Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

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Course Date: 16/12/24

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Day 1: Task 1

Please complete the below boxes on commons 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:

	The Data Protection Act, introduced in 1998, was designed to protect personal data. It was implemented in the UK to ensure organisations handle personal information responsibly. Why is it important: It defines that personal data must be used fairly, lawfully, and only for specific purposes. It helps build trust and ensures individuals' privacy is respected. Real-world example: The NHS holds sensitive patient information. It must not share this data with pharmaceutical or marketing companies without consent. However, if they use patient data to conduct surveys on specific diseases (e.g., tracking COVID-19 cases), that's considered fair and lawful use under the Act. How it impacts working with data: Organisations must use secure methods to handle data, prevent unauthorised access, and ensure data is accurate and not kept longer than necessary. It encourages strong data protection practices. What could happen if you breach it: If an organisation misuses or fails to protect personal data, it can face legal action and financial penalties from the courts or regulatory bodies.
GDPR	What is it: GDPR is a data protection law introduced by the European Union in 2018. It was created to give individuals more control over their personal data and to unify data privacy laws across Europe. The UK follows its own version called UK GDPR after Brexit.

	Why is it important: GDPR introduces stricter rules than the Data Protection Act. It ensures that consent is clear, informed, and transparent. Organisations must also report data breaches within 72 hours and appoint a Data Protection Officer (DPO) if they handle large amounts of sensitive data. Real-world example: Social media platforms like Facebook and Instagram now ask users for explicit permission to track data (e.g., location, activity, advertising preferences). This change came after high-profile data breaches, such as the misuse of Facebook user data during election campaigns in the US. How it impacts working with data: Organisations must be very careful about how data is collected, stored, and shared. They must clearly explain why they're collecting personal information, how it will be used, and who it might be shared with. Transparency and accountability are key. What could happen if you breach it: Breaching GDPR can result in serious legal consequences, including hefty fines of up to €20 million or 4% of global turnover, whichever is higher. It can also cause reputational damage and loss of customer trust.
Freedom of Information Act	What is it: The Freedom of Information Act was introduced in the UK in 2000. It gives the public the legal right to request information held by public sector organisations such as the NHS, local councils, and government departments.

	Why is it important: It promotes transparency and accountability. People have the right to know what information is being held, why it is collected, and how it is used. Real-world example: During the COVID-19 pandemic, the government used FOIA requests to gather data and publish public health reports. Journalists and citizens could also request NHS or council data about hospital capacity, local outbreaks, or government spending. How it impacts working with data: Public organisations must be prepared to respond to information requests and explain how they handle and protect public data. They must respond within 20 working days and follow clear rules for sharing or withholding data. What could happen if you breach it: Failure to respond fairly or within the deadline can result in investigations by the authorities and cause reputation damage to the organisation.
Computer Misuse Act	What is it: The Computer Misuse Act, introduced in 1990, is a UK law designed to prevent unauthorised access to computer systems. It protects devices and digital information from hacking, data theft, and misuse. Although it's illegal in nature, and it strongly reflects ethical responsibility when working with technology. Why is it important: It helps protect people and organisations from data breaches, identity theft, and cybercrime. The law makes it a criminal offence to access or interfere with computer systems without permission.

Real-world example:

The misuse of Facebook user data during election campaigns raised global concern. If data was accessed without permission or misused, it could be a breach of this Act.

Another example: In the UK, credit card fraud through stolen data or hacked accounts is a growing issue, using someone else's details online without consent is illegal under this law.

How it impacts working with data:

Organisations must ensure they have strong cybersecurity measures, such as firewalls, encryption, and secure access controls. Staff must be trained to follow ethical and legal procedures when handling digital data.

What could happen if you breach it:

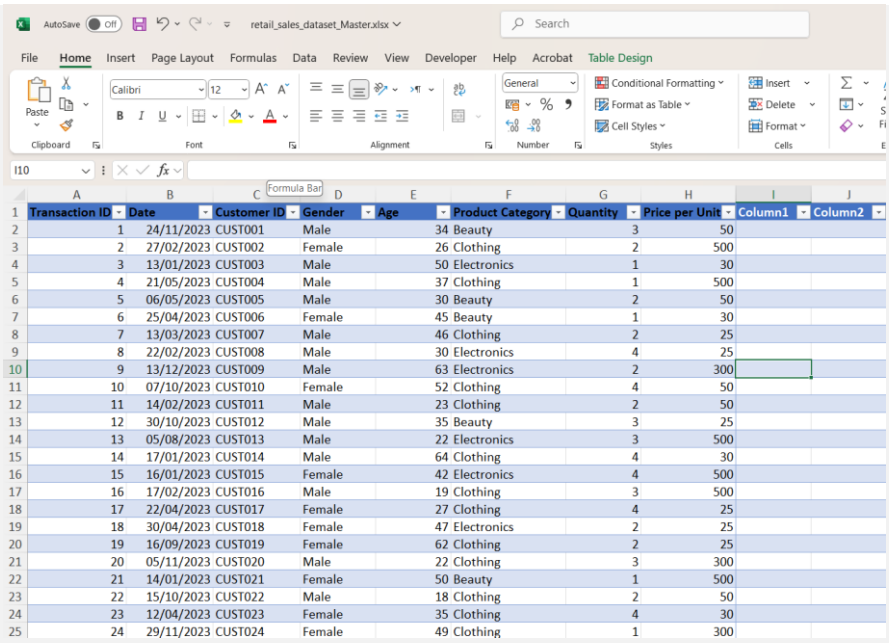
Anyone found guilty of breaching the Computer Misuse Act could face criminal charges, including fines, imprisonment, or both, depending on the seriousness of the offence.

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:

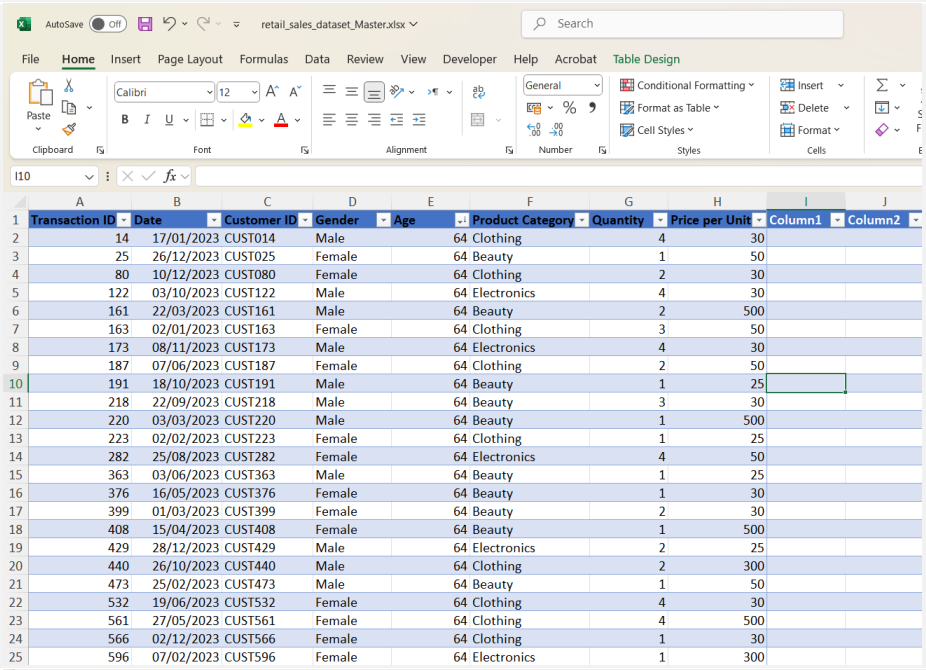
1. In the sheet 'retail_sales_dataset' add all available data between columns A –J into a 'table'
2. Using the 'sort' function, sort 'Age' to 'largest to smallest'
3. Using the 'SUM' function, show me the commission total in cell 'L10'
4. Using the 'AVERAGE' function, show me the average commission in cell 'L11'

