Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

Name:

Course Date:

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Day 1: Task 1

Please research and complete the below boxes on common laws and regulations that must be followed when working with customers data, use the below bulleted list to support your answers.

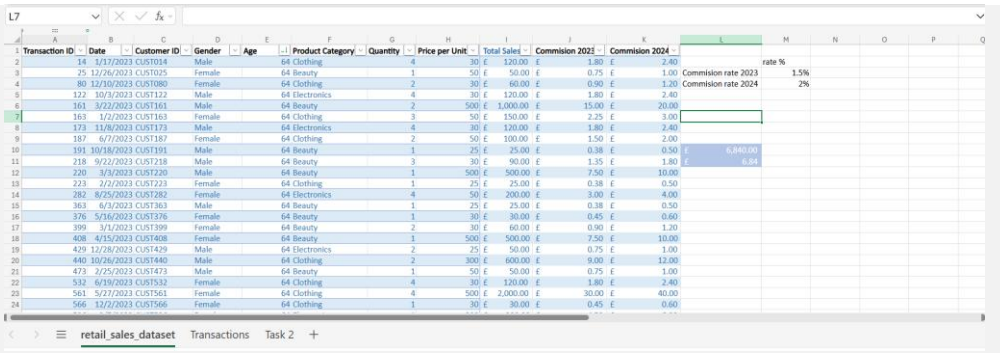
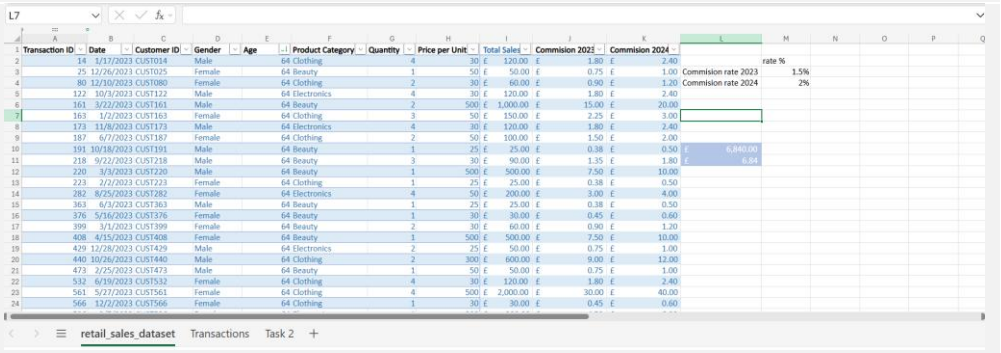
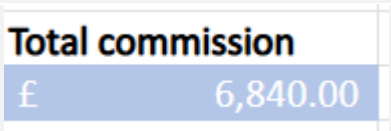
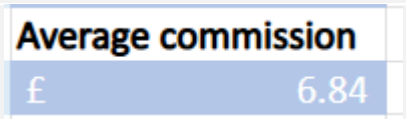
- What is it
- Why is it important
- Provide a real-world example of how you can follow it
- How does it impact working with data
- What could happen if you breached it

Data Protection Act	**What is it**	A UK law that governs how personal data is collected, stored, and used by organisations. The most recent version is the Data Protection Act 2018.
	Why is it important	It ensures individuals' personal data is handled lawfully and securely, giving people rights over their own data.
	Example	A school stores student data in a secure system and only shares it with authorised staff.
	Impact on working with data	You must follow rules about how long to keep data, keep it up to date, and store it safely.
	What could happen if you breached it	You could face fines from the ICO, damage to your reputation, or legal action.
GDPR	**What is it**	A law from the European Union (and adopted in the UK as UK GDPR) that strengthens data protection for individuals.
	Why is it important	It gives people more control over their data and makes businesses more accountable for how they use it.
	Example	A business gets clear consent from customers before sending marketing emails.
	Impact on working with data	You must get consent, allow people to access or delete their data, and only collect what's necessary.
	What could happen if you breached it	Very large fines (up to £17.5 million), investigations, and loss of customer trust.
Freedom of Information Act	**What is it**	A UK law that gives the public the right to access information held by public authorities.
	Why is it important	It promotes transparency and accountability in public organisations.
	Example	A journalist requests public spending data from a local council, and they provide it within 20 working days.
	Impact on working with data	Public organisations must organise and store data in a way that makes it accessible when requested.
	What could happen if you breached it	If you ignore or delay requests without good reason, you may face action from the Information Commissioner.
Computer Misuse Act	**What is it**	A UK law that makes it illegal to access or modify computer systems or data without permission.
	Why is it important	It protects data and systems from hacking, viruses, and cybercrime.
	Example	An employee is trained not to access personal customer files they are not authorised to see.
	Impact on working with data	You must only access data you're allowed to, and avoid sharing passwords or installing unauthorised software.
	What could happen if you breached it	You could be dismissed from work, fined, or even face criminal charges and prison.

