ×				
CustomerID ▾	OrderID ▾	Order Name ▾	DueDate ▾	StaffID ▾
1	1	Victoria Cake	16/05/2021	3
9	9	Chinese	14/05/2021	1
10	10	Thai	23/05/2021	2
11	11	Mexican	23/05/2021	1

A formula was used in the criteria section of the due date which asked the system to identify the orders that were due before the 23rd of May 2021. For this, the formula to used is “<=23/05/2021”, which basically means to go and look for any orders that are due on or before the 23rd of May. The business can alter this however way they want in the future to find out orders that are due by a certain date, or between two dates and many other ways.

Orders in Swansea

Orders in Swansea ×				
CustomerID ▾	First Name ▾	Surname ▾	Address ▾	OrderID ▾
1	Jane	Doe	Swansea	1
9	Katherine	George	Swansea	9

This is similar in the way that a criterion was used to identify certain orders, in this case to identify orders that are for the Swansea area, which consequently was only two. This can be changed in the future to fit other needs, such as identifying order that are from the Llanelli area.

Orders to be completed by Christina Jones

StaffID	FirstName	LastName	OrderID	Order Name	DueDate
1	Christina	Jones	3	Sponge	27/05/2021
1	Christina	Jones	6	Raspberry	27/05/2021
1	Christina	Jones	9	Chinese	14/05/2021
1	Christina	Jones	11	Mexican	23/05/2021

The next three queries are a way of showing how the staff can identify which orders they need to do personally. Each order is allocated to a member of staff, therefore doing this allows them to see how they need to prioritise their work and when each order needs to be completed by. This was done by entering the staff ID in the criteria section of the query.

Orders to be completed by Jimmy Cross

StaffID	FirstName	LastName	OrderID	Order Name	DueDate
2	Jimmy	Cross	2	Cupcakes	29/05/2021
2	Jimmy	Cross	4	Chocolate	30/05/2021
2	Jimmy	Cross	7	Buffet	28/05/2021
2	Jimmy	Cross	10	Thai	23/05/2021

Orders to be completed by Sandra Rees

StaffID	FirstName	LastName	OrderID	Order Name	DueDate
3	Sandra	Rees	1	Victoria Cake	16/05/2021
3	Sandra	Rees	5	Vanilla	29/05/2021
3	Sandra	Rees	8	Indian	28/05/2021

Orders sorted by completion (date ascending)

CustomerID	First Name	Surname	OrderID	DueDate
9	Katherine	George	9	14/05/2021
1	Jane	Doe	1	16/05/2021
11	Peter	Richards	11	23/05/2021
10	Claire	Lewis	10	23/05/2021
6	Llian	Rees	6	27/05/2021
3	Ffion	Smith	3	27/05/2021
8	Elizabeth	Owen	8	28/05/2021
7	Joe	Caines	7	28/05/2021
5	Melanie	Davies	5	29/05/2021
2	John	Jones	2	29/05/2021
4	Manon	Evans	4	30/05/2021

This is a simple way of showing the orders in an ascending order by the date, meaning that they can see the order in which orders need to be completed and by when.

Forms

Main Menu Form



The screenshot shows a web browser window titled 'MainMenu'. The page has a light blue background and a dark blue header with the text 'Main Menu' in white. Below the header, there are five buttons arranged in two rows. The first row contains three buttons: 'Open Celtic Orders Form', 'Open Customer Details Form', and 'Open Invoice Form'. The second row contains two buttons: 'Open Suppliers Form' and 'Open Invoice Report'. A small red 'x' icon is visible on the left side of the 'Open Suppliers Form' button.

This is the main menu with buttons going to different forms and reports and to also close the application. This screen appears as soon as the application is opened, which makes it much easier for the user to navigate through the different forms and reports.

Celtic Orders



The screenshot shows a web browser window titled 'Celtic Orders'. The page has a dark blue header with the text 'Celtic Caterers Orders' in white. Below the header, there is a form with several input fields and buttons. The input fields are labeled: 'Customer ID' (with a dropdown arrow), 'First Name' (with the value 'Jane'), 'Surname' (with the value 'Doe'), 'Order ID' (with the value '1'), 'Order Name' (with the value 'Victoria Cake'), 'Order Price' (with the value '£22.00'), and 'Due Date' (with the value '16/05/2021'). Below the input fields, there are four buttons with navigation icons: a double left arrow, a single left arrow, a single right arrow, and a double right arrow. At the bottom left, there is a button with a red 'x' icon, which is used to close the application.

