Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

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Course Date: 12/05/2025

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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	• The data protection Act is a UK law that monitors how personal information is used, stored and shared by different organisations. • It is important because it ensures personal data is handled lawfully and fairly by organisations, preventing misuse and protecting individual's rights.

	• Example: handling customer survey data. I think customers personal details should be store securely with password protection. Also data should be collected with clear consent and used only for the specific purpose stated. This ensures compliance with principles like data minimization, purpose limitation, and integrity. Impacts of working with data: • Compliance: Organizations must follow laws governing data collection and usage, requiring clear privacy policies and consent. • Trust**:** Proper data management builds consumer trust and loyalty. • Resources: Implementing data privacy measures involves cost for legal compliance and technologies What if we breach the data? • Legal Penalties: Organizations may face significant fines and legal actions. • Reputation Damage: Breaches can harm customer trust and brand reputation. • Operational Disruptions: Managing breaches diverts resources and can impact business operations.
GDPR	**GDPR** stands for the **General Data Protection Regulation**. A data privacy law that came into effect in May 2018 across the European Union, including the UK (which retained it post-Brexit under UK GDPR). It sets rules for how organizations collect, store, and use personal data, giving individuals more control over their information. • Lawfulness, fairness, and transparency • Purpose limitation (use data only for specified reasons) • Data minimization (collect only what's necessary) • Accuracy and storage limitation • Security and accountability Example: An example of GDPR in action is when a company collects email addresses for a newsletter: under GDPR, they must clearly explain why they're collecting the emails and get the user's explicit consent before using them. Consequences of GDPR Breach: • Fines: Up to €20 million or 4% of global annual turnover (whichever is higher), for serious violations. • Reputational Damage: Loss of trust from users, customers, and partners. • Legal Action: Data subjects may sue for damages if their rights are violated. • Operational Disruption: Investigations by Data Protection Authorities (DPAs) may require audits, data access restrictions, or even temporary bans on processing data. • Mandatory Notifications: You must report serious breaches within 72 hours to a supervisory authority and sometimes to affected individuals.

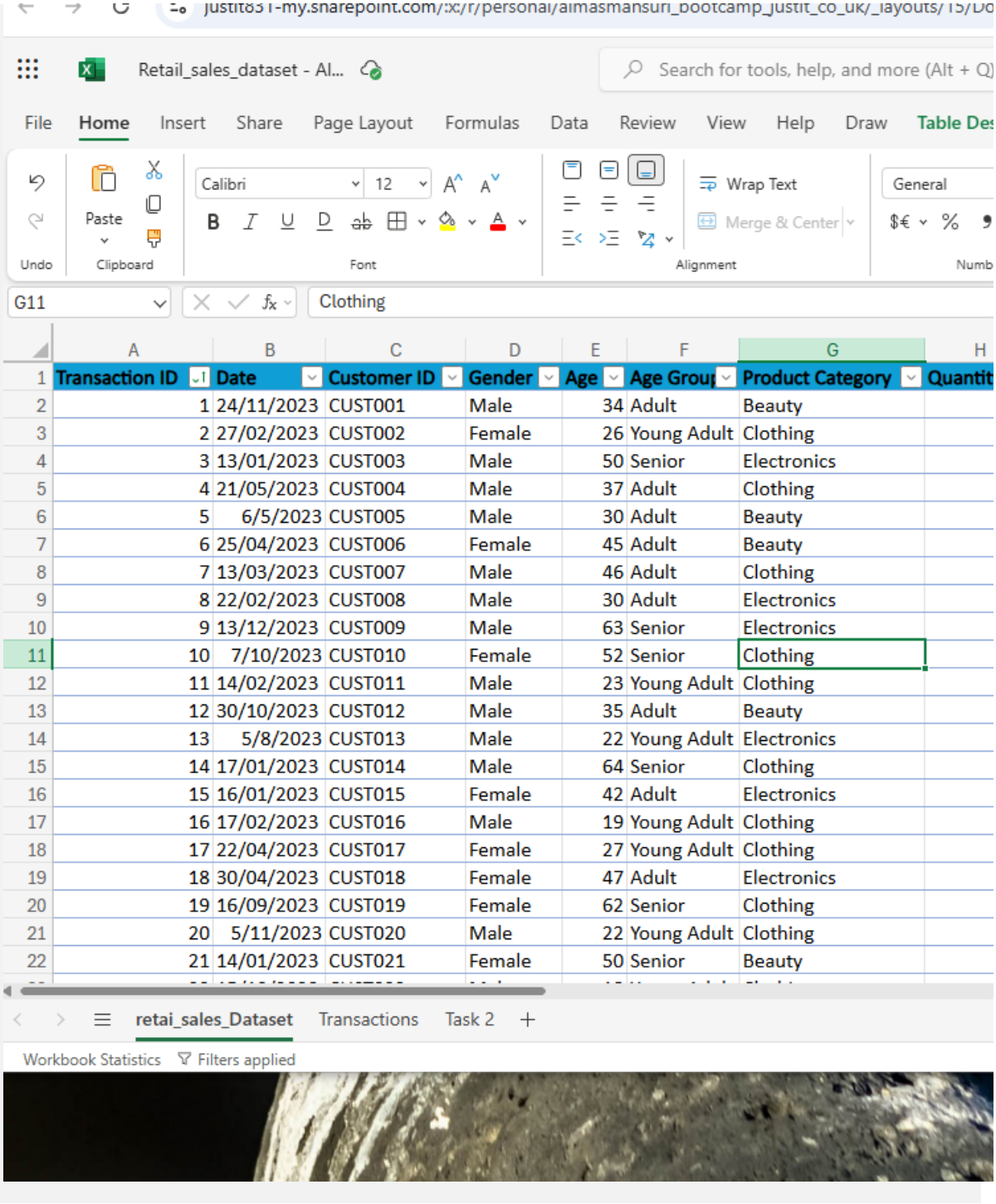
Freedom of Information Act	• UK legislation that grants the public the right to access information held by public authorities Examples: • Government departments, local councils, the NHS, schools, and police forces. • Aims to promote transparency and accountability in public administration What happens if it is breached? • Enforcement Actions: The Information Commissioner's Office (ICO) can issue decision notices requiring authorities to comply with the Act • Investigations: The ICO can investigate instances of criminal destruction, alteration, or concealment of information. • Appeals: Individuals can appeal decisions to the Information Rights Tribunal. • Criminal Penalties: In severe cases, such as intentionally destroying or concealing information to avoid disclosure, individuals can face criminal charges, including fines or imprisonment. • Reputation Damage: Failing to comply with FOIA can harm the reputation of the public authority, as it may be seen as untrustworthy or secretive.
Computer Misuse Act	The Computer Misuse Act 1990 is a law designed to protect computer systems and data. It criminalizes activities such as: • Unauthorized access to computer systems (hacking) • Unauthorized modification of data (e.g., introducing viruses) • Using computers to commit further offenses (e.g., fraud or identity theft) • Unauthorized acts that impair the operation of a computer (e.g., denial-of-service attacks) Example: Someone intentionally accessing a colleague's computer without permission to view or copy files even if they don't change anything. What happens if it is breached? Breaching the Computer Misuse Act is a criminal offense. Consequences can include: • Fines of thousands of pounds • Prison sentences (up to life imprisonment for serious offenses) • Loss of job or career prospects • Damage to your reputation and potential civil lawsuits