Print screen 1



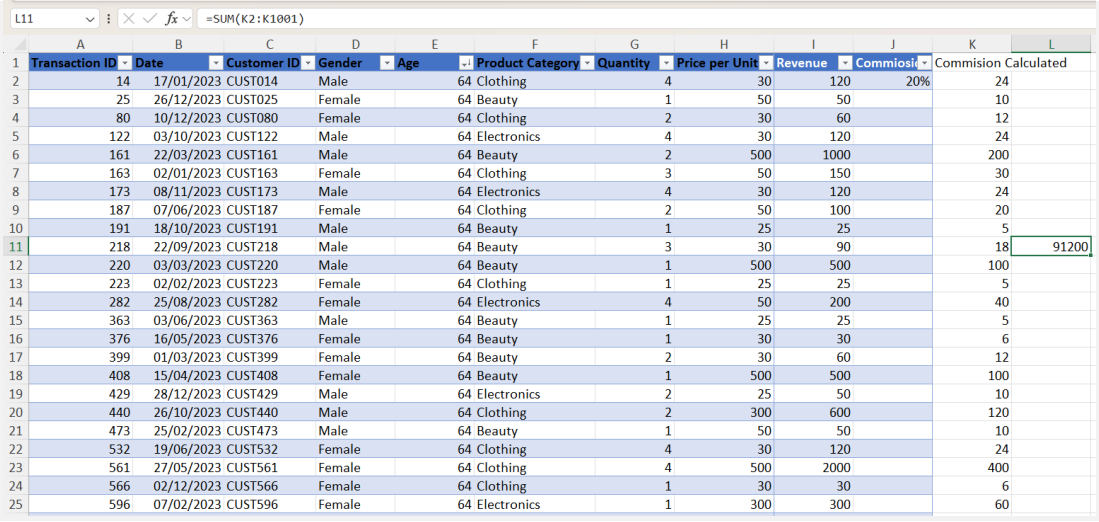
Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Column1	Column2
1	24/11/2023	CUST001	Male	34	Beauty	3	50		
2	27/02/2023	CUST002	Female	26	Clothing	2	500		
3	13/01/2023	CUST003	Male	50	Electronics	1	30		
4	21/05/2023	CUST004	Male	37	Clothing	1	500		
5	06/05/2023	CUST005	Male	30	Beauty	2	50		
6	25/04/2023	CUST006	Female	45	Beauty	1	30		
7	13/03/2023	CUST007	Male	46	Clothing	2	25		
8	22/02/2023	CUST008	Male	30	Electronics	4	25		
9	13/12/2023	CUST009	Male	63	Electronics	2	300		
10	07/10/2023	CUST010	Female	52	Clothing	4	50		
11	14/02/2023	CUST011	Male	23	Clothing	2	50		
12	30/10/2023	CUST012	Male	35	Beauty	3	25		
13	05/08/2023	CUST013	Male	22	Electronics	3	500		
14	17/01/2023	CUST014	Male	64	Clothing	4	30		
15	16/01/2023	CUST015	Female	42	Electronics	4	500		
16	17/02/2023	CUST016	Male	19	Clothing	3	500		
17	22/04/2023	CUST017	Female	27	Clothing	4	25		
18	30/04/2023	CUST018	Female	47	Electronics	2	25		
19	16/09/2023	CUST019	Female	62	Clothing	2	25		
20	05/11/2023	CUST020	Male	22	Clothing	3	300		
21	14/01/2023	CUST021	Female	50	Beauty	1	500		
22	15/10/2023	CUST022	Male	18	Clothing	2	50		
23	12/04/2023	CUST023	Female	35	Clothing	4	30		
24	29/11/2023	CUST024	Female	49	Clothing	1	300		