This shows all the different orders that needs to be completed. When the user is on this form, they are able to go to the very first record, go to the very last record and go to the next and previous records. This is a handy way of navigating through the different records, making it user friendly. The door icon means that the user can also go back to the main menu from there.

Customer Details

The screenshot shows a web browser window with a tab labeled 'customerDetails'. The page title is 'Celtic Caterers Customer Details'. Below the title bar, there are four navigation buttons: a double left arrow, a single left arrow, a single right arrow, and a double right arrow. The main form area contains the following fields:

Customer ID	1
First Name	Jane
Surname	Doe
Date of Birth	01/01/2021
Address Number	70
Address	Swansea
Postal Code	SA15 0DH
Email address	janeDoe@gmail.com
Telephone Number	(+44)7558392785
Order ID	1

At the bottom of the form, there are three buttons: a save button (represented by a floppy disk icon), an undo button (represented by a curved arrow icon), and a delete button (represented by a trash can icon).

This is the customer details form, here the user can view the different records, navigate between them and they are also able to save and undo the record, if they wanted to add new customers. This is an easy way to add customers to the database as the user just has to fill out each of the fields and click save.

Invoices

The screenshot shows a web browser window with a single tab titled 'invoice'. The page has a dark blue header with the text 'Celtic Caterers Customer Invoices'. Below the header is a light blue sidebar with a right-pointing arrow. The main content area is white and contains several input fields: 'Customer ID' with value '1', 'Order ID' with value '1', 'First Name' with value 'Jane', 'Last Name' with value 'Doe', 'Order Name' with value 'Victoria Cake', and 'Price' with value '£22.00'. At the top of the main area are four navigation buttons with icons for first, previous, next, and last. At the bottom are four buttons: a print icon, a pencil icon, a magnifying glass icon, and a button labeled 'Open Report'.

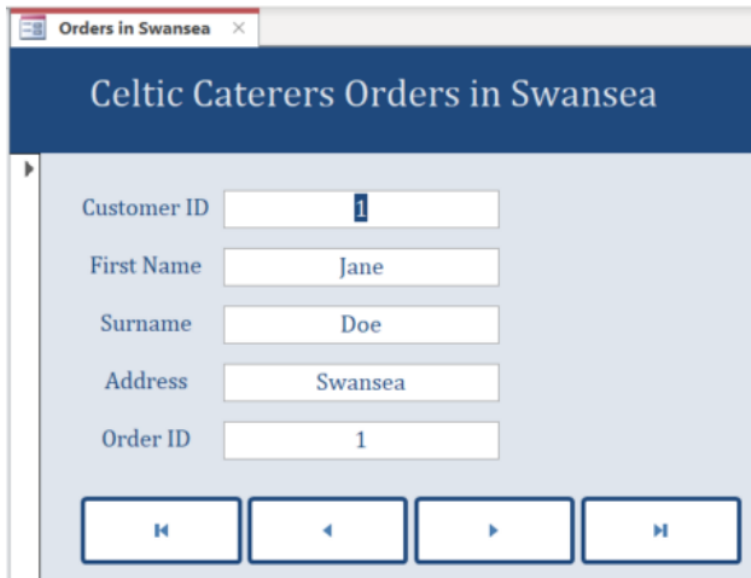
The invoice has a lot more functions on it, with the normal previous and next functions and the back to home button. There is also a print button, which will print the current form, the pencil represents adding a record, and the open report button is self-explanatory as it will open the invoices report.

Orders due before the 23rd of May 2021

The screenshot shows a web browser window with a single tab titled 'orders due before 23/05/2021'. The page has a dark blue header with the text 'Celtic Caterers Orders due before the 23rd of May 2021'. Below the header is a light blue sidebar with a right-pointing arrow. The main content area is white and contains several input fields: 'Customer ID' with value '1', 'Order ID' with value '1', 'Order Name' with value 'Victoria Cake', 'Due Date' with value '16/05/2021', and 'Staff ID' with value '3'. At the bottom of the main area are four navigation buttons with icons for first, previous, next, and last.