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:

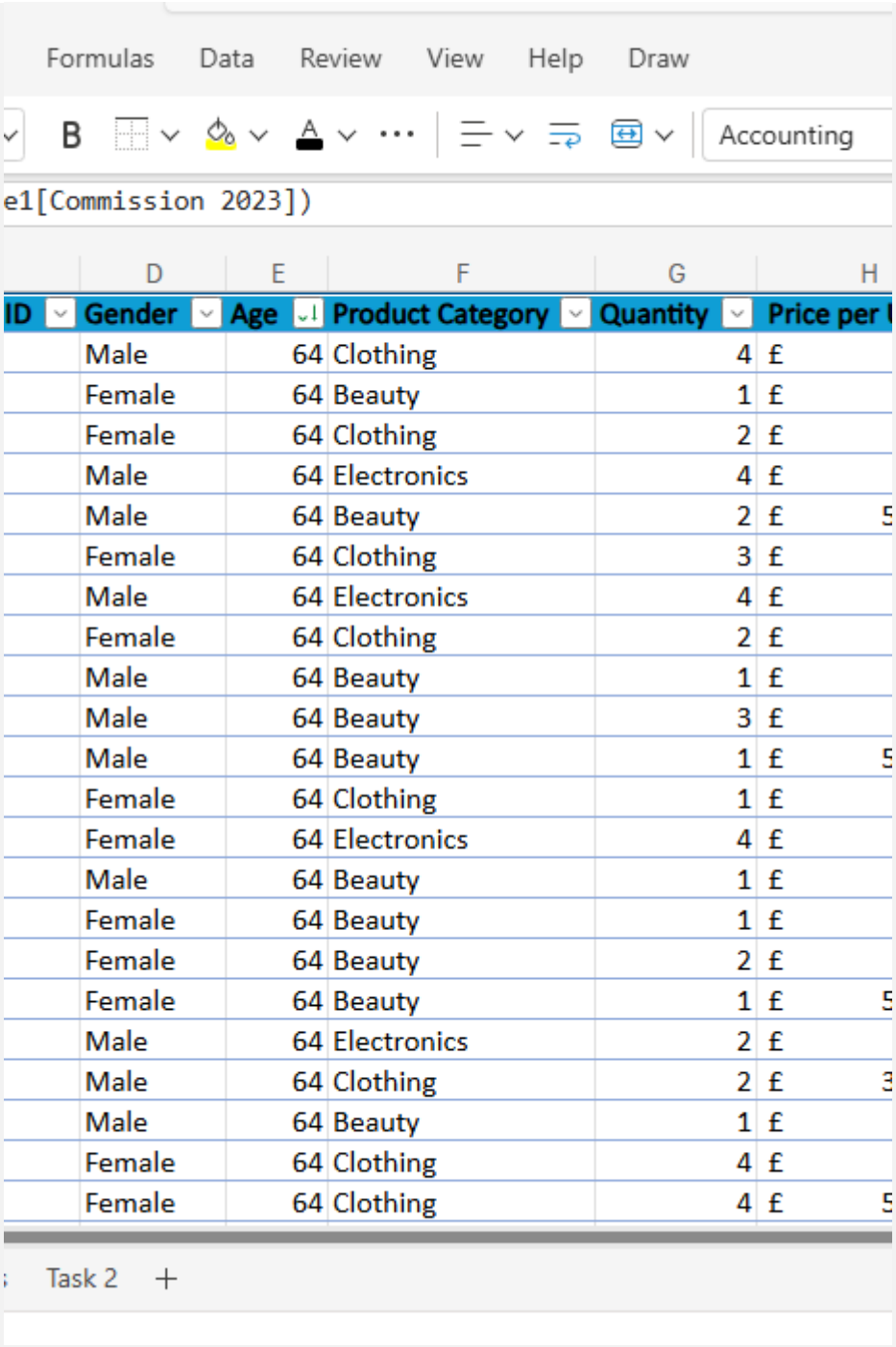
1. In the sheet 'retail_sales_dataset' add all available data between columns **A – H** into a 'table'
2. Using the 'filter' function, filter 'Age' to 'largest to smallest'
3. Using the 'SUM' function, show me the commission total in cell '**P10'**
4. Using the 'AVERAGE' function, show me the average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

