

My Learning Experience in the Past Four Weeks

Excel, Azure DevOps, and Database Design

Ogochukwu Ebele

Azure DevOps Experience

Azure DevOps Experience

Bullet points:

- Working on Azure DevOps interface with team members
- Breaking down projects into smaller tasks
- Creating epics, features, and PBIs
- Shuffling tickets on the board and committing to sprints
- Completing tasks and closing them

The screenshot shows the Azure DevOps interface for the 'Fall 2025 Interns Project'. The left sidebar menu includes 'Overview', 'Boards', 'Work items', 'Boards', 'Backlogs' (which is selected), 'Sprints', 'Queries', 'Delivery Plans', and 'Retrospectives'. The main area displays the 'Backlog' tab under 'Analytics'. A table lists backlog items:

	Order	Work Item Type	Title
+	28	Epic	My palm oil business database
		Feature	Physical Design
		Feature	Technical Writing
		Feature	Conceptual and Logical Design
		Feature	Create Tables
		Feature	The Database

Screenshots Of Azure DevOps Experience

Fall 2025 Interns Project +

As a stakeholder, you can access the backlog, task and Kanban boards, work items and manage approvals.

Fall 2025 Interns Project Team

+ New Work Item View

Backlog Analytics

Order	Work Item Type	Title
28	Epic	My palm oil business database
	Feature	> Physical Design
	Feature	> Technical Writing
	Feature	> Conceptual and Logical Design
	Feature	> Create Tables
	Feature	> The Database

Boards Work items Boards Backlogs Sprints Queries Delivery Plans Retrospectives

Fall 2025 Interns Project Team

+ New Work Item View

Backlog Analytics

Order	Work Item Type	Title
28	Epic	My palm oil business database
	Feature	> Physical Design
	Product Backlog	> Inventory Table
	Product Backlog	> Product Table
	Product Backlog	> Customer Table
	Product Backlog	> Order Detail Table
	Product Backlog	> Supplier Table
	Product Backlog	> Shipment Table

Fall 2025 Interns Project Team

As a stakeholder, you can access the backlog, task and Kanban boards, work items and manage approvals. [Learn more](#)

Board Analytics

26/20 Approved 1/20 Committed 11/20 Dev/DA Doing 0/20 Dev/DA Done 42/20

Category	Count
Approved	26/20
Committed	1/20
Dev/DA Doing	11/20
Dev/DA Done	42/20

View as backlog

Backlog items

Filter by keyword

Types: Ogochukwu States: In Progress Tags: Area: Parent Work Item:

1531 Create database documentation
1590 Transactions Table
1583 Create Transactions Table

1612 How to create a database for a school database
1641 add the constraint

Fall 2025 Interns Project Team

+ New Work Item Column Options

Taskboard Backlog Analytics

Fall Sprint 1 Person: All

20 October - 13 November 5 work days remaining

Filter by keyword

Types: Ogochukwu States: In Progress Tags: Area: Parent Work Item:

To Do In Progress Done

1531 Create database documentation
1590 Transactions Table
1583 Create Transactions Table

1612 How to create a database for a school database
1641 add the constraint

Database Design Project

Database Design Project

Bullet points:

- Designing a palm oil database
- Gathering entities and relations
- Creating ERD on Lucid Chart
- Implementing database on MySQL Workbench
- Writing articles on database design steps

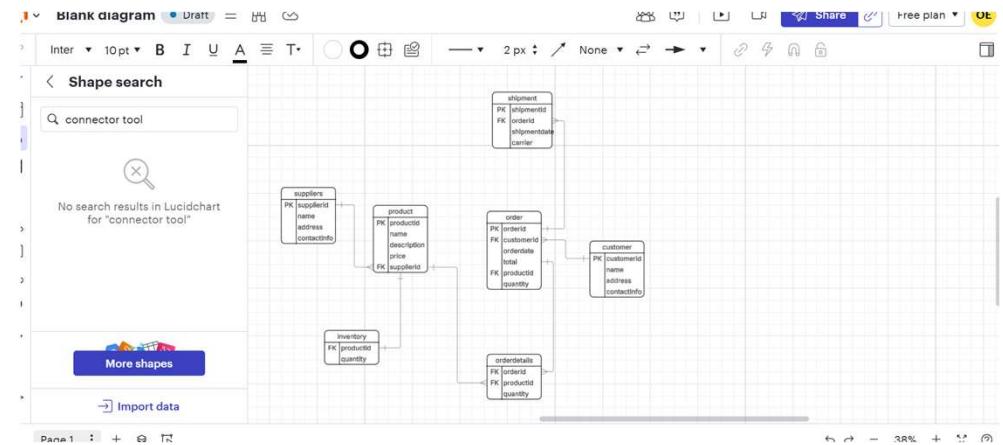
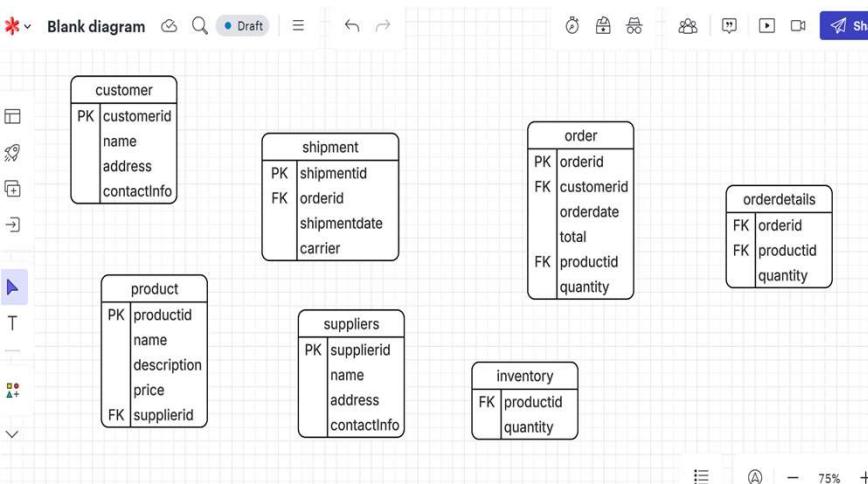
The screenshot shows the MySQL Workbench interface with the following details:

- Toolbar:** Local instance MySQL80, File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Navigator:** palmoilbiz, SQL File 3*.
- Schemas:** ecommerce, employees, heavenlyoil, mypalmoilbiz (selected), palmoilbiz.
- Script Area:** SQL code for creating the database and two tables.
- Result Grid:** Shows the structure of the Products table.

```
1 • create database MyPalmOilBiz;
2 • ◇ CREATE TABLE Suppliers (
3     SupplierID INT PRIMARY KEY not null,
4     Name VARCHAR(255) not null ,
5     Address VARCHAR(255),
6     ContactInformation VARCHAR(255) not null
7 );
8 • ◇ CREATE TABLE Products (
9     ProductID INT PRIMARY KEY not null,
10    Name VARCHAR(255) not null,
11    Description VARCHAR(255),
12    Price DECIMAL(10, 2) not null,
13    supplierid int not null,
14    FOREIGN KEY (supplierid) REFERENCES suppliers(supplierid)
```

ProductID	Name	Description	Price	supplierid
NULL	NULL	NULL	NULL	NULL

Screenshots of ERD, Database Design On MySQL Workbench, Technical Writing



```

File Edit View Query Database Server Tools Scripting Help
Navigator: palmoilbiz SQL File 3*
SCHEMAS
Schemas Filter objects
ecommerce employees heavenlyoil mypalmoilbiz
mypalmoilbiz Tables Views Stored Procedures Functions
mypalmoilbiz Tables
customers inventory orderdetails
Administration Schemas
Information Schema: mypalmoilbiz
Result Grid Filter Rows Edits Export/Import Wrap Cell Content
ProductID Name Description Price supplierid
NULL NULL NULL NULL

```

```

1 • create database MyPalmOilBiz;
2 •  CREATE TABLE Suppliers (
3     SupplierID INT PRIMARY KEY not null,
4     Name VARCHAR(255) not null ,
5     Address VARCHAR(255),
6     ContactInformation VARCHAR(255) not null
7 );
8 •  CREATE TABLE Products (
9     ProductID INT PRIMARY KEY not null,
10    Name VARCHAR(255) not null,
11    Description VARCHAR(255),
12    Price DECIMAL(10, 2) not null,
13    supplierid int not null,
14    CONSTRAINT FK_supplierid FOREIGN KEY (supplierid) REFERENCES Suppliers(supplierid)

```

Conceptual Stage:

The conceptual stage involves identifying entities, attributes, and relationships. For my palm oil distribution business, the entities are:

- **Suppliers:** Palm oil suppliers
- **Products:** Different types of palm oil products(crude palm oil, refined palm oil, etc)
- **Customers:** Food manufacturers, restaurants, retailers, and wholesalers
- **Orders:** Customer orders for palm oil products
- **Shipments:** Palm oil shipments to customers
- **Inventory:** Current stock levels of palm oil products

Relationships:

- Suppliers provide products
- Customers place orders for products
- Orders are associated with specific products and quantities

Business Rules:

- A supplier provides products.
- A product has a single inventory record.
- A customer places orders.
- An order can have multiple products with quantities.
- A product can be part of many orders.
- An order can have multiple shipments.

Excel Learning Objectives

Excel Skills Acquired

Bullet points:

- Converting range to Table by using Ctrl + T
- Converting tables to ranges
- Using Paste Values to override formulas
- Highlighting and deleting duplicate rows
- Data validation
- Calculating subtotal by groups
- Sorting and filtering data
- Creating charts from tables

The screenshot shows a Microsoft Excel spreadsheet with data in columns A through F. The first few rows contain headers like 'Division' and 'Category'. A context menu is open over the data, with the 'Create Table' option selected. A dialog box asks 'Where is the data for your table?' with the range '\$A\$1:\$F\$59' selected. The 'My table has headers' checkbox is checked. Below the table, the 'Table Design' ribbon tab is active, showing options for table properties and tools. The data table below has a header row and contains various sales figures for different categories across three months.

Division	Category	Jan	Feb	Mar	Total Sales
East	Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00
East	Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00
East	Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00
East	Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00
East	Software	\$ 2,025.00	\$ 2,200.00	\$ 1,650.00	\$ 5,875.00
East	Maintenance	\$ 1,350.00	\$ 1,500.00	\$ 1,700.00	\$ 4,550.00
East	Supplies	\$ 3,300.00	\$ 3,500.00	\$ 3,700.00	\$ 10,500.00
East	Telemarketing	\$ 3,825.00	\$ 3,725.00	\$ 3,750.00	\$ 11,300.00
East	Contractors	\$ 8,900.00	\$ 10,315.00	\$ 5,250.00	\$ 24,465.00
East	Consultants	\$ 6,250.00	\$ 6,000.00	\$ 6,500.00	\$ 18,750.00
East	Rent	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 24,000.00
East	Miscellaneous	\$ 11,500.00	\$ 12,500.00	\$ 12,500.00	\$ 36,500.00