Print screen 2



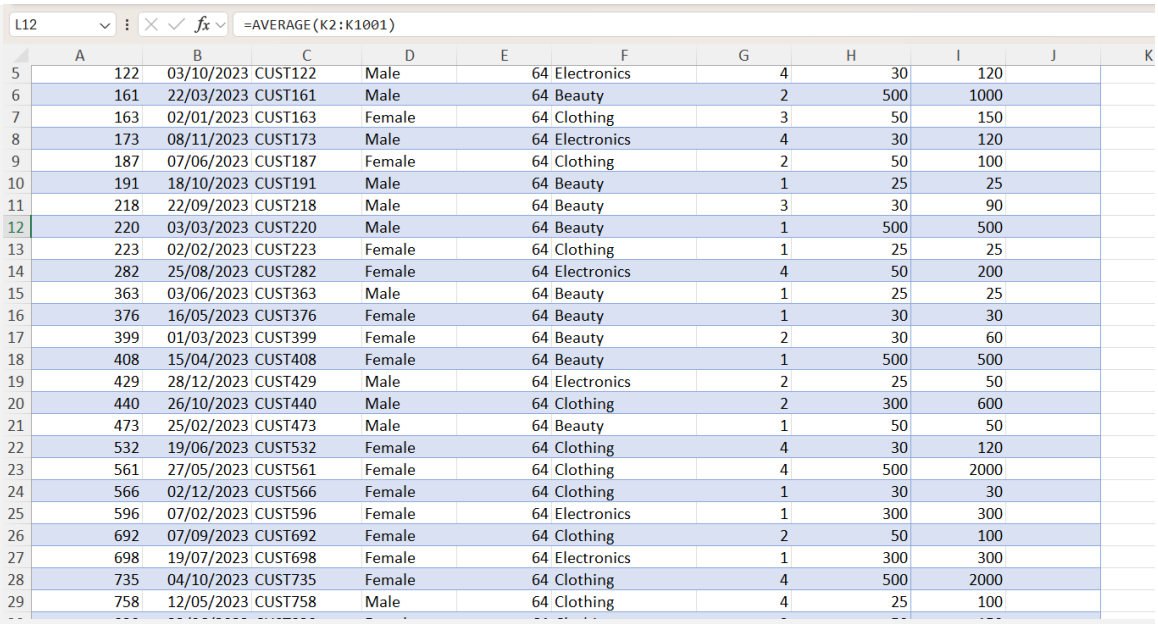
Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Column1	Column2
14	17/01/2023	CUST014	Male	64	Clothing	4	30		
25	26/12/2023	CUST025	Female	64	Beauty	1	50		
80	10/12/2023	CUST080	Female	64	Clothing	2	30		
122	03/10/2023	CUST122	Male	64	Electronics	4	30		
161	22/03/2023	CUST161	Male	64	Beauty	2	500		
163	02/01/2023	CUST163	Female	64	Clothing	3	50		
173	08/11/2023	CUST173	Male	64	Electronics	4	30		
187	07/06/2023	CUST187	Female	64	Clothing	2	50		
191	18/10/2023	CUST191	Male	64	Beauty	1	25		
218	22/09/2023	CUST218	Male	64	Beauty	3	30		
220	03/03/2023	CUST220	Male	64	Beauty	1	500		
223	02/02/2023	CUST223	Female	64	Clothing	1	25		
282	25/08/2023	CUST282	Female	64	Electronics	4	50		
363	03/06/2023	CUST363	Male	64	Beauty	1	25		
376	16/05/2023	CUST376	Female	64	Beauty	1	30		
399	01/03/2023	CUST399	Female	64	Beauty	2	30		
408	15/04/2023	CUST408	Female	64	Beauty	1	500		
429	28/12/2023	CUST429	Male	64	Electronics	2	25		
440	26/10/2023	CUST440	Male	64	Clothing	2	300		
473	25/02/2023	CUST473	Male	64	Beauty	1	50		
532	19/06/2023	CUST532	Female	64	Clothing	4	30		
561	27/05/2023	CUST561	Female	64	Clothing	4	500		
566	02/12/2023	CUST566	Female	64	Clothing	1	30		
596	07/02/2023	CUST596	Female	64	Electronics	1	300		

Print screen 3



Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Revenue	Commiosi	Commision Calculated	
14	17/01/2023	CUST014	Male	64	Clothing	4	30	120	20%	24	
25	26/12/2023	CUST025	Female	64	Beauty	1	50	50		10	
80	10/12/2023	CUST080	Female	64	Clothing	2	30	60		12	
122	03/10/2023	CUST122	Male	64	Electronics	4	30	120		24	
161	22/03/2023	CUST161	Male	64	Beauty	2	500	1000		200	
163	02/01/2023	CUST163	Female	64	Clothing	3	50	150		30	
173	08/11/2023	CUST173	Male	64	Electronics	4	30	120		24	
187	07/06/2023	CUST187	Female	64	Clothing	2	50	100		20	
191	18/10/2023	CUST191	Male	64	Beauty	1	25	25		5	
218	22/09/2023	CUST218	Male	64	Beauty	3	30	90		18	91200
220	03/03/2023	CUST220	Male	64	Beauty	1	500	500		100	
223	02/02/2023	CUST223	Female	64	Clothing	1	25	25		5	
282	25/08/2023	CUST282	Female	64	Electronics	4	50	200		40	
363	03/06/2023	CUST363	Male	64	Beauty	1	25	25		5	
376	16/05/2023	CUST376	Female	64	Beauty	1	30	30		6	
399	01/03/2023	CUST399	Female	64	Beauty	2	30	60		12	
408	15/04/2023	CUST408	Female	64	Beauty	1	500	500		100	
429	28/12/2023	CUST429	Male	64	Electronics	2	25	50		10	
440	26/10/2023	CUST440	Male	64	Clothing	2	300	600		120	
473	25/02/2023	CUST473	Male	64	Beauty	1	50	50		10	
532	19/06/2023	CUST532	Female	64	Clothing	4	30	120		24	
561	27/05/2023	CUST561	Female	64	Clothing	4	500	2000		400	
566	02/12/2023	CUST566	Female	64	Clothing	1	30	30		6	
596	07/02/2023	CUST596	Female	64	Electronics	1	300	300		60	