Print screen 1

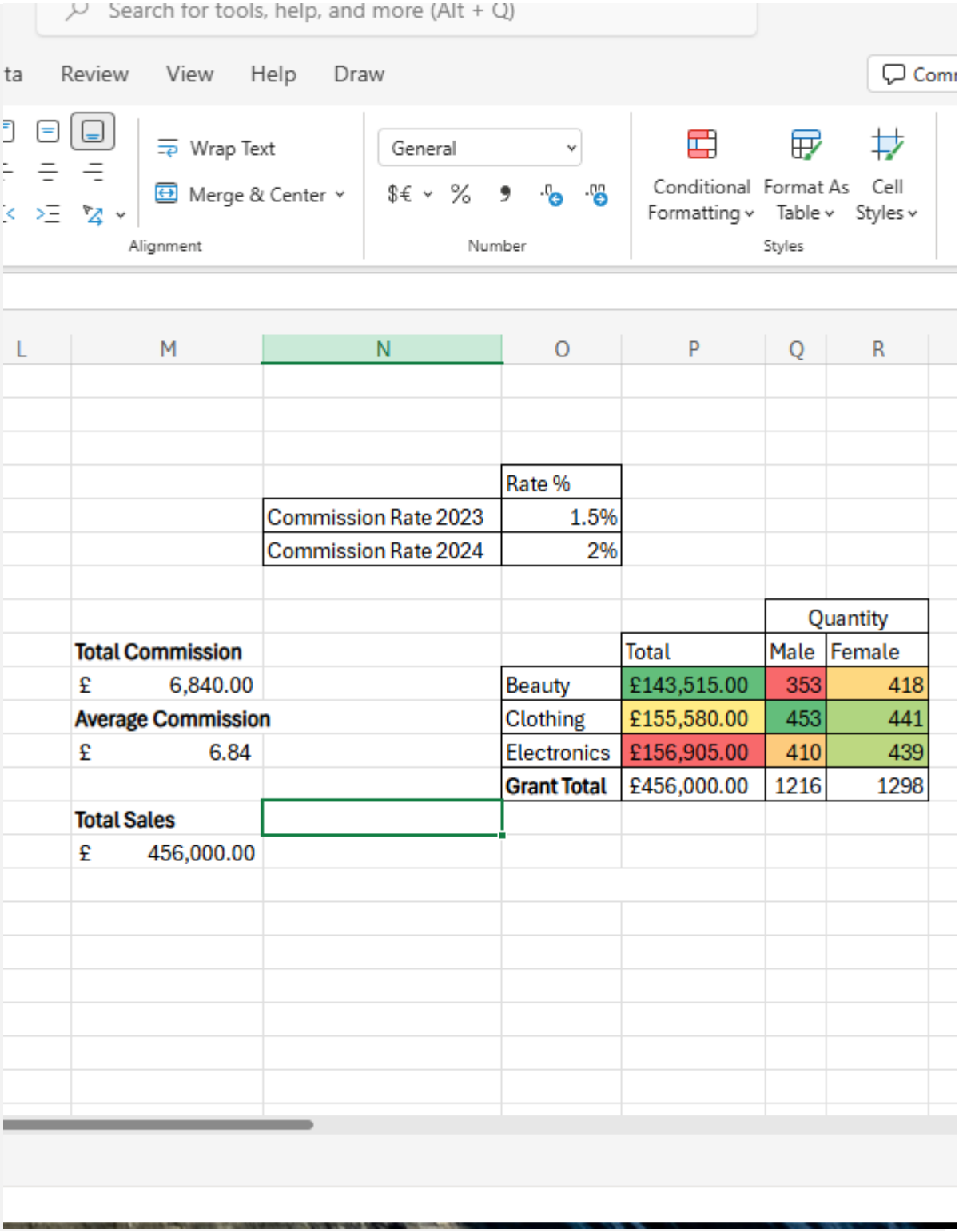


	A	B	C	D	E	F	G	H
1	Transaction ID	Date	Customer ID	Gender	Age	Age Grou	Product Category	Quantit
2	1	24/11/2023	CUST001	Male	34	Adult	Beauty	
3	2	27/02/2023	CUST002	Female	26	Young Adult	Clothing	
4	3	13/01/2023	CUST003	Male	50	Senior	Electronics	
5	4	21/05/2023	CUST004	Male	37	Adult	Clothing	
6	5	6/5/2023	CUST005	Male	30	Adult	Beauty	
7	6	25/04/2023	CUST006	Female	45	Adult	Beauty	
8	7	13/03/2023	CUST007	Male	46	Adult	Clothing	
9	8	22/02/2023	CUST008	Male	30	Adult	Electronics	
10	9	13/12/2023	CUST009	Male	63	Senior	Electronics	
11	10	7/10/2023	CUST010	Female	52	Senior	Clothing	
12	11	14/02/2023	CUST011	Male	23	Young Adult	Clothing	
13	12	30/10/2023	CUST012	Male	35	Adult	Beauty	
14	13	5/8/2023	CUST013	Male	22	Young Adult	Electronics	
15	14	17/01/2023	CUST014	Male	64	Senior	Clothing	
16	15	16/01/2023	CUST015	Female	42	Adult	Electronics	
17	16	17/02/2023	CUST016	Male	19	Young Adult	Clothing	
18	17	22/04/2023	CUST017	Female	27	Young Adult	Clothing	
19	18	30/04/2023	CUST018	Female	47	Adult	Electronics	
20	19	16/09/2023	CUST019	Female	62	Senior	Clothing	
21	20	5/11/2023	CUST020	Male	22	Young Adult	Clothing	
22	21	14/01/2023	CUST021	Female	50	Senior	Beauty	

Print screen 2



ID	Gender	Age	Product Category	Quantity	Price per
	Male	64	Clothing	4	£
	Female	64	Beauty	1	£
	Female	64	Clothing	2	£
	Male	64	Electronics	4	£
	Male	64	Beauty	2	£
	Female	64	Clothing	3	£
	Male	64	Electronics	4	£
	Female	64	Clothing	2	£
	Male	64	Beauty	1	£
	Male	64	Beauty	3	£
	Male	64	Beauty	1	£
	Female	64	Clothing	1	£
	Female	64	Electronics	4	£
	Male	64	Beauty	1	£
	Female	64	Beauty	1	£
	Female	64	Beauty	2	£
	Female	64	Beauty	1	£
	Male	64	Electronics	2	£
	Male	64	Clothing	2	£
	Male	64	Beauty	1	£
	Female	64	Clothing	4	£
	Female	64	Clothing	4	£