Converting Table to Range and Replacing Formular with Values

Screenshot of Excel showing the 'Table Design' ribbon tab selected. A tooltip 'Convert to Range' is displayed over the 'Convert to Range' button in the Tools group. The table structure is as follows:

	Division	Category	Jan	Feb	Mar	Total Sales
1	East	Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00
2	East	Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00
3	East	Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00
4	East	Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00
5	East	Software	\$ 2,025.00	\$ 2,200.00	\$ 1,650.00	\$ 5,875.00
6	East	Maintenance	\$ 1,350.00	\$ 1,500.00	\$ 1,700.00	\$ 4,550.00
7	East	Supplies	\$ 3,300.00	\$ 3,500.00	\$ 3,700.00	\$ 10,500.00
8	East	Telemarketing	\$ 3,825.00	\$ 3,725.00	\$ 3,750.00	\$ 11,300.00
9	East	Contractors	\$ 8,900.00	\$ 10,315.00	\$ 5,250.00	\$ 24,465.00
10	East	Consultants	\$ 6,250.00	\$ 6,000.00	\$ 6,500.00	\$ 18,750.00
11	East	Rent	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 24,000.00
12	East	Miscellaneous	\$ 11,500.00	\$ 12,500.00	\$ 12,500.00	\$ 36,500.00

Screenshot of Excel showing the 'Home' ribbon tab selected. The 'Paste' dropdown menu is open, showing options like 'Paste Values'. The formula bar shows '=SUM(C2:E2)'. The table structure is identical to the one above.

	Division	Category	Jan	Feb	Mar	Total Sales
1	East	Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00
2	East	Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00
3	East	Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00
4	East	Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00
5	East	Software	\$ 2,025.00	\$ 2,200.00	\$ 1,650.00	\$ 5,875.00
6	East	Maintenance	\$ 1,350.00	\$ 1,500.00	\$ 1,700.00	\$ 4,550.00
7	East	Supplies	\$ 3,300.00	\$ 3,500.00	\$ 3,700.00	\$ 10,500.00
8	East	Telemarketing	\$ 3,825.00	\$ 3,725.00	\$ 3,750.00	\$ 11,300.00
9	East	Contractors	\$ 8,900.00	\$ 10,315.00	\$ 5,250.00	\$ 24,465.00
10	East	Consultants	\$ 6,250.00	\$ 6,000.00	\$ 6,500.00	\$ 18,750.00

Screenshot of Excel showing the 'Home' ribbon tab selected. The formula bar shows '=SUM(C7:E7)'. The table structure is identical to the ones above.

	Division	Category	Jan	Feb	Mar	Total Sales
1	East	Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00
2	East	Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00
3	East	Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00
4	East	Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00
5	East	Software	\$ 2,025.00	\$ 2,200.00	\$ 1,650.00	\$ 5,875.00
6	East	Maintenance	\$ 1,350.00	\$ 1,500.00	\$ 1,700.00	\$ 4,550.00
7	East	Supplies	\$ 3,300.00	\$ 3,500.00	\$ 3,700.00	\$ 10,500.00
8	East	Telemarketing	\$ 3,825.00	\$ 3,725.00	\$ 3,750.00	\$ 11,300.00
9	East	Contractors	\$ 8,900.00	\$ 10,315.00	\$ 5,250.00	\$ 24,465.00

Screenshot of Excel showing the 'Home' ribbon tab selected. The formula bar shows '2600'. The table structure is identical to the ones above.

	Division	Category	Jan	Feb	Mar	Total Sales
1	East	Technical Support	\$ 800.00	\$ 650.00	\$ 700.00	\$ 2,150.00
2	East	Telephone	\$ 900.00	\$ 850.00	\$ 850.00	\$ 2,600.00
3	East	Copying	\$ 4,850.00	\$ 3,200.00	\$ 1,155.00	\$ 9,205.00
4	East	Overhead	\$ 1,250.00	\$ 1,250.00	\$ 1,250.00	\$ 3,750.00
5	East	Software	\$ 2,025.00	\$ 2,200.00	\$ 1,650.00	\$ 5,875.00

Highlighting and Deleting Duplicates Rows

The screenshot illustrates two methods for managing duplicate rows in Microsoft Excel:

Method 1: Conditional Formatting (Left Side)

The screenshot shows the "Conditional Formatting" dialog box open over a table of employee records. The "Highlight Cells Rules" section is selected, showing various options like "Greater Than...", "Less Than...", "Between...", "Equal To...", "Text that Contains...", "A Date Occurring...", and "Duplicate Values...". The "Duplicate Values..." option is highlighted.

