

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

• The DPA is a UK law that controls how personal data is used by organisations, business and the government.

	 Impact on data use: it ensures data is collected faily, used only for specific purposes, kept secure and not held longer than necessary. Consequences: of breach: organisations can face heavy fines and reputational damage if they misuse or fail to protect data.
GDPR	GDOR is an EU regulation (adopted by the UK too) that strengthens and unifies data protection for individuals. Impact on data use: it gives people more control over their personal information, requires organisations to be transparent about how they use data, and enforces strict rules on consent and security.
	Freedom of information Act
Freedom of Information	What it is: law that gives the public the right to access information held by public authorities (like government bodies, councils, NHS, schools).
Act	Impact on data use: promotes transparency by allowing citizens to request information, unless it Falls
	Consequences of breach: authorities can be challenged legally if they withhold information without valid reasons.
Computer	A UK law introduced in 1990 to protect against cybercrime, such as hacking spreading viruses, or authorized access to system.
Misuse Act	Impact on data: it makes it illegal to access, steal, or damage data without permission.

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'



	⊿ B	С	D	E	F	G	Н	
		Customer ID			Product Category	▼ Quantity	▼ Price per Unit	▼ Rev
	17/01/2023		Male		Clothing		4	£30
	26/12/2023		Female Female		Beauty		1	£30
	10/12/2023 03/10/2023		Male		Clothing Electronics		2	£30 £30
	22/03/2023		Male		Beauty		2	£30
	02/01/2023		Female		Clothing		3	£30
	08/11/2023		Male		Electronics		4	£30
	07/06/2023		Female		Clothing		2	£30
	18/10/2023		Male		Beauty		1	£30
	22/09/2023		Male		Beauty		3	£30
	03/03/2023 02/02/2023		Male Female		Beauty Clothing		1	£30 £30
	25/08/2023		Female		Electronics		4	£30
	03/06/2023		Male		Beauty		1	£30
Print	16/05/2023		Female		Beauty		1	£30
	01/03/2023	CUST399	Female	64	Beauty		2	£30
scree	15/04/2023		Female		Beauty		1	£30
n 1	28/12/2023		Male		Electronics		2	£30
n 1	26/10/2023		Male		Clothing		2	£30
	25/02/2023 2 19/06/2023		Male Female		Beauty Clothing		4	£30
	3 27/05/2023		Female		Clothing		4	£30
	02/12/2023		Female		Clothing		1	£30
	07/02/2023		Female		Electronics		1	£30
	07/09/2023		Female		Clothing		2	£30
	19/07/2023	CUST698	Female	64	Electronics		1	£30
	04/10/2023	CUST735	Female		Clothing		4	£30
	12/05/2023		Male		Clothing		4	£30
	22/06/2023		Female		Clothing		3	£30
	06/06/2023		Female		Electronics		2	£30
	2 26/09/2023 3 13/12/2023		Female Male		Electronics Electronics		2	£30 £30
	18/11/2023		Female		Beauty		1	£30
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	Date v 17/01/2023 26/12/2023 10/12/2023	CUST014 CUST025 CUST080	Male Female Female	Age 44 64 64	Product Category Clothing Beauty Clothing		Price per Unit 4 1 2	£30 £30 £30
	17/01/2023 26/12/2023 10/12/2023 03/10/2023	Customer ID CUST014 CUST025 CUST080 CUST122	Male Female Female Male	Age +1 64 64 64	Product Category Clothing Beauty Clothing Electronics		Price per Unit 4 1 2 4	£30 £30 £30 £30
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		ner IE Gende	Product Categ	ony v	G Quantity ✓ Pri	H ice per Unit	t	nue v commi	ssion 2023 v comr	K L	М	N