Print screen 3	
Print screen 4	Please refer print screen 3

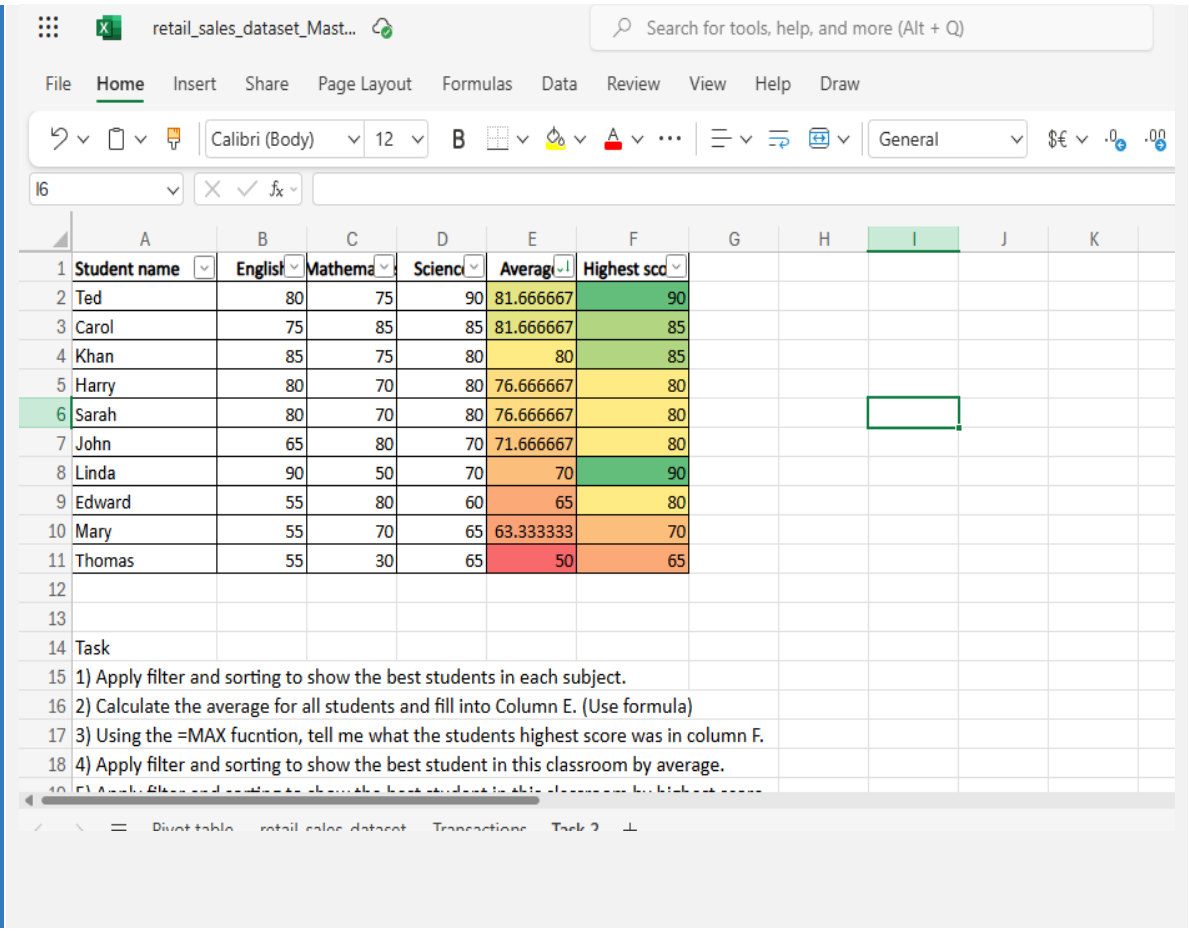
	L	M	N	O	P	Q	R
				Rate %			
			Commission Rate 2023	1.5%			
			Commission Rate 2024	2%			
						Quantity	
		Total Commission			Total	Male	Female
		£ 6,840.00		Beauty	£143,515.00	353	418
		Average Commission		Clothing	£155,580.00	453	441
		£ 6.84		Electronics	£156,905.00	410	439
				Grant Total	£456,000.00	1216	1298
		Total Sales					
		£ 456,000.00					

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

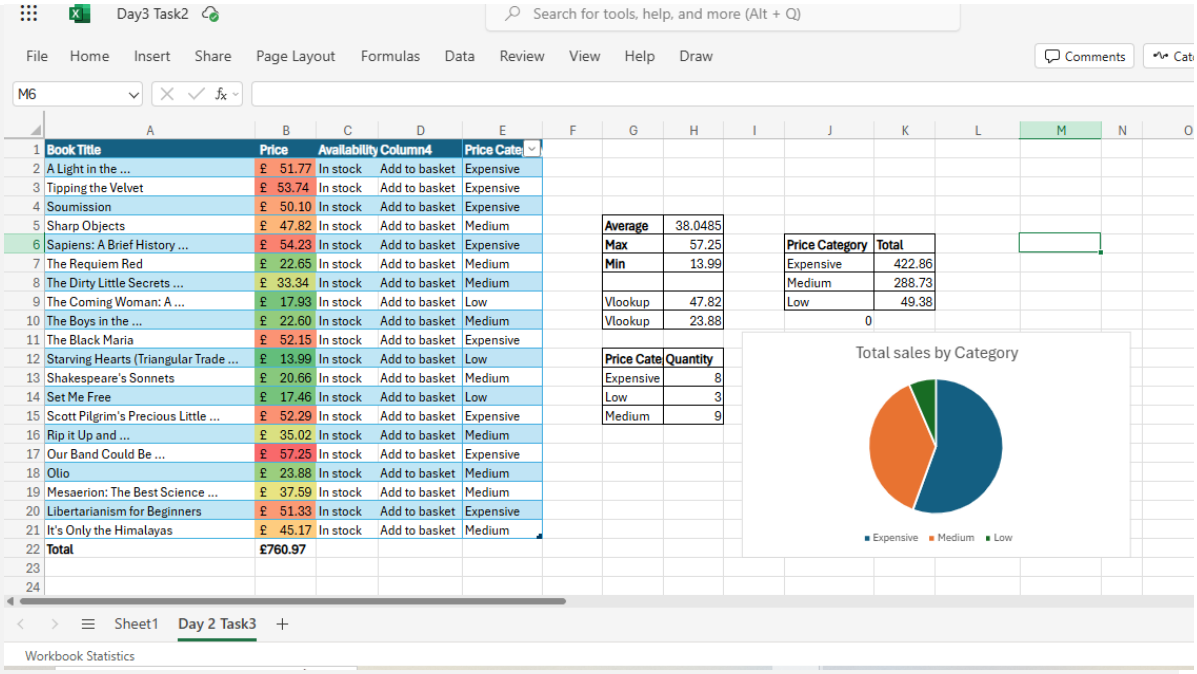


	A	B	C	D	E	F
1	Student name	English	Mathema	Scienc	Averag	Highest sco
2	Ted	80	75	90	81.666667	90
3	Carol	75	85	85	81.666667	85
4	Khan	85	75	80	80	85
5	Harry	80	70	80	76.666667	80
6	Sarah	80	70	80	76.666667	80
7	John	65	80	70	71.666667	80
8	Linda	90	50	70	70	90
9	Edward	55	80	60	65	80
10	Mary	55	70	65	63.333333	70
11	Thomas	55	30	65	50	65
12						
13						
14	Task					
15	1) Apply filter and sorting to show the best students in each subject.					
16	2) Calculate the average for all students and fill into Column E. (Use formula)					
17	3) Using the =MAX fucntion, tell me what the students highest score was in column F.					
18	4) Apply filter and sorting to show the best student in this classroom by average.					