Emp ID	Last Name	First Name	Dept	E-mail	Phone Ext	Location	Hire Date
1814	Al-Sabah	Daoud	HR	daouda	103	Building 3	04-Mar-89
1721	Alstain	Isolede	HR	isoldea	102	Building 3	06-Aug-90
1999	Atherly	Katherine	HR	kathyra	428	Building 3	05-Jul-98
1196	Atherton	Katie	HR	katiea	289	Building 3	01-Apr-98
1908	Bankler	Rowena	SA	rowenab	155	Building 3	28-Sep-89
1792	Barton	Eileen	AT	eileenb	111	Building 1	24-Dec-90
1516	Bell	Tom	AC	tomb	105	Building 2	06-Mar-85
1284	Bellwood	Frank	MK	frankb	124	Building 1	04-Jan-85
1982	Berwick	Elaine	SA	ebewick	202	Building 3	03-Apr-97
1167	Berwick	Sam	SA	samb	119	Building 3	18-Apr-91
1673	Boughton	Frank	AD	fboughton	112	Building 2	25-Mar-92
1758	Bryne	Melia	AC	meliab	107	Building 2	18-Mar-82
1990	Chang	Jessica	MF	jessc	198	Building 1	14-Feb-98
1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
1986	Corlandt	Charles	SA	charlesc	159	Building 3	13-Apr-82
1983	Corwick	Judy	AT	judyc	154	Building 1	28-Jun-97
1964	Corwick	Rob	AC	robertc	108	Building 2	17-Nov-91
1293	Cronwith	Brent	HR	brentc	205	Building 3	14-Sep-84
1672	Dixon-Waite	Sherrie	MF	sherried	114	Building 1	16-Apr-90
1960	Fontaine	Jean	MF	jeanf	150	Building 1	13-Nov-86
1975	Franklin	Larry	AC	larryf	125	Building 2	01-Mar-96
1056	Gonzales	Joe	AT	joeg	121	Building 1	25-Oct-79
1078	Hapsbuch	Kendrick	AC	kendrichk	101	Building 2	01-Apr-86
1078	Hapsbuch	Kendrick	AC	kendrichk	101	Building 2	01-Apr-86
1152	Henders	Mark	AD	markh	118	Building 2	21-Jan-90
1075	Kane	Sheryl	AD	sheytk	126	Building 2	07-Aug-92
1509	Kegler	Pam	AT	pamk	135	Building 1	19-Jun-85
1529	Kellerman	Tommie	MF	tomk	129	Building 1	28-Jan-87
1856	Kourios	Theo	MF	theok	149	Building 1	14-Dec-87
1426	Lampstone	Pete	SA	petel	128	Building 3	08-Sep-77
1426	Lampstone	Pete	SA	petel	128	Building 3	08-Sep-77
1984	MacDonald	Bronwy	SA	bronm	204	Building 3	01-Dec-97
1676	Miller	Janet	MF	janetm	115	Building 1	26-Oct-81
1995	Mivelli	Maria	AT	mariam	198	Building 1	01-Mar-98
1359	Morton	Norman	SA	normann	153	Building 3	09-Aug-90
1931	Mueller	Ursula	AC	ursulam	110	Building 2	20-Jun-89
1723	Sammier	Mark	MK	marks	145	Building 1	10-Feb-78
1949	Sampson	Carla	SA	carlas	147	Building 3	12-Oct-81
1949	Sampson	Carla	SA	carlas	147	Building 3	12-Oct-81
1067	Scote	Gail	AT	gails	123	Building 1	20-Sep-87
1299	Simpson	Sandrea	MF	sandraes	127	Building 1	21-Dec-89
1302	Sindole	Randy	MK	randys	139	Building 1	06-Aug-84

Method 2: Data Tools (Right Side)

The screenshot shows the "Data Tools" ribbon tab selected in the ribbon bar. A callout box highlights the "Remove Duplicates" button under the "Text to Columns" section. The callout box contains the text: "Delete duplicate rows from a sheet." and "You can pick which columns should be checked for duplicate information."

Emp ID	Last Name	First Name	Dept	E-mail	Phone Ext	Location	Hire Date
1814	Al-Sabah	Daoud	HR	daouda	103	Building 3	04-Mar-89
1721	Alstain	Isolede	HR	isoldea	102	Building 3	06-Aug-90
1999	Atherly	Katherine	HR	kathyra	428	Building 3	05-Jul-98
1196	Atherton	Katie	HR	katiea	289	Building 3	01-Apr-98
1908	Bankler	Rowena	SA	rowenab	155	Building 3	28-Sep-89
1792	Barton	Eileen	AT	eileenb	111	Building 1	24-Dec-90
1516	Bell	Tom	AC	tomb	105	Building 2	06-Mar-85
1284	Bellwood	Frank	MK	frankb	124	Building 1	04-Jan-85
1982	Berwick	Elaine	SA	ebewick	202	Building 3	03-Apr-97
1167	Berwick	Sam	SA	samb	119	Building 3	18-Apr-91
1673	Boughton	Frank	AD	fboughton	112	Building 2	25-Mar-92
1758	Bryne	Melia	AC	meliab	107	Building 2	18-Mar-82
1990	Chang	Jessica	MF	jessc	198	Building 1	14-Feb-98
1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
1290	Cooper	Linda	AD	lindac	113	Building 2	03-Jan-85
1986	Corlandt	Charles	SA	charlesc	159	Building 3	13-Apr-82
1983	Corwick	Judy	AT	judyc	154	Building 1	28-Jun-97
1964	Corwick	Rob	AC	robertc	108	Building 2	17-Nov-91
1293	Cronwith	Brent	HR	brentc	205	Building 3	14-Sep-84
1672	Dixon-Waite	Sherrie	MF	sherried	114	Building 1	16-Apr-90
1960	Fontaine	Jean	MF	jeanf	150	Building 1	13-Nov-86
1975	Franklin	Larry	AC	larryf	125	Building 2	01-Mar-96
1058	Gonzales	Joe	AT	joeg	121	Building 1	25-Oct-79

Screenshots of Data Validation, Sorting, and Calculating Sub Totals By Group

Data Validation

Validation criteria: Allow: Decimal, Minimum: 10.00, Maximum: 45.00. Apply these changes to all other cells with the same settings.