Day 2: Task 1

Please research and complete the following tasks within the retail-sales_dataset.xlsx document, paste a print screen into the provided boxes below:

1. In the sheet 'retail_sales_dataset' add all available data between columns **A – H** into a 'table'
2. Using the 'filter' function, filter 'Age' to 'largest to smallest'
3. Using the 'SUM' function, show me the commission total in cell '**P10'**
4. Using the 'AVERAGE' function, show me the average commission in cell **'P11'**

Print screen 1	
Print screen 2	
Print screen 3	
Print screen 4	

Day 2: Task 2

Please research and complete the following tasks within the retail-sales_dataset.xlsx document, paste print screens into the provided box below:

Student name	English	Mathematic	Science	Average	Highest score
Carol	75	85	85		
Ted	80	75	90		
Khan	85	75	80		
Harry	80	70	80		
Sarah	80	70	80		
John	65	80	70		
Linda	90	50	70		
Edward	55	80	60		
Mary	55	70	65		
Thomas	55	30	65		

Task

1) Apply filter and sorting to show the best students in each subject.
2) Calculate the average for all students and fill into Column E. (Use formula)
3) Using the =MAX fucntion, tell me what the students highest score was in column F.
4) Apply filter and sorting to show the best student in this classroom by average.
5) Apply filter and sorting to show the best student in this classroom by highest score.
6) Use conditional formatting to clearly identify the highest and lowest average scores

Print screen 1

1.1 Best student in English

Student name	English	Mathematic	Scienc	Average	Highest scor
Linda	90	50	70		
Khan	85	75	80		
Ted	80	75	90		
Harry	80	70	80		
Sarah	80	70	80		
Carol	75	85	85		
John	65	80	70		
Edward	55	80	60		
Mary	55	70	65		
Thomas	55	30	65		

1.2 Best student in Math

Student name	English	Mathematic	Scienc	Average	Highest scor
Carol	75	85	85		
John	65	80	70		
Edward	55	80	60		
Khan	85	75	80		
Ted	80	75	90		
Harry	80	70	80		
Sarah	80	70	80		
Mary	55	70	65		
Linda	90	50	70		
Thomas	55	30	65		

1.3 Best student in Science

Student name	English	Mathematic	Scienc	Average	Highest scor
Ted	80	75	90		
Carol	75	85	85		
Khan	85	75	80		
Harry	80	70	80		
Sarah	80	70	80		
John	65	80	70		
Linda	90	50	70		
Mary	55	70	65		
Thomas	55	30	65		
Edward	55	80	60		

2. Average for all students

E2 =AVERAGE(Таблица4[@[English]:[Science]])

	A	B	C	D	E	F
1	Student name	English	Mathematic	Scienc	Average	Highest scor
2	Ted	80	75	90	81.67	
3	Carol	75	85	85	81.67	
4	Khan	85	75	80	80.00	
5	Harry	80	70	80	76.67	
6	Sarah	80	70	80	76.67	
7	John	65	80	70	71.67	
8	Linda	90	50	70	70.00	
9	Mary	55	70	65	63.33	
10	Thomas	55	30	65	50.00	
11	Edward	55	80	60	65.00	

3. The student's highest score is 90:

F2 =MAX(Таблиця4[@[English]:[Science]])

	A	B	C	D	E	F
1	Student name	Englisl	Mathematic	Scienc	Average	Highest scor
2	Ted	80	75	90	81.67	90
3	Carol	75	85	85	81.67	85
4	Khan	85	75	80	80.00	85
5	Harry	80	70	80	76.67	80
6	Sarah	80	70	80	76.67	80
7	John	65	80	70	71.67	80
8	Linda	90	50	70	70.00	90
9	Mary	55	70	65	63.33	70
10	Thomas	55	30	65	50.00	65
11	Edward	55	80	60	65.00	80
12						90

4. The best student in this classroom by average:

Student name	Englisl	Mathematic	Scienc	Average	Highest scor
Ted	80	75	90	81.67	90
Carol	75	85	85	81.67	85
Khan	85	75	80	80.00	85
Harry	80	70	80	76.67	80
Sarah	80	70	80	76.67	80
John	65	80	70	71.67	80
Linda	90	50	70	70.00	90
Edward	55	80	60	65.00	80
Mary	55	70	65	63.33	70
Thomas	55	30	65	50.00	65
					90

5. The best student in this classroom by highest score:

Student name	Englisl	Mathematic	Scienc	Average	Highest scor
Ted	80	75	90	81.67	90
Linda	90	50	70	70.00	90
Carol	75	85	85	81.67	85
Khan	85	75	80	80.00	85
Harry	80	70	80	76.67	80
Sarah	80	70	80	76.67	80
John	65	80	70	71.67	80
Edward	55	80	60	65.00	80
Mary	55	70	65	63.33	70
Thomas	55	30	65	50.00	65
					90