	2 17/01/2023 CUSTO		64 Clothing	oly .	4	ice per onic	£30	£120	£1.8	£2.40		
Print	3 26/12/2023 CUSTO				1		£30	£30	£0.5	£0.60		
	4 10/12/2023 CUSTO	80 Female	e 64 Clothing		2		£30	£60	£0.9	£1.20		
	5 03/10/2023 CUST1		64 Electronics		4		£30	£120	£1.8	£2.40		
scree	6 22/03/2023 CUST1		64 Beauty		2		£30	£60	£0.9	£1.20		
	7 02/01/2023 CUST1 8 08/11/2023 CUST1		e 64 Clothing 64 Electronics		3		£30	£90	£1.4 £1.8	£1.80 £2.40		
	9 07/06/2023 CUST1				2		£30	£60	£0.9	£1.20		
n 3	10 18/10/2023 CUST1		64 Beauty		1		£30	£30	£0.5	£0.60		
	11 22/09/2023 CUST2		64 Beauty		3		£30	£90	£1.4	£1.80		
	12 03/03/2023 CUST2		64 Beauty		1		£30	£30	£0.5	£0.60		commission
	13 02/02/2023 CUST2 14 25/08/2023 CUST2				1 4		£30	£30 £120	£0.5 £1.8	£0.60 £2.40		commission
	15 03/06/2023 CUST3		e 64 Electronics 64 Beauty		1		£30	£120	£1.8 £0.5	£2.40 £0.60	SUM	£75,4
			04 beauty				130	150	10.5	10.00	30141	
	B C	D	E F	G	Н				K	L M	N	0
	Date Y Customer II		✓ Age ✓ Product Category	▼ Quantity	Price per Unit	▼ Rev			nmission 202			
	17/01/2023 CUST014	Male	64 Clothing		4	£30	£120	£1.8	£2.40			
	26/12/2023 CUST025	Female	64 Beauty		1	£30	£30	£0.5	£0.60			
	10/12/2023 CUST080	Female	64 Clothing		2	£30	£60	£0.9	£1.20			
	03/10/2023 CUST122	Male	64 Electronics		4	£30	£120	£1.8	£2.40			
	22/03/2023 CUST161	Male	64 Beauty		2	£30	£60	£0.9	£1.20			
	02/01/2023 CUST163	Female	64 Clothing		3	£30	£90	£1.4	£1.80			
	08/11/2023 CUST173	Male	64 Electronics		4	£30	£120	£1.8	£2.40			
	07/06/2023 CUST187	Female	64 Clothing		2	£30	£60	£0.9	£1.20			
	18/10/2023 CUST191	Male	64 Beauty		1	£30	£30	£0.5	£0.60			
	22/09/2023 CUST218	Male	64 Beauty		3	£30	£90	£1.4	£1.80			ate %
					1	£30	£30	£0.5	£0.60			1.50%
	03/03/2023 CUST220	Male	64 Beauty								commission 2023	
	02/02/2023 CUST223	Female	64 Clothing		1	£30	£30	£0.5	£0.60		commission 2024	2.00%
	25/08/2023 CUST282	Female	64 Electronics		4	£30	£120	£1.8	£2.40			
Print	03/06/2023 CUST363	Male	64 Beauty		1	£30	£30	£0.5	£0.60	SUM	£75,420.00	
יוווונ	16/05/2023 CUST376	Female	64 Beauty		1	£30	£30	£0.5	£0.60	AVERAGE	£75.42	
	01/03/2023 CUST399	Female	64 Beauty		2	£30	£60	£0.9	£1.20	COUNT	1000	
cree	15/04/2023 CUST408	Female	64 Beauty		1	£30	£30	£0.5	£0.60	MAX	£120	
CIEC	28/12/2023 CUST429	Male	64 Electronics		2	£30	£60	£0.9	£1.20	MIN	£30	
	26/10/2023 CUST440	Male	64 Clothing		2	£30	£60	£0.9	£1.20			
n 4	25/02/2023 CUST473	Male	64 Beauty		1	£30	£30	£0.5	£0.60			
	19/06/2023 CUST532	Female	64 Clothing		4	£30	£120	£1.8	£2.40			
	27/05/2023 CUST561	Female	64 Clothing		4	£30	£120	£1.8	£2.40			
	02/12/2023 CUST566	Female	64 Clothing		1	£30	£30	£0.5	£0.60			
	07/02/2023 CUST596	Female	64 Electronics		1	£30	£30	£0.5	£0.60			
	07/02/2023 CUST692		64 Clothing		2	£30	£60	£0.9	£1.20			
		Female	•									
	19/07/2023 CUST698	Female	64 Electronics		1	£30	£30	£0.5	£0.60	SUM	£75,420	
	04/10/2023 CUST735	Female	64 Clothing		4	£30	£120	£1.8	£2.40	SUMIF-clothing	£26,820	
	12/05/2023 CUST758	Male	64 Clothing		4	£30	£120	£1.8	£2.40	SUMIF-Male	£36,480	
	22/06/2023 CUST830	Female	64 Clothing		3	£30	£90	£1.4	£1.80			
	06/06/2023 CUST882	Female	64 Electronics		2	£30	£60	£0.9	£1.20			
	26/09/2023 CUST897	Female	64 Electronics		2	£30	£60	£0.9	£1.20			
	13/12/2023 CUST009	Male	63 Electronics		2	£30	£60	£0.9	£1.20			
	18/11/2023 CUST057	Female	63 Beauty		1	£30	£30	£0.5	£0.60			
	16/11/2020 0001057	Male	C2 Flateration			630	000	50.0	61.20			