ID	MAKE	MODEL	DOORS	AUTO	SMOKE	PRICE	CNVRT	IN	RATE
7	33	Ford	Festiva	2	n	n	n	n	\$19.95
8	34	Chrysler	LeBaron	2	n	n	y	y	\$24.95
9	14	Pontiac	Sunbird	4	n	n	y	y	\$24.95
10	16	Pontiac	Sunbird	2	n	n	y	y	\$19.95
11	26	Pontiac	Sunbird	4	n	n	y	y	\$19.95
12	3	Ford	Tempo	4	n	n	n	n	\$19.95
13	32	Ford	Tempo	4	n	y	n	y	\$19.95
14	4	Chevy	Astrovan	5	y	n	n	y	\$34.95
15	11	Dodge	Caravan	5	y	n	n	y	\$34.95
16	22	Dodge	Caravan	5	y	n	n	y	\$34.95
17	29	Dodge	Caravan	5	y	n	n	y	\$34.95
18	5	Chevy	Lumina	4	y	y	n	n	\$22.95
19	18	Chevy	Lumina	4	y	n	n	y	\$24.95

Order Info Sort & Filter Subtotals Charting Buyers 2015 New Hires List + Average: \$25.45 Count: 16 Sum: \$407

Accessibility: Investigate

Sort & Filter

B2: Sort A to Z, Z↓ Sort Z to A, Sort by Colour, Sheet View, Clear Filter From "Product", Filter by Colour, Text Filters, Search.

	C	D	E
1	Units	Price/Unit	Sales
2	99	\$10.00	\$990.00
3	61	\$13.00	\$793.00
4	28	\$13.50	\$378.00
5	75	\$11.20	\$840.00
6	80	\$11.20	\$896.00
7	80	\$11.20	\$896.00
8	75	\$11.00	\$825.00
9	75	\$12.65	\$948.75
10	68	\$12.65	\$860.20
11	86	\$10.00	\$860.00
12	55	\$12.55	\$690.25
13	65	\$12.55	\$815.75

Chocolate Chocolate Chip

Subtotal

B1: Add each item: Product, Use function: Sum, Add subtotal to: Salesperson, Replace current subtotals, Page break between groups, Summary below data.

	A	B	C	D	E
1	Salesperson	Product	Units	Price/Unit	Sales
2	Cattapan	Chocolate Chocolate Chip	99	\$10.00	\$990.00
3	DeMarcos	Chocolate Chocolate Chip	75	\$11.00	\$825.00
4	Packet	Chocolate Chocolate Chip	95	\$10.55	\$1,002.25
5	Patterson	Chocolate Chocolate Chip	52	\$12.00	\$624.00
6	Sergelo	Chocolate Chocolate Chip	57	\$12.55	\$715.35
7	Smith	Chocolate Chocolate Chip	70	\$11.00	\$770.00
8	Wilson	Chocolate Chocolate Chip	73	\$11.60	\$846.80
9	Cattapan	Fudge Brownie	61	\$13.00	\$783.00
10	DeMarcos	Fudge Brownie	75	\$11.00	\$825.00
11	Packet	Fudge Brownie	68	\$12.65	\$880.20
12	Patterson	Fudge Brownie	95	\$10.55	\$1,002.25
13	Sergelo	Fudge Brownie	85	\$11.00	\$935.00
14	Smith	Fudge Brownie	80	\$11.00	\$880.00
15	Wilson	Fudge Brownie	23	\$10.99	\$259.77
16	Cattapan	Strawberry	28	\$13.50	\$378.00
17	DeMarcos	Strawberry	86	\$10.00	\$860.00
18	Packet	Strawberry	90	\$10.90	\$981.00
19	Patterson	Strawberry	110	\$10.90	\$1,199.00
20	Sergelo	Strawberry	82	\$13.69	\$707.20
21	Smith	Strawberry	81	\$10.00	\$810.00
22	Wilson	Strawberry Total			\$810.00
23	Cattapan	Vanilla	75	\$12.00	\$840.00
24	DeMarcos	Vanilla	85	\$11.95	\$840.00

Chocolate Chocolate Chip Total
Fudge Brownie Total
Strawberry Total
Vanilla Total

Screenshots of Importing Data To Excel And Creating Charts In Excel Sheets

Top Left: Power BI Data Explorer

The screenshot shows the Power BI Data Explorer interface. On the left, there's a 'Navigator' pane with a search bar and a list of items: 'Select multiple items', 'Display Options', 'device dataset.xlsx [2]', 'Devices', and 'Transactions'. The 'Transactions' item is highlighted with a green border. The main area displays a table titled 'Transactions' with columns: ProductName, PaymentMethod, Quantity, UnitPrice, and Sales. The table lists various products like Smartphones, Laptops, Tablets, and Wireless Earbuds, along with their respective payment methods, quantities, unit prices, and total sales.

Top Right: Power Query Editor

This screenshot shows the Power Query Editor ribbon at the top. Below it is a list of data source options: 'From File', 'From Database', 'From Azure', 'From Fabric & Power Platform', 'From Online Services', 'From Other Sources', 'Combine Queries', 'Launch Power Query Editor...', 'Data Source Settings...', and 'Query Options'. A specific item, 'From Excel Workbook', is highlighted with a green border. A tooltip for 'From Excel Workbook' indicates it imports data from a Microsoft Excel workbook.