This shows the orders due before the 23rd of May, which allows the user to navigate between the records.

Orders in Swansea



Orders in Swansea

Celtic Caterers Orders in Swansea

Customer ID

First Name

Surname

Address

Order ID

Navigation buttons: [Double Left Arrow] [Single Left Arrow] [Single Right Arrow] [Double Right Arrow]

This shows the orders that are in Swansea, allowing the user to again navigate between the records.

Orders to be completed by Christina Jones



orders to be completed by christina jones

Orders to be Completed by Christina Jones

Staff ID

First Name

Last Name

Order ID

Order Name

Due Date

Navigation buttons: [Double Left Arrow] [Single Left Arrow] [Single Right Arrow] [Double Right Arrow]

The next three forms are again containing the different orders that needs to be completed by the different staff. The forms contain buttons that allows them to navigate between them easily.

Orders to be completed by Jimmy Cross

A screenshot of a web browser window showing a form titled "Orders to be Completed by Jimmy Cross". The browser tab is labeled "orders to be completed by jimmy cross". The form has a dark blue header with the title in white. Below the header, there are several input fields with labels to their left: "Staff ID" (value: 2), "First Name" (value: Jimmy), "Last Name" (value: Cross), "Order ID" (value: 2), "Order Name" (value: Cupcakes), and "Due Date" (value: 29/05/2021). At the bottom of the form, there are four navigation buttons: a double left arrow, a single left arrow, a single right arrow, and a double right arrow.

Staff ID	2
First Name	Jimmy
Last Name	Cross
Order ID	2
Order Name	Cupcakes
Due Date	29/05/2021

Navigation buttons: [Double Left Arrow] [Single Left Arrow] [Single Right Arrow] [Double Right Arrow]

Orders to be completed by Sandra Rees

A screenshot of a web browser window showing a form titled "Orders to be Completed by Sandra Rees". The browser tab is labeled "orders to be completed by Sandra Rees". The form has a dark blue header with the title in white. Below the header, there are several input fields with labels to their left: "Staff ID" (value: 3), "First Name" (value: Sandra), "Last Name" (value: Rees), "Order ID" (value: 1), "Order Name" (value: Victoria Cake), and "Due Date" (value: 16/05/2021). At the bottom of the form, there are four navigation buttons: a double left arrow, a single left arrow, a single right arrow, and a double right arrow.

Staff ID	3
First Name	Sandra
Last Name	Rees
Order ID	1
Order Name	Victoria Cake
Due Date	16/05/2021

Navigation buttons: [Double Left Arrow] [Single Left Arrow] [Single Right Arrow] [Double Right Arrow]

Orders sorted by completion date (soonest first)

Sorted by completion ×

Celtic Orders Sorted by Completion Date

Customer ID

First Name

Surname

Order ID

Due Date

These are the orders sorted by completion date, meaning the first record it shows is the one that the customer needs first.

Suppliers

suppliers

Supplier Information

StockID

1

Stock Supplies

Buffet Food

Supplier ID

1234

Supplier Name

British Foods

Order Date

06/05/2021

Quantity

3

⏮

⏪

⏩

⏭

🔍

🖨

And lastly, the supplier information allows the user to navigate between them easily to see each order, to go back to the home page and to print records in order to keep track of each order.

Reports

Invoices

Invoice					
Customer ID	Order ID	First Name	Last Name	Order Name	Price
1	1	Jane	Doe	Victoria Cake	£22.00
10	10	Claire	Lewis	Thai	£50.00
11	11	Peter	Richards	Mexican	£35.00
2	2	John	Jones	Cupcakes	£30.00
3	3	Ffion	Smith	Sponge	£20.00
4	4	Manon	Evans	Chocolate	£25.00
5	5	Melanie	Davies	Vanilla	£75.00
6	6	Llian	Rees	Raspberry	£70.00
7	7	Joe	Caines	Buffet	£40.00
8	8	Elizabeth	Owen	Indian	£40.00
9	9	Katherine	George	Chinese	£35.00

Orders due before 23rd of May 2021

Orders due before the 23rd of May 2021				
Customer ID	Order ID	Order Name	Due Date	Staff ID
1	1	Victoria Cake	16/05/2021	3
9	9	Chinese	14/05/2021	1
10	10	Thai	23/05/2021	2
11	11	Mexican	23/05/2021	1