6. Conditional formatting

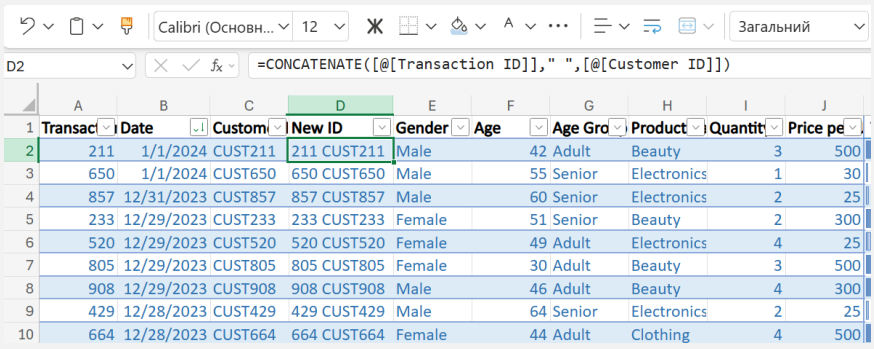
Student name	English	Mathematic	Scienc	Average	Highest scor
Ted	80	75	90	81.67	90
Linda	90	50	70	70.00	90
Carol	75	85	85	81.67	85
Khan	85	75	80	80.00	85
Harry	80	70	80	76.67	80
Sarah	80	70	80	76.67	80
John	65	80	70	71.67	80
Edward	55	80	60	65.00	80
Mary	55	70	65	63.33	70
Thomas	55	30	65	50.00	65
					90

Day 2: Task 3

Using the skills developed today, have some fun with the data set you have imported. Paste your work below and enjoy!

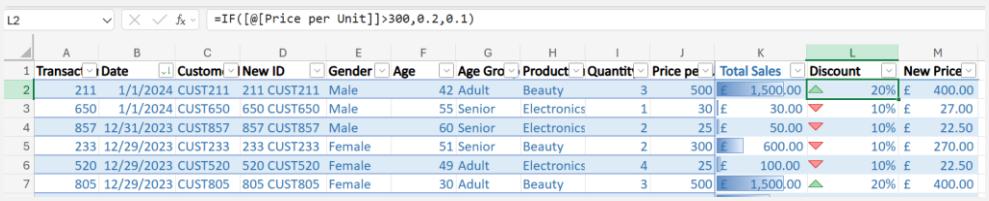
Print screen 1

1. Add new field “New ID”



	A	B	C	D	E	F	G	H	I	J
1	Transac	Date	Custom	New ID	Gender	Age	Age Gro	Product	Quantit	Price pe
2	211	1/1/2024	CUST211	211 CUST211	Male	42	Adult	Beauty	3	500
3	650	1/1/2024	CUST650	650 CUST650	Male	55	Senior	Electronics	1	30
4	857	12/31/2023	CUST857	857 CUST857	Male	60	Senior	Electronics	2	25
5	233	12/29/2023	CUST233	233 CUST233	Female	51	Senior	Beauty	2	300
6	520	12/29/2023	CUST520	520 CUST520	Female	49	Adult	Electronics	4	25
7	805	12/29/2023	CUST805	805 CUST805	Female	30	Adult	Beauty	3	500
8	908	12/29/2023	CUST908	908 CUST908	Male	46	Adult	Beauty	4	300
9	429	12/28/2023	CUST429	429 CUST429	Male	64	Senior	Electronics	2	25
10	664	12/28/2023	CUST664	664 CUST664	Female	44	Adult	Clothing	4	500

2. Add new field “Discount”



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Transac	Date	Custom	New ID	Gender	Age	Age Gro	Product	Quantit	Price pe	Total Sales	Discount	New Price
2	211	1/1/2024	CUST211	211 CUST211	Male	42	Adult	Beauty	3	500	£ 1,500.00	20%	£ 400.00
3	650	1/1/2024	CUST650	650 CUST650	Male	55	Senior	Electronics	1	30	£ 30.00	10%	£ 27.00
4	857	12/31/2023	CUST857	857 CUST857	Male	60	Senior	Electronics	2	25	£ 50.00	10%	£ 22.50
5	233	12/29/2023	CUST233	233 CUST233	Female	51	Senior	Beauty	2	300	£ 600.00	10%	£ 270.00
6	520	12/29/2023	CUST520	520 CUST520	Female	49	Adult	Electronics	4	25	£ 100.00	10%	£ 22.50
7	805	12/29/2023	CUST805	805 CUST805	Female	30	Adult	Beauty	3	500	£ 1,500.00	20%	£ 400.00

3. Calculated total sales for different categories

P3 =SUMIFS($K:$K,$H:$H,P2,$G:$G,$O3)

	Beauty	Clothing	Electronics
Adult	£ 68,030.00	£ 62,360.00	£ 59,300.00
Senior	£ 34,085.00	£ 47,070.00	£ 62,000.00
Young Adult	£ 41,400.00	£ 46,150.00	£ 35,605.00
GRANT TOTALS	£143,515.00	£155,580.00	£156,905.00