Print screen 4



L12 =AVERAGE(K2:K1001)

	A	B	C	D	E	F	G	H	I	J	K
5	122	03/10/2023	CUST122	Male	64	Electronics	4	30	120		
6	161	22/03/2023	CUST161	Male	64	Beauty	2	500	1000		
7	163	02/01/2023	CUST163	Female	64	Clothing	3	50	150		
8	173	08/11/2023	CUST173	Male	64	Electronics	4	30	120		
9	187	07/06/2023	CUST187	Female	64	Clothing	2	50	100		
10	191	18/10/2023	CUST191	Male	64	Beauty	1	25	25		
11	218	22/09/2023	CUST218	Male	64	Beauty	3	30	90		
12	220	03/03/2023	CUST220	Male	64	Beauty	1	500	500		
13	223	02/02/2023	CUST223	Female	64	Clothing	1	25	25		
14	282	25/08/2023	CUST282	Female	64	Electronics	4	50	200		
15	363	03/06/2023	CUST363	Male	64	Beauty	1	25	25		
16	376	16/05/2023	CUST376	Female	64	Beauty	1	30	30		
17	399	01/03/2023	CUST399	Female	64	Beauty	2	30	60		
18	408	15/04/2023	CUST408	Female	64	Beauty	1	500	500		
19	429	28/12/2023	CUST429	Male	64	Electronics	2	25	50		
20	440	26/10/2023	CUST440	Male	64	Clothing	2	300	600		
21	473	25/02/2023	CUST473	Male	64	Beauty	1	50	50		
22	532	19/06/2023	CUST532	Female	64	Clothing	4	30	120		
23	561	27/05/2023	CUST561	Female	64	Clothing	4	500	2000		
24	566	02/12/2023	CUST566	Female	64	Clothing	1	30	30		
25	596	07/02/2023	CUST596	Female	64	Electronics	1	300	300		
26	692	07/09/2023	CUST692	Female	64	Clothing	2	50	100		
27	698	19/07/2023	CUST698	Female	64	Electronics	1	300	300		
28	735	04/10/2023	CUST735	Female	64	Clothing	4	500	2000		
29	758	12/05/2023	CUST758	Male	64	Clothing	4	25	100		

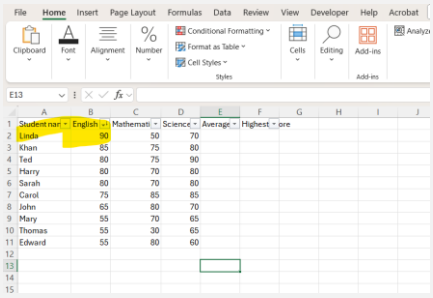
Day 2: Task 2

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

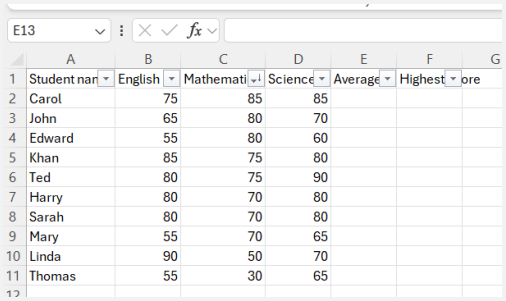
Student name	English	Mathematic	Science	Average	Highest score
Carol	75	85	85		
Ted	80	75	90		
Khan	85	75	80		
Harry	80	70	80		
Sarah	80	70	80		
John	65	80	70		
Linda	90	50	70		
Edward	55	80	60		
Mary	55	70	65		
Thomas	55	30	65		
Task					
1) Apply filter and sorting to show the best students in each 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

Sorted for English Scores:

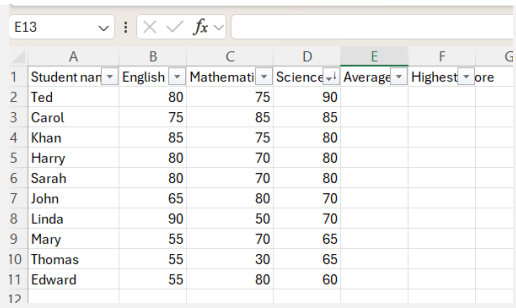


Sorted for Maths



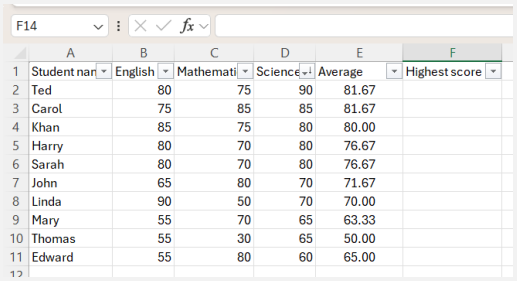
	A	B	C	D	E	F	G
1	Student nar	English	Mathemati	Science	Average	Highest	ore
2	Carol	75	85	85			
3	John	65	80	70			
4	Edward	55	80	60			
5	Khan	85	75	80			
6	Ted	80	75	90			
7	Harry	80	70	80			
8	Sarah	80	70	80			
9	Mary	55	70	65			
10	Linda	90	50	70			
11	Thomas	55	30	65			

Sorted for Science:



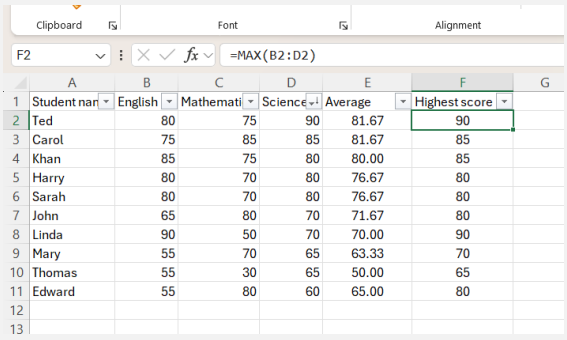
	A	B	C	D	E	F	G
1	Student nar	English	Mathemati	Science	Average	Highest	ore
2	Ted	80	75	90			
3	Carol	75	85	85			
4	Khan	85	75	80			
5	Harry	80	70	80			
6	Sarah	80	70	80			
7	John	65	80	70			
8	Linda	90	50	70			
9	Mary	55	70	65			
10	Thomas	55	30	65			
11	Edward	55	80	60			

Average:



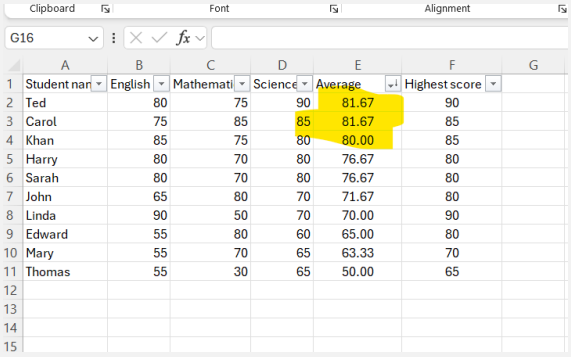
	A	B	C	D	E	F
1	Student nar	English	Mathemati	Science	Average	Highest score
2	Ted	80	75	90	81.67	
3	Carol	75	85	85	81.67	
4	Khan	85	75	80	80.00	
5	Harry	80	70	80	76.67	
6	Sarah	80	70	80	76.67	
7	John	65	80	70	71.67	
8	Linda	90	50	70	70.00	
9	Mary	55	70	65	63.33	
10	Thomas	55	30	65	50.00	
11	Edward	55	80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

Max function:



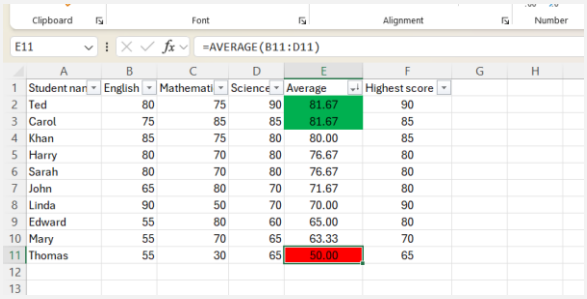
	A	B	C	D	E	F	G
1	Student nar	English	Mathemati	Science	Average	Highest score	
2	Ted	80	75	90	81.67	90	
3	Carol	75	85	85	81.67	85	
4	Khan	85	75	80	80.00	85	
5	Harry	80	70	80	76.67	80	
6	Sarah	80	70	80	76.67	80	
7	John	65	80	70	71.67	80	
8	Linda	90	50	70	70.00	90	
9	Mary	55	70	65	63.33	70	
10	Thomas	55	30	65	50.00	65	
11	Edward	55	80	60	65.00	80	
12							
13							