Orders in Swansea

Orders in Swansea				
CustomerID	First Name	Surname	Address	OrderID
1	Jane	Doe	Swansea	1
9	Katherine	George	Swansea	9

Orders to be completed by Christina Jones

Orders to be Completed by Christina Jones					
Staff ID	First Name	Last Name	Order ID	Order Name	DueDate
1	Christina	Jones	3	Sponge	27/05/2021
1	Christina	Jones	6	Raspberry	27/05/2021
1	Christina	Jones	9	Chinese	14/05/2021
1	Christina	Jones	11	Mexican	23/05/2021

Orders to be completed by Jimmy Cross

Orders to be Completed by Jimmy Cross					
Staff ID	First Name	Last Name	Order ID	Order Name	Due Date
2	Jimmy	Cross	2	Cupcakes	29/05/2021
2	Jimmy	Cross	4	Chocolate	30/05/2021
2	Jimmy	Cross	7	Buffet	28/05/2021
2	Jimmy	Cross	10	Thai	23/05/2021

Orders to be completed by Sandra Rees

Orders to be Completed by Sandra Rees					
Staff ID	First Name	Last Name	Order ID	Order Name	Due Date
3	Sandra	Rees	1	Victoria Cake	16/05/2021
3	Sandra	Rees	5	Vanilla	29/05/2021
3	Sandra	Rees	8	Indian	28/05/2021

Orders sorted by Completion (soonest first)

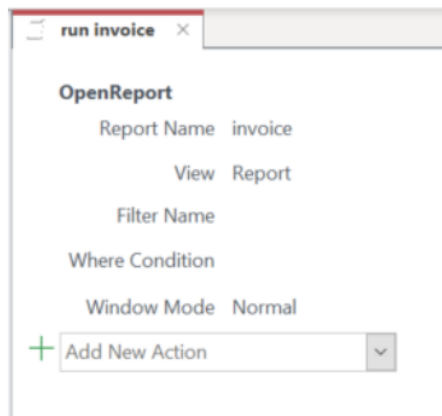
Sorted by completion ×				
Celtic Caterers Orders sorted by Completion				
Customer ID	First Name	Surname	Order ID	Due Date
9	Katherine	George	9	14/05/2021
1	Jane	Doe	1	16/05/2021
11	Peter	Richards	11	23/05/2021
10	Claire	Lewis	10	23/05/2021
6	Llian	Rees	6	27/05/2021
3	Ffion	Smith	3	27/05/2021
8	Elizabeth	Owen	8	28/05/2021
7	Joe	Caines	7	28/05/2021
5	Melanie	Davies	5	29/05/2021
2	John	Jones	2	29/05/2021
4	Manon	Evans	4	30/05/2021

Evaluation of the Reports

All the reports follow the same process as the forms, in which they display the relevant information for the criteria. They are designed to fit in with Celtic Caterers colour scheme, meaning that they look appealing to the customers, which could increase their business. If it looks appealing, then the customers will like it.

Macros

Run Invoice



The screenshot shows a window titled 'run invoice' with a close button. Inside the window, the 'OpenReport' section is expanded, showing the following properties:

- Report Name: invoice
- View: Report
- Filter Name:
- Where Condition:
- Window Mode: Normal

At the bottom, there is a green plus icon and a text box labeled 'Add New Action' with a dropdown arrow.

This is the macros that has been used on the invoice. This is so that the invoice report appears when the button is clicked. There are not many macros included in this as the buttons do the work on the forms, making it more user friendly.

Conclusion

In conclusion, this document has given a brief overview of the system that has been built on access for Celtic Caterers. For a more in depth, view of the system then please examine the access document. The system provides Celtic caterers with a system that provides them with a designed invoice they can view on the screen or send to print, which the invoice form and report achieves. Along with this, they wanted to see a record of transactions when purchasing from the supplier and are able to query information about a catering event booked. This is easily achievable by viewing the queries and looking at the forms that are specifically designed to include information on each order. Conclusively, Celtic Caterers are able to view data and information in a much more efficient way that will save them time and money when dealing with their customers and suppliers.

Database Assignment

GRADEMARK REPORT

FINAL GRADE

/100

GENERAL COMMENTS

Instructor

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