4. Calculated sales in December

P13 =VLOOKUP(O13,B2:K1001,9,FALSE)

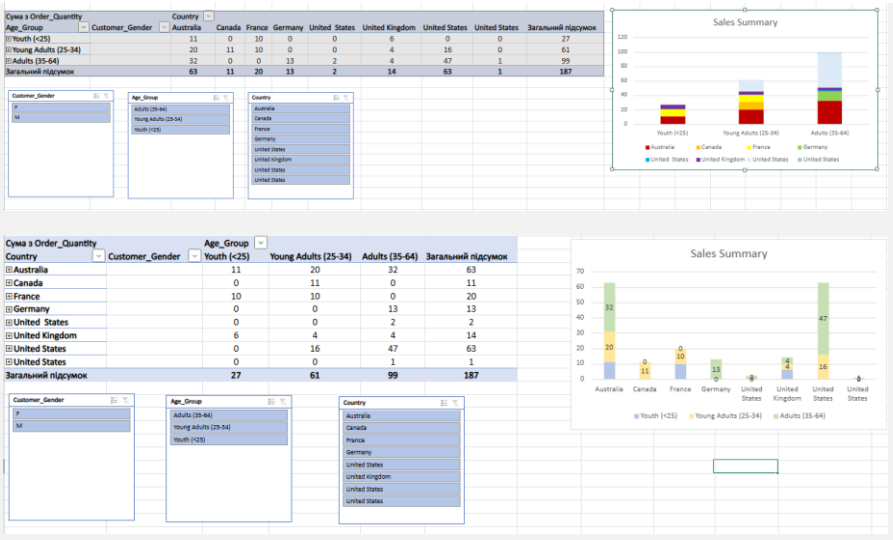
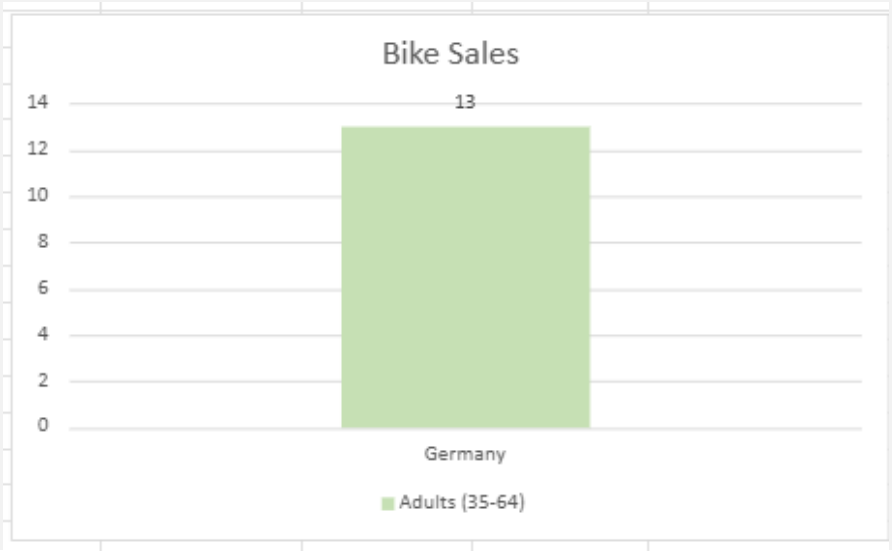
Sales in December		
Date		Total Sales
12/31/2023	☆	25
12/29/2023	☆	300
12/28/2023	☆	25
12/27/2023	☆	50
12/26/2023	☆	50
12/25/2023	☆	300
12/24/2023	☆	50
12/23/2023	☆	25
12/22/2023	★	500
12/21/2023	☆	300
12/20/2023	☆	50
12/19/2023	☆	300
12/5/2023	★	500
12/4/2023	★	500
12/3/2023	☆	300
12/2/2023	★	500
12/1/2023	☆	30
MAX		500
MIN		25
Total		7285