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



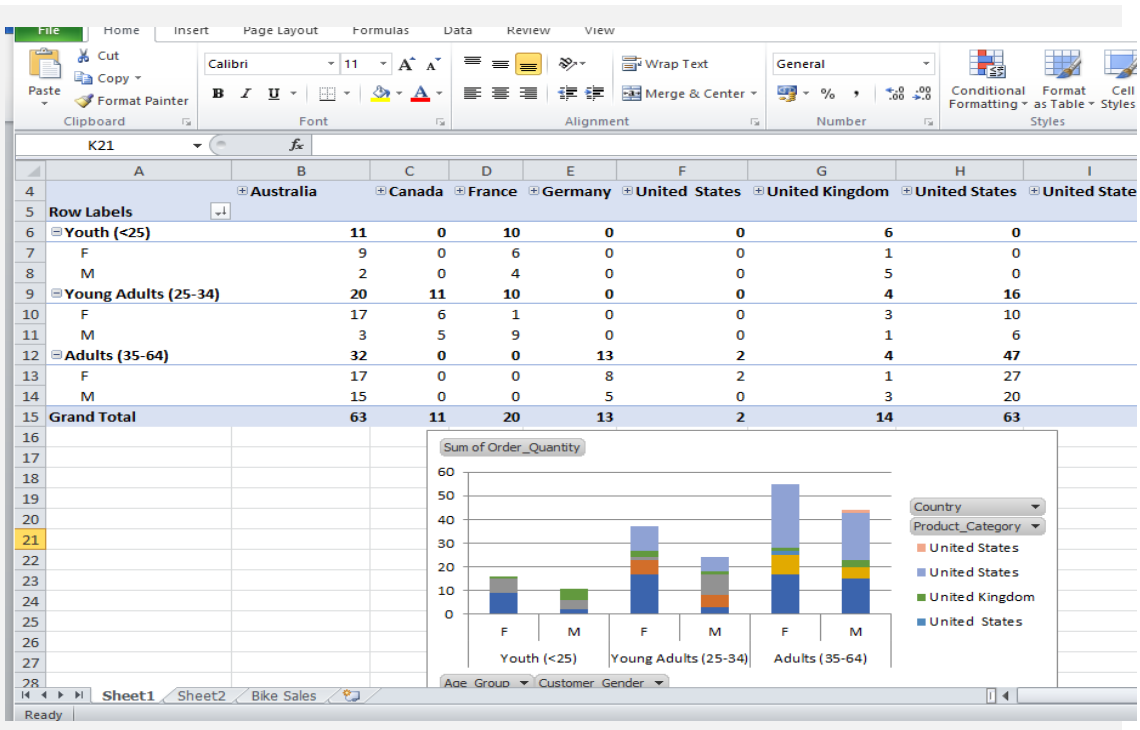
Day 3: Task 1

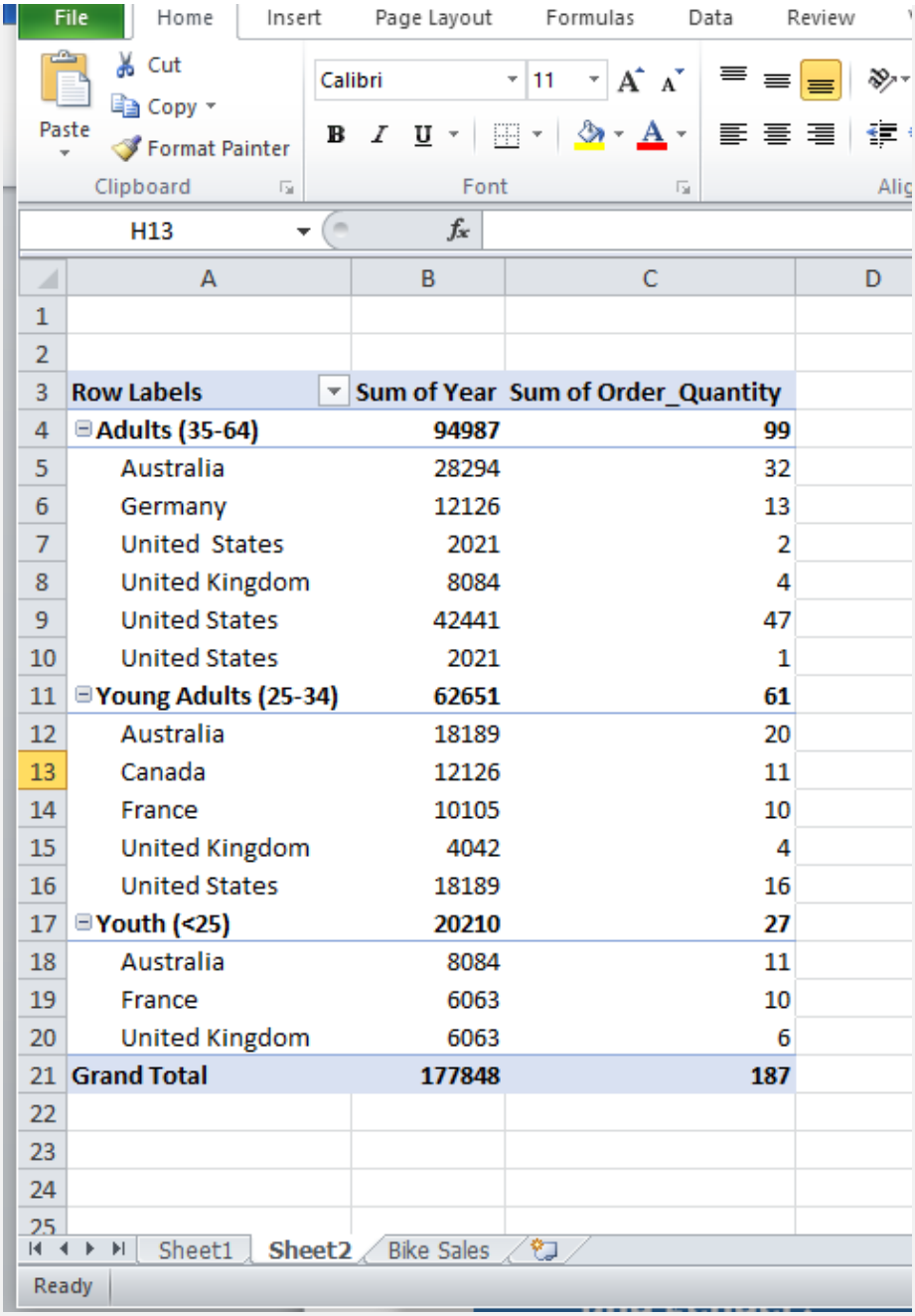
Please download the dataset 'Day_3_Task_1_Bike_Sales_Pivot_Lab.xlsx' from here.