Sorted for best average:



	A	B	C	D	E	F	G
1	Student nar	English	Mathemati	Science	Average	Highest score	
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	Edward	55	80	60	65.00	80	
10	Mary	55	70	65	63.33	70	
11	Thomas	55	30	65	50.00	65	
12							
13							
14							
15							

Conditional Formatting using New rules:



	A	B	C	D	E	F	G	H
1	Student nar	English	Mathemati	Science	Average	Highest score		
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	Edward	55	80	60	65.00	80		
10	Mary	55	70	65	63.33	70		
11	Thomas	55	30	65	50.00	65		
12								
13								

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!

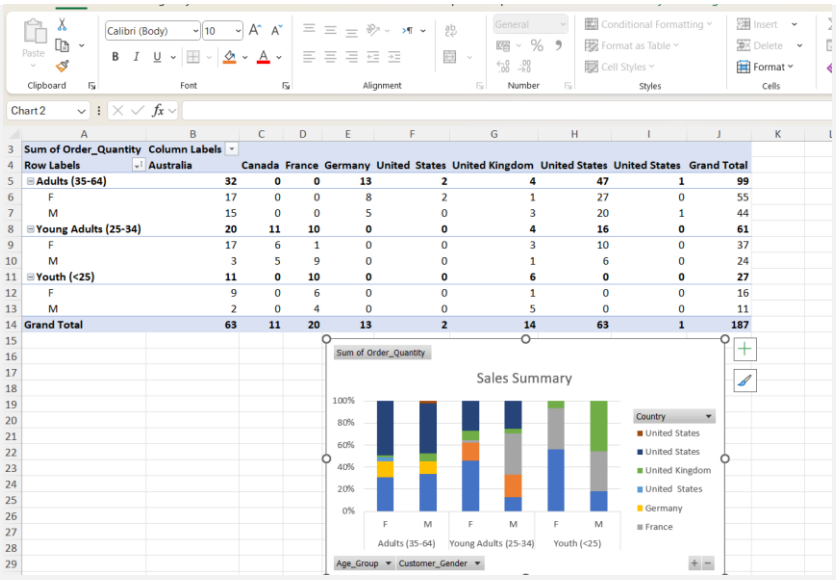
Print screen 1

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	
In which markets does Germany have customers?	Only Adults (35-64), Majority Females.
What country has sales in all markets?	Australia
What are the most profitable markets by country, age group, and gender?	Australia and United States
Any other findings?	Canada has lowest sales

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:

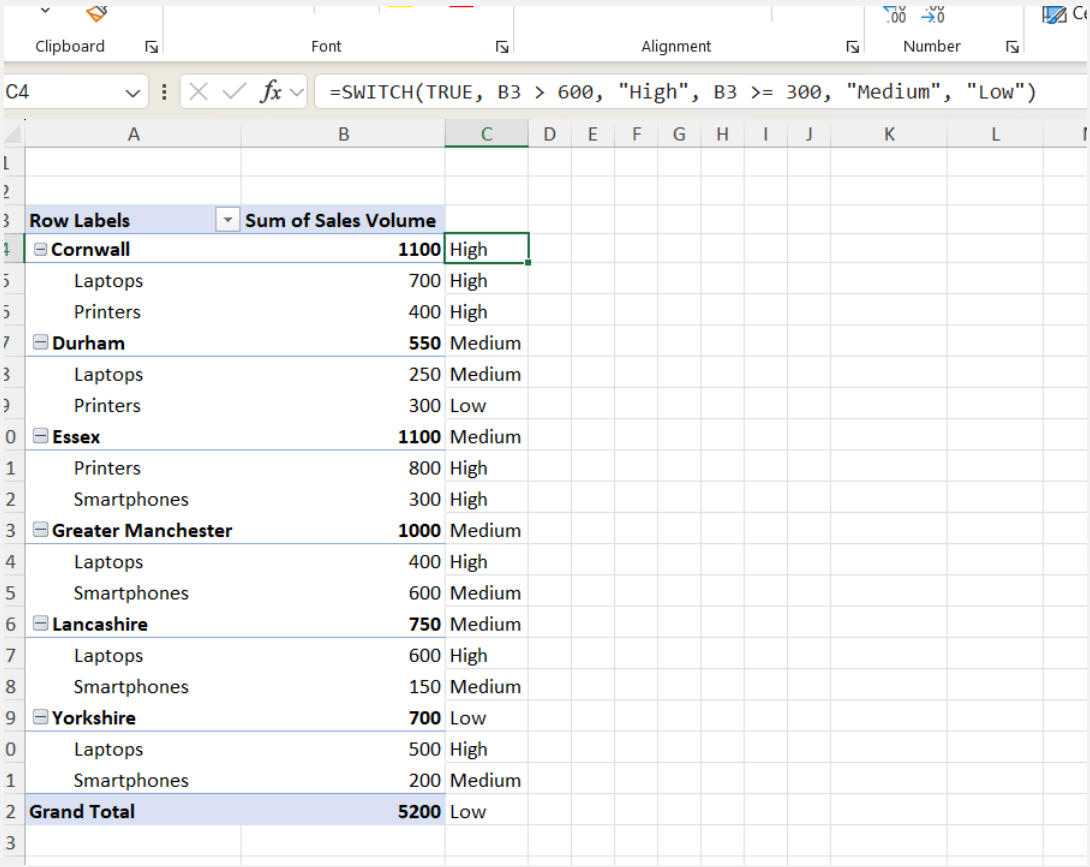
```
=SWITCH(TRUE, C2 > 600, "High", C2 >= 300, "Medium", "Low")
```