Bottom Left: Excel Worksheet

The screenshot shows an Excel worksheet with data for February. It includes a bar chart showing transaction amounts by payment method and a pie chart showing the distribution of payment categories. The data table below the charts is as follows:

Category	Amount (£)
BANK TRANSFER	£19,979.61
BANK TRANSFER	£53,683.96
CREDIT CARD	£9,345.90
CREDIT CARD	£49,575.60
CREDIT CARD	£78,320.06
CREDIT CARD	£128,401.16
BANK TRANSFER	£49,072.46
BANK TRANSFER	£85,275.08
BANK TRANSFER	£19,629.96
MOBILE CASH	£33,629.40
MOBILE PAYMENT	£121,188.84
BANK PAYMENT	£156,229.92
BANK TRANSFER	£38,708.00
BANK TRANSFER	£13,762.36
MOBILE PAYMENT	£8,036.76
CREDIT CARD	£10,763.88
CREDIT CARD	£9,379.34
BANK TRANSFER	£930.84

Bottom Right: Excel PivotTable

The screenshot shows an Excel PivotTable with data for January, February, and March across Product Name and Category. The data table is as follows:

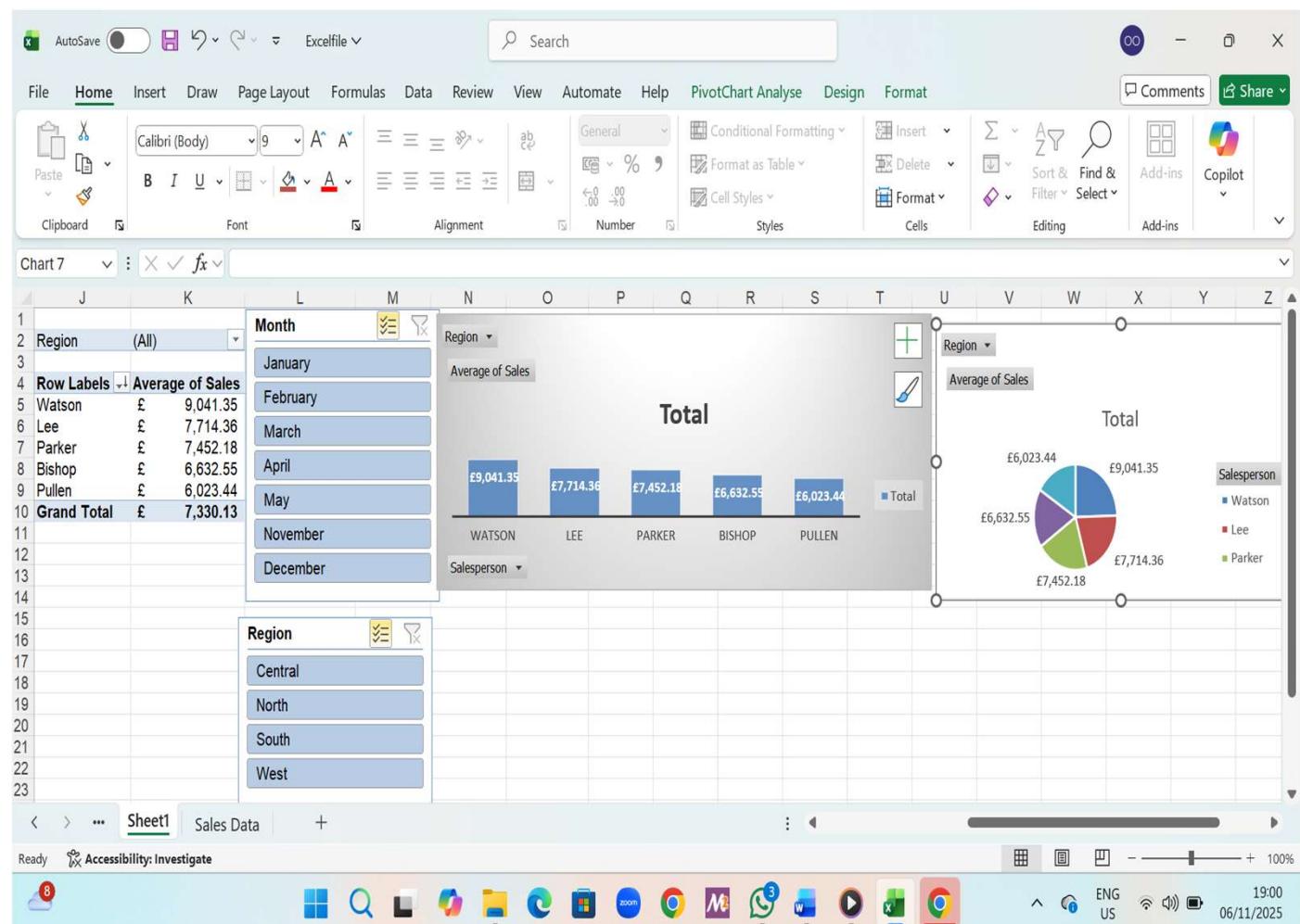
Product Name	Cartegory	January	February	March
Wireless Earbuds	Bank Transfer	£ 1,182.24	£ 19,979.61	£ 22,328.90
Smartwatch	Bank Transfer	£ 7,488.32	£ 53,663.96	£ 119,084.32
Tablet	Mobile Payment	£ 8,091.31	£ 9,340.90	£ 85,275.08
Smartphone	Cash	£ 13,610.52	£ 49,575.60	£ 104,068.80
Tablet	Credit Card	£ 14,235.84	£ 78,320.06	£ 103,508.08
Tablet	Credit Card	£ 14,756.56	£ 128,401.16	£ 7,488.32
Wireless Earbuds	Bank Transfer	£ 15,714.50	£ 49,072.46	£ 174,305.25
Smartwatch	Credit Card	£ 20,979.70	£ 85,275.08	£ 13,610.52
Smartwatch	Bank Transfer	£ 21,419.15	£ 19,629.96	£ 1,182.24
Wireless Earbuds	Cash	£ 22,328.90	£ 121,188.84	£ 4,157.60
Laptop	Mobile Payment	£ 28,357.50	£ 33,629.40	£ 8,091.31
Wireless Earbuds	Cash	£ 29,075.04	£ 156,229.92	£ 15,714.50
Tablet	Mobile Payment	£ 32,129.85	£ 39,708.00	£ 28,357.50
Smartphone	Bank Transfer	£ 39,326.45	£ 13,762.36	£ 62,284.95
Laptop	Bank Transfer	£ 62,284.95	£ 8,036.76	£ 188.44
Tablet	Mobile Payment	£ 71,921.52	£ 10,763.88	£ 14,235.84
Wireless Earbuds	Cash	£ 104,068.80	£ 1,529.67	£ 106,700.44
Smartwatch	Credit Card	£ 104,105.00	£ 107,000.00	£ 107,000.00