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

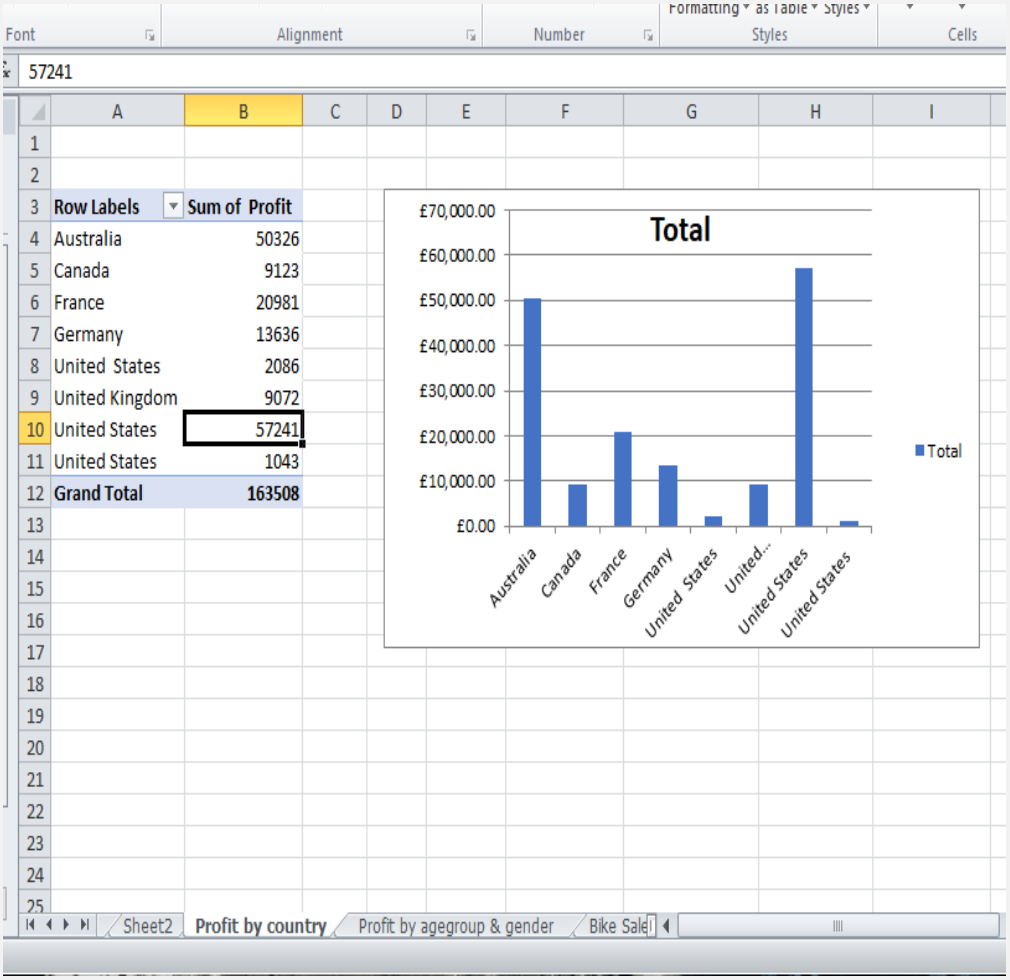


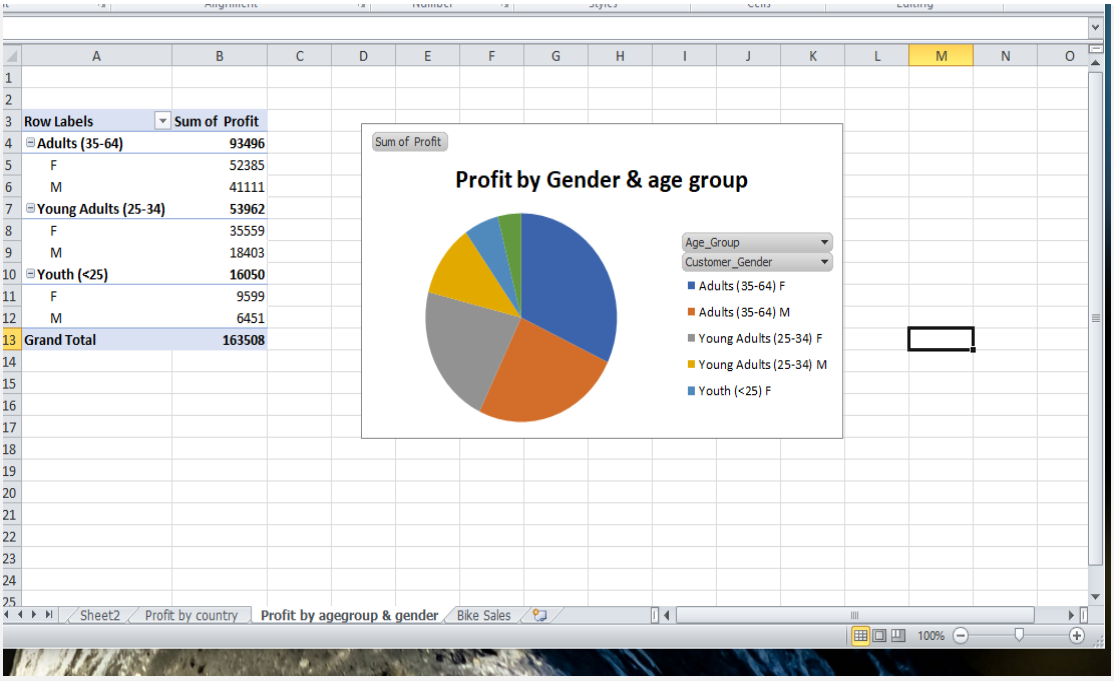


	A	B	C	D
1				
2				
3	**Row Labels**	**Sum of Year**	**Sum of Order_Quantity**	
4	**Adults (35-64)**	**94987**	**99**	
5	Australia	28294	32	
6	Germany	12126	13	
7	United States	2021	2	
8	United Kingdom	8084	4	
9	United States	42441	47	
10	United States	2021	1	
11	**Young Adults (25-34)**	**62651**	**61**	
12	Australia	18189	20	
13	Canada	12126	11	
14	France	10105	10	
15	United Kingdom	4042	4	
16	United States	18189	16	
17	**Youth (<25)**	**20210**	**27**	
18	Australia	8084	11	
19	France	6063	10	
20	United Kingdom	6063	6	
21	**Grand Total**	**177848**	**187**	
22				
23				
24				
25				

In which markets does Germany have customers?