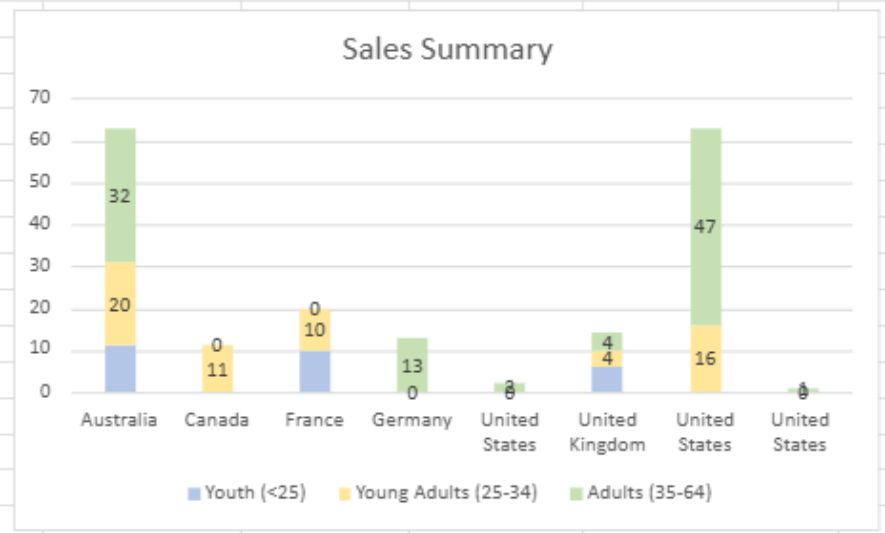
Day 3: Task 1

Please download the dataset 'Day_3_Task_1_Bike_Sales_Pivot_Lab.xlsx' from here.

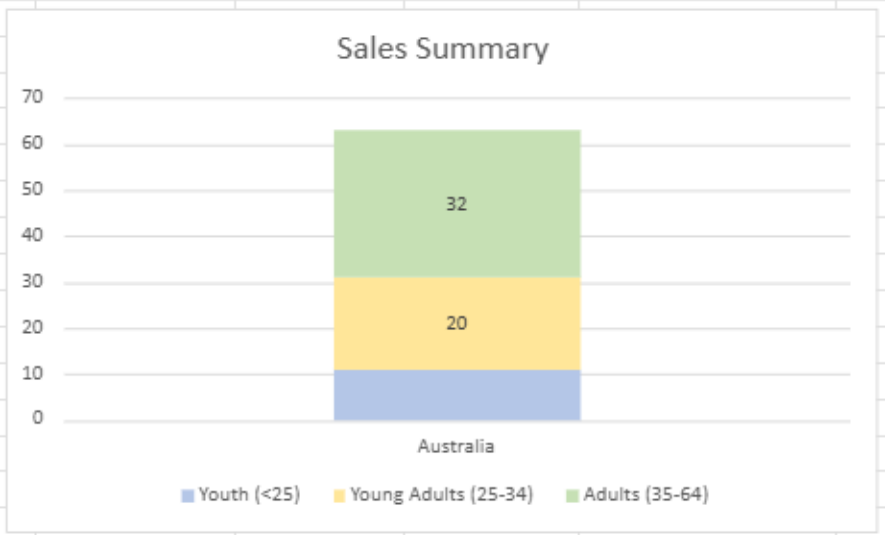
The lab instructions can be found here. Do not worry if you do not complete the lab, just working with data and playing with the pivot table will be good experience.

Please paste your final pivot table below and complete the reflection questions:

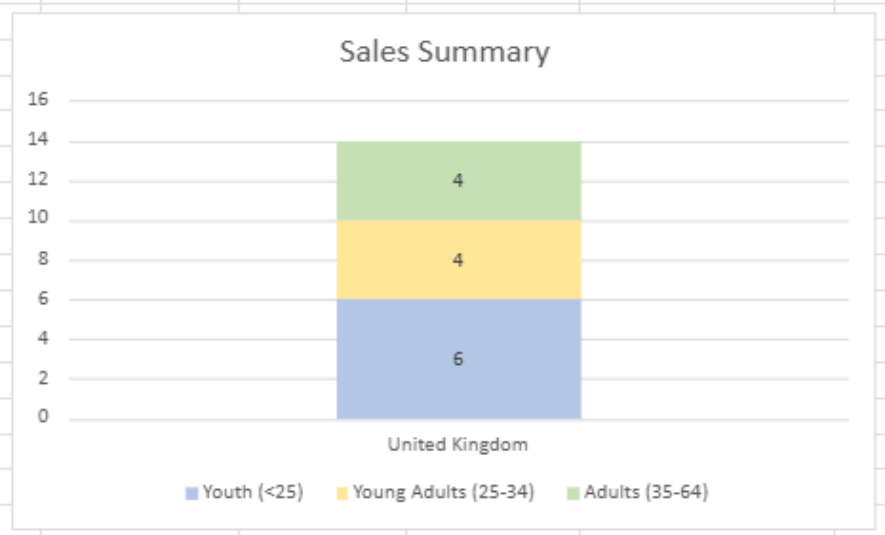
Print screen 1	
In which markets does Germany have customers?	**Adults (35-64)** 
What country has sales in all markets?	Australia and United Kingdom