Creating And Analyzing Pivot Table

Pivot Table Best Practices

Bullet points:

- Ensure column names/headers are present
- Format columns correctly (numbers, accounting, general/text)
- Remove empty rows and aggregation
- Check for duplicates
- Creating Pivot Tables



Screenshots of Creating Pivot Table From Tables

This screenshot shows the Microsoft Excel ribbon with the "Insert" tab selected. In the "Tables" group, the "PivotTable" icon is highlighted. A dropdown menu titled "From Table/Range" is open, showing the text "PivotTable from table or range. Create a PivotTable using data in a table or range." Below this, a preview of the "Sales Data" table is displayed. The table has columns for Date, Product, Salesperson, Region, Sales, Units, and Order #. The "Sales" column is currently selected.

This screenshot shows the Microsoft Excel ribbon with the "PivotTable Analyse" tab selected. The "PivotTable Fields" pane on the right lists fields from the "Sales Data" table: Year, Month, Type, Salesperson, Region, Sales, Units, and Order #. The "Values" section is expanded, showing the "Sum of Sales" field. The main workspace shows a partially built PivotTable with the first row labeled "PivotTable1". The formula bar shows the formula =PivotTable1[[#All], [Sales]].

Screenshots of Pivot Table Analysis

This screenshot shows the Microsoft Excel ribbon with the 'Pivot' tab selected. The main area displays a PivotTable with data for Salespeople and their total sales. A 'PivotTable Fields' dialog box is open, allowing users to choose fields to add to the report. The 'Salesperson' field is currently selected under the 'Values' section.

	A	B	C
1	A	B	C
2			
3	Row Labels	Total Sales	
4	Bishop	£ 596,929.90	
5	Lee	£ 740,578.40	
6	Parker	£ 760,122.80	
7	Pullen	£ 505,968.95	
8	Watson	£ 650,976.90	
9	Grand Total	£ 3,254,576.95	
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			

PivotTable Fields

Choose fields to add to report:

- Year
- Month
- Type
- Salesperson** (Selected)
- Region
- Sales
- Units
- Order #

Drag fields between areas below:

Rows: Salesperson

Columns:

Values: Total Sales

Defer Layo... Update

This screenshot shows a more complex analysis setup. The 'Insert Slicers' dialog box is open, with 'Region' selected as the field to slice. The main area contains a PivotTable with data for Salespeople and their total sales, and a PivotChart showing average sales by region. A 'PivotTable Fields' pane on the right lists various fields and their current usage.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3	Row Labels	Total Sales										
4	Parker	£ 760,122.80										
5	Lee	£ 740,578.40										
6	Watson	£ 650,976.90										
7	Bishop	£ 596,929.90										
8	Pullen	£ 505,968.95										
9	Grand Total	£ 3,254,576.95										
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												

Insert Slicers

File Home Insert Draw Page Layout Formulas Data Review View Automate Help **PivotTable Analyse** Design

Selection: Insert Slicer Insert Timeline Refresh Filter Connections Actions Fields, Items, & Sets Data PivotChart Recommended PivotTables Tools Field List +/- Buttons Field Headers Show

PivotTable Fields

Choose fields to add to report:

- Year
- Month
- Type
- Salesperson**
- Region
- Sales**
- Units
- Order #

Rows: Salesperson

Columns:

Values: Average of Sales

Defer Layo... Update

PivotTable Fields

Choose fields to add to report:

- Year
- Month
- Type
- Salesperson**
- Region
- Sales**
- Units
- Order #

Rows: Salesperson

Columns:

Values: Average of Sales

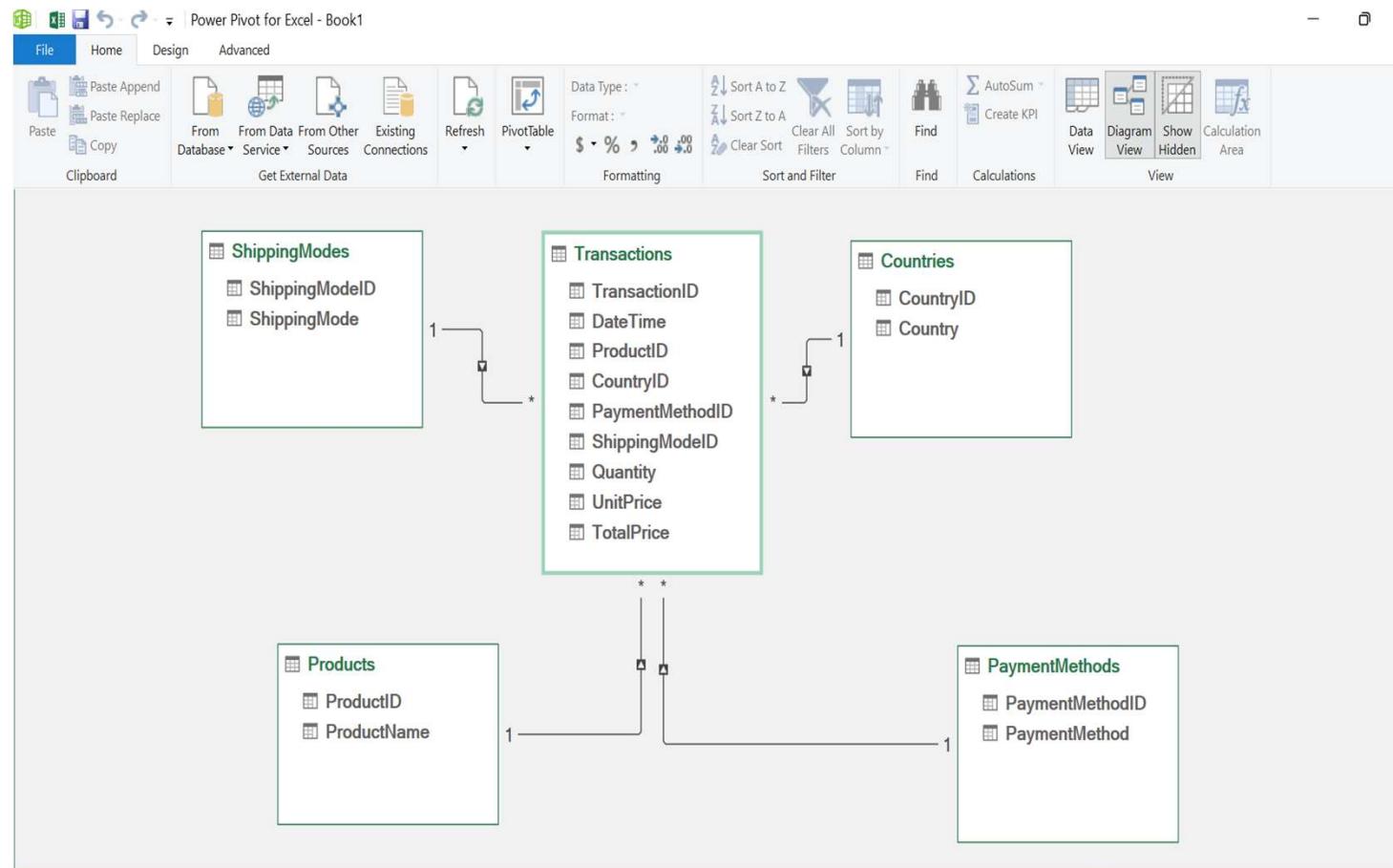
Defer Layo... Update

Power Pivot and ERD

Power Pivot and ERD Design

Bullet points:

- Enabling Excel Power Pivot
- Importing data from datasets
- Designing ERD on Power Pivot



Importing Data to Excel Power Pivot And Creating Relationships

Power Pivot for Excel - Book1

Table Import Wizard

Connect to a Data Source

You can either create a connection to a data source, or you can use one that already exists.

Others (OLEDB/ODBC)
Create a connection to a data source by using an OLE DB provider or an OLE DB for ODBC provider. Import data from the tables or views that are returned by the provider.

Multidimensional Sources
Microsoft Analysis Services
Create a connection to a SQL Server Analysis Services cube. Import data returned from an MDX query.

Data Feeds
Report
Create a connection to a Microsoft Reporting Services Report. Import data from the feed.

Other Feeds
Create a connection to a data feed. Import data from the feed.

Text Files
Excel File
Import data from an Excel file.

Text File
Import data from a text file.

< Back Next > Finish Cancel

Power Pivot for Excel - Book1

Relationships

```

    graph LR
        SM[ShippingModes] --- T[Transactions]
        T --- C[Countries]
        P[Products] --- T
        PM[PaymentMethods] --- T
    
```

Display: ENG 19:54

Power Pivot for Excel - Book1

Data View

TransactionID	DateTime	ProductID	CountryID	PaymentMethodID	ShippingModeID	Quantity	UnitPrice	TotalPrice
1	28/01/2024...	4	2	4	3	40	1529.67	88737.66
2	c014bafe-bfc6...	4	2	3	2	23471.1		
3	bc99075c-403b...	15/04/2020...	4	2	2	4	29030.4	
4	9bb0b74c-d8ce...	27/10/2023...	4	2	1	3	1344.51	
5	5c4a0f0cc-0d9f...	05/01/2021...	4	2	1	3	688.34	33728.66
6	e8ae702b-e43...	21/10/2022...	4	2	1	2	14	1409.53
7	64af8acf-cd4e...	07/12/2024...	4	2	4	45	698.26	31421.7
8	25f8cea4-9c4a...	07/11/2022...	4	2	4	1	17	1029.47
9	b0754d04-523...	01/10/2020...	4	2	3	1	6	682.53
10	0e03e213-e371...	25/04/2023...	4	2	3	1	88	766.3
11	bd257565-b0b...	18/06/2024...	4	2	2	2	89	1553.64
12	20abcc69-7255...	07/04/2024...	4	2	1	3	9	1909.14
13	7a8e1a3d-448...	21/07/2020...	4	2	4	1	88	1936.74
14	d3d8dcfc-c91a...	15/08/2023...	4	2	3	2	41	1729.9
15	0269f00d-ee99...	20/10/2020...	4	2	3	3	98	836.35
16	416024415-505...	02/07/2022...	4	2	2	27	1000.5	10454.5

Transactions ShippingModes Products PaymentMethods Countries

Record: 1 of 5,000

Conclusion

Summary of what I learnt over the past four weeks:

- Database Design: Palm oil database design
- Azure DevOps: Project management, collaboration
- Excel: Dynamic ranges, pivot tables, charts

Thank You For Listening