Mountain 200-Black & Mountain-200-silver

What country has sales in all markets?	Australia
What are the most profitable markets by country, age group, and gender?	 US have most Profitable Market



Any other findings?

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:

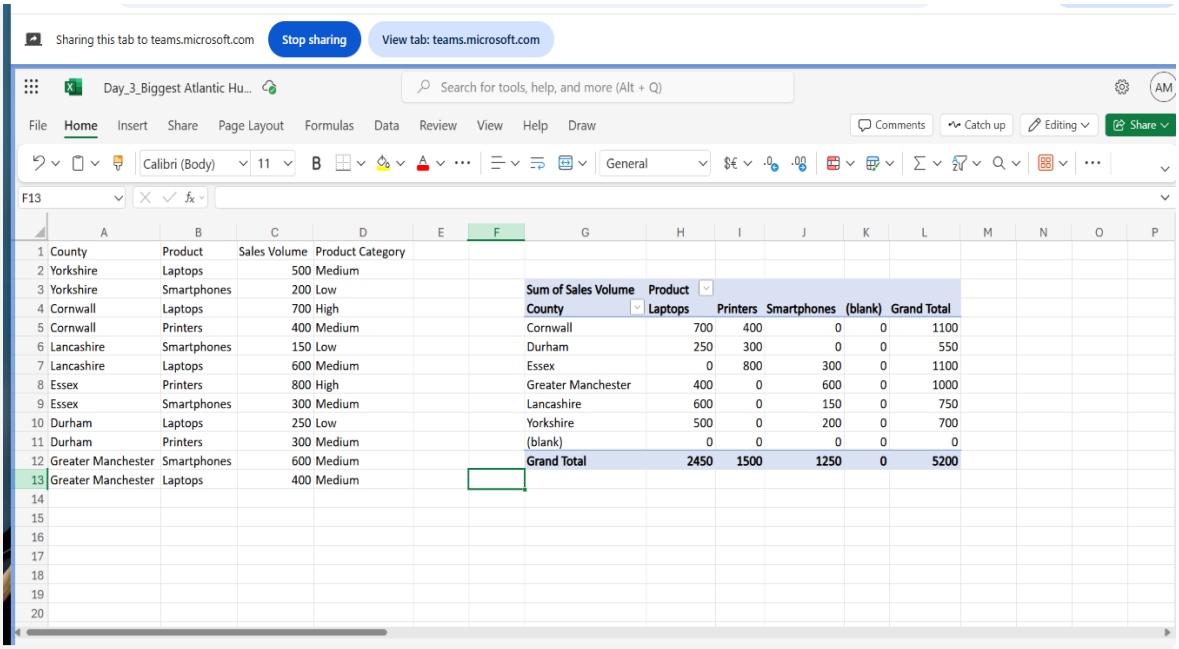
```
=SWITCH(TRUE, C2 > 600, "High", C2 >= 300, "Medium", "Low")
```

- 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



	A	B	C	D
1	County	Product	Sales Volume	Product Category
2	Yorkshire	Laptops	500	Medium
3	Yorkshire	Smartphones	200	Low
4	Cornwall	Laptops	700	High
5	Cornwall	Printers	400	Medium
6	Lancashire	Smartphones	150	Low
7	Lancashire	Laptops	600	Medium
8	Essex	Printers	800	High
9	Essex	Smartphones	300	Medium
10	Durham	Laptops	250	Low
11	Durham	Printers	300	Medium
12	Greater Manchester	Smartphones	600	Medium
13	Greater Manchester	Laptops	400	Medium

Sum of Sales Volume	Product				
County	Laptops	Printers	Smartphones	(blank)	Grand Total
Cornwall	700	400	0	0	1100
Durham	250	300	0	0	550
Essex	0	800	300	0	1100
Greater Manchester	400	0	600	0	1000
Lancashire	600	0	150	0	750
Yorkshire	500	0	200	0	700
(blank)	0	0	0	0	0
Grand Total	**2450**	**1500**	**1250**	**0**	**5200**

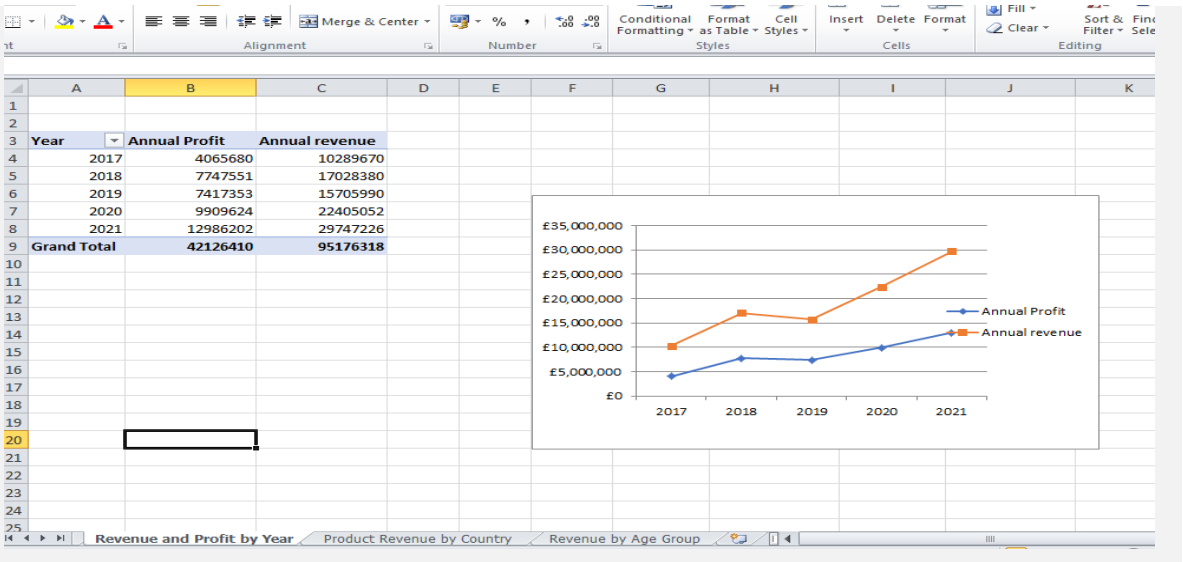
Day 3: Task 3

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.