- 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



Row Labels	Sum of Sales Volume	
Cornwall	**1100**	High
Laptops	700	High
Printers	400	High
Durham	**550**	Medium
Laptops	250	Medium
Printers	300	Low
Essex	**1100**	Medium
Printers	800	High
Smartphones	300	High
Greater Manchester	**1000**	Medium
Laptops	400	High
Smartphones	600	Medium
Lancashire	**750**	Medium
Laptops	600	High
Smartphones	150	Medium
Yorkshire	**700**	Low
Laptops	500	High
Smartphones	200	Medium
Grand Total	**5200**	Low

Day 3: Task 3

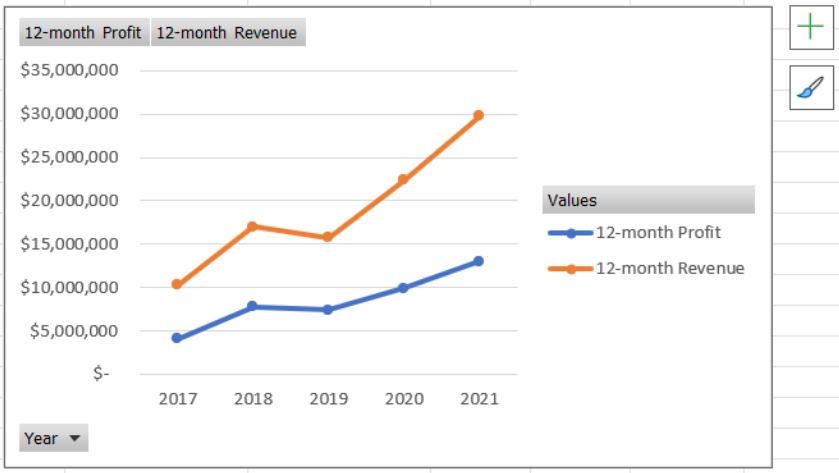
Please download the dataset 'Day_3_Task_3_Bike_Sales_Visualisations_Lab.xlsx' from here.

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	12-month Profit	12-month Revenue
2017	$ 4,065,680	$ 10,289,670
2018	$ 7,747,551	$ 17,028,380
2019	$ 7,417,353	$ 15,705,990
2020	$ 9,909,624	$ 22,405,052
2021	$ 12,986,202	$ 29,747,226
Grand Total	**$ 42,126,410**	**$ 95,176,318**



Day 4: Task 1

You have been asked to deliver your analysis findings to the board of directors, with 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?	
What tools would you use for the delivery?	
What is prospecting and why would you complete this before your delivery?	
Tell me best practices for public speaking and providing updates to senior leaders	

What will you show the board in your delivery?	
How will you articulate the changes that are needed?	
Provide a list of online resources and videos that will support your preparation for public speaking	
Evaluate tools that provide visualisation. **Tell me what they are.** **Tell me 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.