Australia

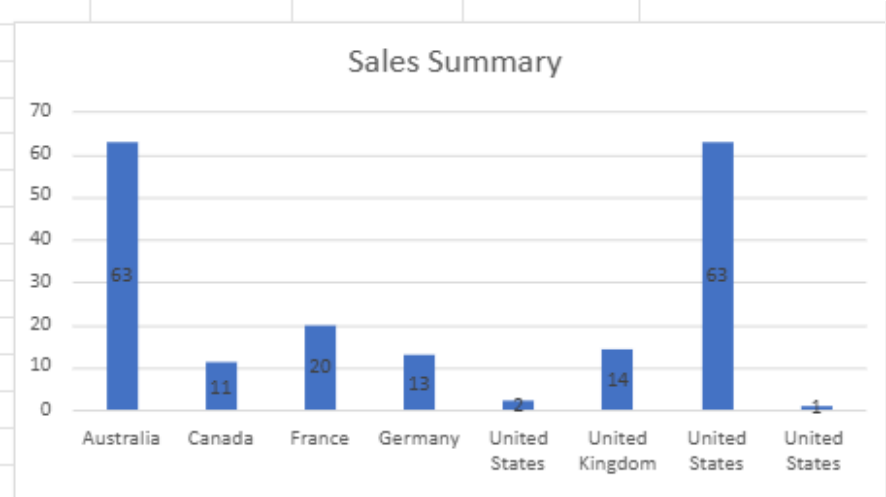
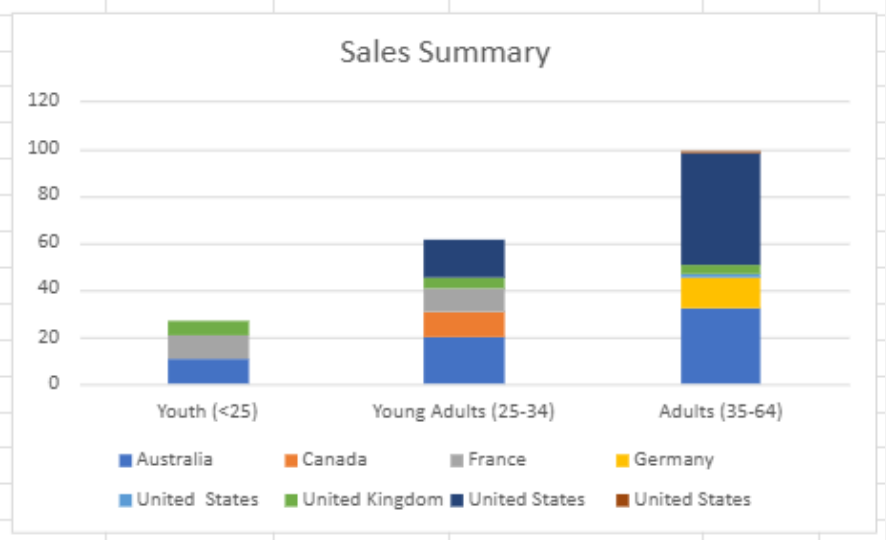
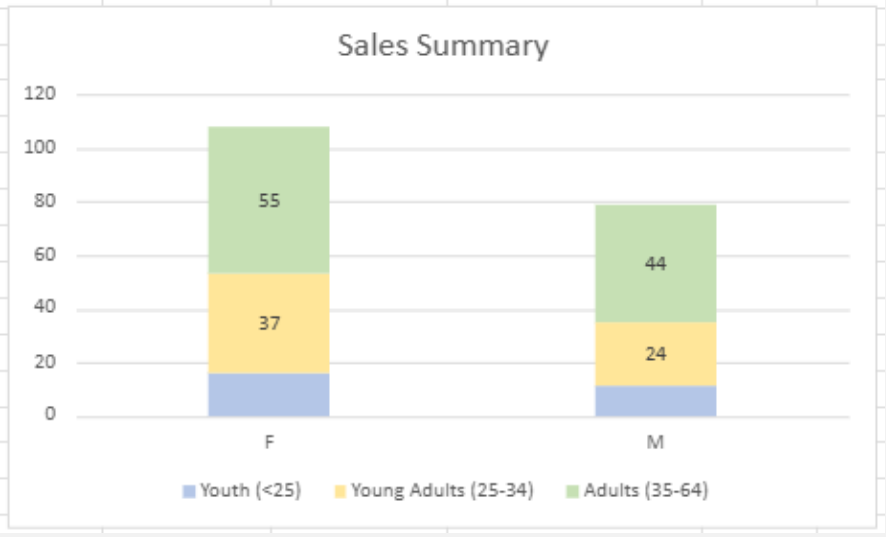