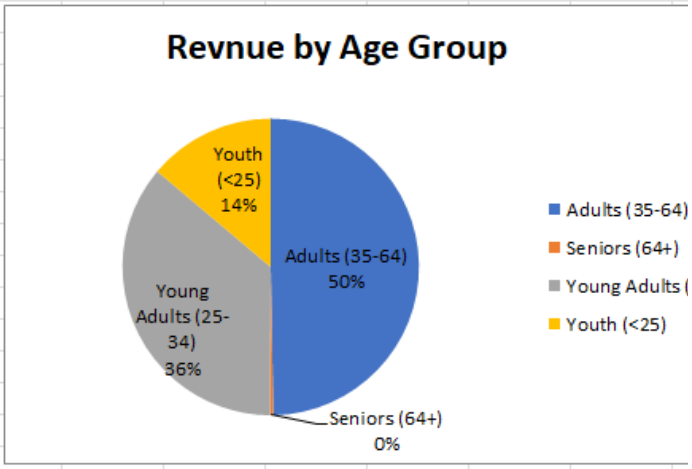
Please paste your results below:

Print screen 1



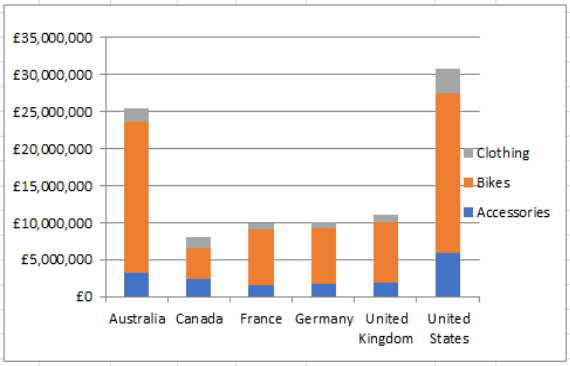
Year	Annual Profit	Annual revenue
2017	4065680	10289670
2018	7747551	17028380
2019	7417353	15705990
2020	9909624	22405052
2021	12986202	29747226
Grand Total	**42126410**	**95176318**

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



Revenue and Profit by Year | Product Revenue by Country | **Revenue by Age Group**

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**



Revenue and Profit by Year | **Product Revenue by Country** | Revenue by Age Group

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?	-Customers feedback -get information from left customers who left through surveys, recordings, structured notes
What tools would you use for the delivery?	-Using dashboards tools such as power BI, Tableau, Power point slides, Excel -Write down feedback from customers
What is prospecting and why would you complete this before your delivery?	-Prospecting is the process of identifying and reaching out to potential customers or clients. -To present the results.
Tell me best practices for public speaking and providing updates to senior leaders	-Prepare Yourself, Be confident, Make sure You have all the findings need to present.

What will you show the board in your delivery?	-Show the research and findings through power dashboards. -Any thoughts or opinions from seniors can be edited in the findings.
How will you articulate the changes that are needed?	By using predictive analysis with the help of excel forecasting feature
Provide a list of online resources and videos that will support your preparation for public speaking	https://professional.dce.harvard.edu/blog/10-tips-for-improving-your-public-speaking-skills/ https://www.youtube.com/watch?v=Ns_z4wEtdRM&pp=ygUMI3B1YmxpY3NwZWVo
Evaluate tools that provide visualisation. **Tell me what they are.** **Tell me**	Tableau and Power BI It is interactive and Enables the creation of interactive dashboards that display key performance indicators (KPIs) and other relevant data in a visually appealing manner. Use Power BI because it allows you to present data-driven insights clearly, interactively, and professionally.

what you would choose when delivering your presentation and why	

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.

The right to personal liberty and autonomy.- In the digital era, individuals leave behind vast amounts of personal data—on social media, through online shopping, and via mobile devices.

Citizens may feel their freedom is compromised when data is collected without clear consent or transparency.

Being transparent, clear user consent, and legal protections to prevent misuse.

Acknowledging and celebrating cultural, religious, and personal differences

Facial recognition systems have shown lower accuracy for minority ethnic groups.

Targeted ads may reinforce stereotypes or exclude certain demographics

Ethical Data Use Frameworks: A clear ethical framework for the collection, processing, and use of data should be established.

Individuals should be educated about the risks and rights associated with their personal data.

British values such as **individual freedom**, **democracy**, and **respect for diversity** are central to a fair and open society. However, in the digital age, these values face increasing pressure due to concerns around **data privacy** and **security**.

Individual freedom can be threatened by the collection and use of personal data without consent. For instance, excessive government surveillance or misuse of data by tech companies may infringe on a person's right to privacy, limiting their ability to express themselves freely online. At the same time, protecting against cyber threats is essential to preserve citizens' safety and rights. Therefore, it's important to strike a balance between security and freedom.

Democracy relies on transparency, trust, and informed decision-making. Misinformation campaigns, data manipulation during elections, and the lack of control over personal data can erode democratic processes. To uphold democratic values, citizens must have access to accurate information and be aware of how their data is used, especially by political entities or social media platforms.

Respect for diversity also ties into data practices. Algorithms can reflect bias if not carefully designed, leading to discrimination in areas like job recruitment, policing, or access to services. Ensuring data systems are inclusive and fair helps to protect all individuals, regardless of background.

To uphold these values, the **responsible collection, use, and protection of personal data** is crucial. This includes:

- Ensuring transparency in how data is used.
- Gaining informed consent from individuals.
- Following strong legal protections like the **UK GDPR**.
- Promoting digital literacy so people understand their data rights.
-

People must have control over their personal data in order to exercise their right to individual freedom, which means that data practices must prioritize transparency and consent.
To prevent abuse for manipulation or surveillance, democracy requires that data use be accountable and subject to oversight.

To ensure fairness and non-discrimination in digital processes, data systems must respect diversity by avoiding bias and protecting all groups equally.