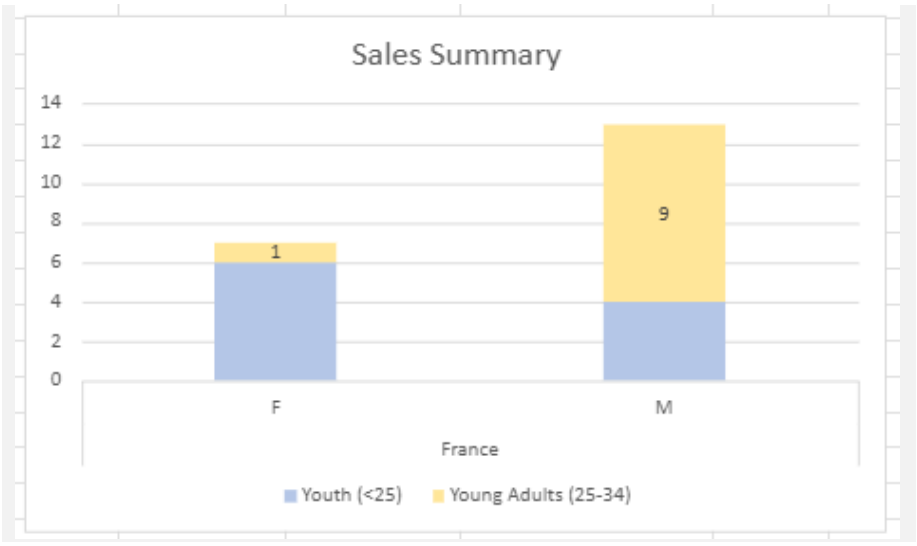
United Kingdom



What are the most profitable markets by

By country - United States

country, age group, and gender?	 Age group - Adults (35-64)  Gender –Female 
Any other findings?	France does not has sales in Adults (35-64) market



Day 3: Task 2

The dataset below tracks the sales performance of different products in various counties in England. Please paste the dataset into a blank Excel workbook. Your task is to:

- **Create a Pivot Table** to summarise the data by county and product.
- **Use the SWITCH function** to categorise products based on their sales volume.

Dataset:

County	Product	Sales Volume
Yorkshire	Laptops	500
Yorkshire	Smartphones	200
Cornwall	Laptops	700
Cornwall	Printers	400
Lancashire	Smartphones	150
Lancashire	Laptops	600
Essex	Printers	800
Essex	Smartphones	300
Durham	Laptops	250
Durham	Printers	300
Greater Manchester	Smartphones	600
Greater Manchester	Laptops	400

Step 1: Create a Pivot Table

- Select the dataset (columns A to C).
- Insert a Pivot Table to summarise the data by **County** in the rows and **Products** in the columns. Use **Sales Volume** as the value to be summarised.

Step 2: Use the SWITCH Function

In a new column next to your data, use the SWITCH function to categorise products based on **Sales Volume** as follows:

- For sales greater than 600: **"High"**
- For sales between 300 and 600: **"Medium"**
- For sales less than 300: **"Low"**

SWITCH Function Example:

```
=SWITCH(TRUE, C2 > 600, "High", C2 >= 300, "Medium", "Low")
```

- Apply this formula to each row, and check if the products are categorised correctly.

Submission:

- A completed Pivot Table summarising sales by county and product.
- A new column in the dataset categorising products by sales volume using the SWITCH function.
  - Please paste your completed work below

Print screen 1

Data

County	Product	Sales Volume	Product Category
Yorkshire	Laptops	500	Medium
Yorkshire	Smartphones	200	Low
Cornwall	Laptops	700	High
Cornwall	Printers	400	Medium
Lancashire	Smartphones	150	Low
Lancashire	Laptops	600	Medium
Essex	Printers	800	High
Essex	Smartphones	300	Medium
Durham	Laptops	250	Low
Durham	Printers	300	Medium
Greater Manchester	Smartphones	600	Medium
Greater Manchester	Laptops	400	Medium

Pivot Table

Сума з Sales Volume	Product				
County	Laptops	Printers	Smartphones	Grand total	Product Category
Cornwall	700	400	0	1100	High
Durham	250	300	0	550	Medium
Essex	0	800	300	1100	High
Greater Manchester	400	0	600	1000	High
Lancashire	600	0	150	750	High
Yorkshire	500	0	200	700	High
Grand total	**2450**	**1500**	**1250**	**5200**	

Day 3: Task 3

Please download the dataset 'Day_3_Task_3_Bike_Sales_Visualisations_Lab.xlsx' from here.

The lab instructions can be found here. Do not worry if you do not complete the lab, just working with data and playing with the charts will be good experience.

Please paste your results below:

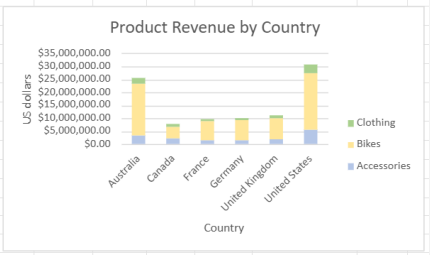
Print screen 1

Part 1: Creating a Line Chart

Year	Annual Profit	Annual Revenue
2017	4065680	10289670
2018	7747551	17028380
2019	7417353	15705990
2020	9909624	22405052
2021	12986202	29747226
Загальний пі	42126410	95176318

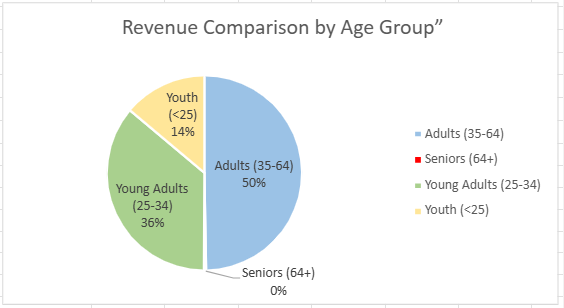
Part 2: Creating a Column Chart

Sum of Revenue	Product_Category			
Country	Accessories	Bikes	Clothing	Grand Total
Australia	3284787	20231486	1911313	25427586
Canada	2305298	4317696	1391542	8014536
France	1627689	7378349	841175	9847213
Germany	1724549	7544500	713154	9982203
United Kingdom	1951000	8184668	954338	11090006
United States	5819323	21551497	3443954	30814774
Grand Total	16712646	69208196	9255476	95176318



Part 3: Creating a Pie Char

Age_Group	Sum of Revenue
Adults (35-64)	47323876
Seniors (64+)	339700
Young Adults (25-34)	34310905
Youth (<25)	13201837
Grand Total	95176318



Day 4: Task 1

You have been asked to deliver your analysis findings to the board of directors, within your analysis you have identified that customers are leaving your company at the 12-month point, this is typically when they receive their renewal price.

Conduct research and complete the below questions:

How would you prepare for the delivery?

- **Understand your audience:** Research the board members' priorities and tailor your language and focus accordingly.
- **Clarify key findings:** Summarize the main insight (e.g. churn at 12 months) and its impact on revenue or growth.
- **Anticipate questions:** Prepare data to answer potential concerns like “Why are they leaving?” and “What can we do?”
- **Practice your presentation:** Rehearse with

	colleagues or mentors to get feedback and build confidence. • **Backup data:** Ensure all charts, stats, and claims are well-sourced and accurate.
What tools would you use for the delivery?	• **Microsoft PowerPoint** – To present key insights visually with slides. • **Excel** – To support raw data analysis and charts. • **Power BI or Tableau** – For interactive dashboards or trend visualisation.
What is prospecting and why would you complete this before your delivery?	**Prospecting** is the process of **researching and gathering information** about your audience (in this case, board members). **Why do it?** • To understand what matters to them (financials, growth, risk). • To tailor your language, recommendations, and tone. • To align your message with company goals and leadership priorities.
Tell me best practices for public speaking and providing updates to senior	• **Be concise and direct** – Senior leaders want the "so what?" quickly.

leaders	• **Use facts and evidence**, not just opinions. • **Maintain confident posture and voice** – It conveys credibility. • **Pause for emphasis** – Helps key messages land. • **Avoid jargon** – Use clear, business-relevant language. • **Summarise next steps and actions clearly**.
What will you show the board in your delivery?	• A clear **summary of the analysis findings** (customer churn at 12 months). • **Data trends**: Retention curve, customer numbers over time, drop-off point. • **Customer feedback** or survey results if available. • **Benchmarking** vs competitors (if others offer better renewal incentives). • **Strategic recommendations**: Pricing models, retention plans, customer success efforts. • **Impact projections**: What could change if action is taken.
How will you articulate the changes that are needed?	- **Problem**: "We lose 30% of customers at 12 months." - **Root Cause**: "This coincides with when they receive renewal pricing." - **Impact**: "This costs us approximately £X per year." - **Solution**: "Introduce personalised renewal offers or loyalty rewards." - **Outcome**: "We project a 10–15% improvement in retention." Use simple, confident language like: "To address this, we recommend introducing tiered renewal pricing based on customer engagement and loyalty. This change could reduce churn and increase lifetime value."
Provide a list of online resources and	

videos that will support your preparation for public speaking

Resource	Type	Why It's Good
TED Talks: Chris Anderson – "TED's Secret to Great Public Speaking"	Video	Clear framework for impactful speaking
Toastmasters International	Organization	Local clubs to practice public speaking
Duarte's Slide:ology	Book & blog	Great for building story-based slides
LinkedIn Learning – Public Speaking Foundations	Course	Step-by-step confidence-building

Evaluate tools that provide visualisation.

Tell me what they are.

Tool	Strengths	Use Case
Excel	Simple, quick charts, widely used	Small data summaries
Power BI	Interactive dashboards, live data updates	Executive overviews, trend tracking
Tableau	Advanced visuals, storytelling with data	Detailed, layered analysis
Canva	Easy infographics & visuals	One-pagers, visual summaries

Tell me what you would choose when delivering your presentation and why

Chosen Tools:

- **Canva -** For clear structure and control during the board presentation.
- **Power BI** – For a polished, interactive visualisation of customer churn trends.

Why?

- **Canva** provides control over the flow of the message.
- Power BI allows for drill-down questions from the

board.

Course Notes

It is recommended to take notes from the course, use the space below to do so, or use the revision guide shared with the class:

We have included a range of additional links to further resources and information that you may find useful, these can be found within your revision guide.

END OF WORKBOOK

Please check through your work thoroughly before submitting and update the table of contents if required.

Please send your completed work booklet to your trainer.