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:

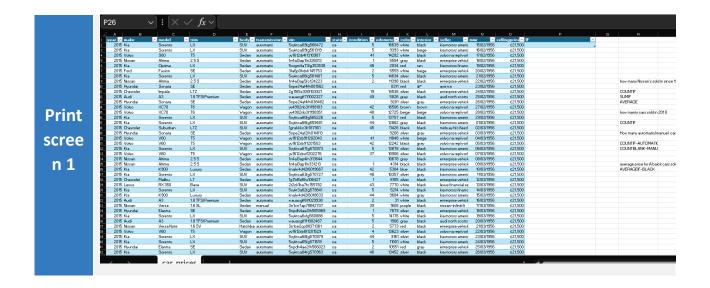
Student name	English	Mathematic:	Science	Average	Highest score
Carol	75	85	85		
Ted	80	75	90		
Khan	85	75	80		
Harry	80	70	80		
Sarah	80	70	80		
John	65	80	70		
Linda	90	50	70		
Edward	55	80	60		
Mary	55	70	65		
Thomas	55	30	65		
Task					

- 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

		· · J**	1001				
	A	В	С	D	Е	F	G
	1 Student name	English 🕶	⁄Iathema ▼	Science	Average▼	Highest sco ↓↓	
	2 Ted	80	75	90	81.66667	90	
	3 Linda	90	50	70	70	90	
	4 Carol	75	85	85	81.66667	85	
	5 Khan	85	75	80	80	85	
	6 Harry	80	70	80	76.66667	80	
	7 Sarah	80	70	80	76.66667	80	
Print	8 John	65	80	70	71.66667	80	
scree	9 Edward	55	80	60	65	80	
n 1	10 Mary	55	70	65	63.33333	70	
	11 Thomas	55	30	65	50	65	
	12						
	13						
	14 Task						
	15 1) Apply filter and	d sorting to	show the l	oest studer	nts in each	subject.	
	16 2) Calculate the a	verage for	all student	s and fill in	to Column	E. (Use formu	ıla)
	17 3) Using the =MA	X fucntion,	tell me wh	at the stud	lents highe	est score was i	n column
	18 4) Apply filter and	d sorting to	show the l	oest studer	nt in this cl	assroom by av	erage.
	10 F) A l f:lt		ا مماله مدينة		A : Ala :		

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!



Day 3: Task 1

Please download the dataset 'Day_3_Task_1_Bike_Sales_Pivot_Lab.xlsx' and the lab instructions.

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:

	_ A	В	С	D	Е	
	2 3 Sum of Order_Quantity	Caluma Labala v				
	4 Row Labels		N/I	Grand Total		
	5		20	63		
	8 Youth (<25) 9 □ Canada	9				
	. ,		5	11		
			13	20		
	12 Young Adults (25-34) 13 Youth (<25)		9			
	` '	6				
Print screen 1		8				
Fillit Scieen 1		8		13 2		
		2		2		
	17 Adults (35-64) 18 United Kingdom		9	14		
			3			
	` '	3				
	20 Young Adults (25-34) 21 Youth (<25)	1		6		
	22 United States		26	63		
	23 Adults (35-64)		20	47		
			6	16		
	Young Adults (25-34) 25 ■ United States	10	1	10		
	26 Adults (35-64)		1	1		
	27 Grand Total	108		187		
	28	100	,,	107		
	20					
In which markets do	Adults 35-64					
C						
Germany have						
customers?						
custoffiers:						
What country has	Australia					
sales in all markets?						
What are the most	Country: Australia	a				
	,					
profitable markets by	Ago group: adulto	•				
country aga group	Age group: adults					
country, age group,						
and gender?	Gender: females					
and Sonaci i						
Any other findings?						
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:

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

SWITCH Function Example:

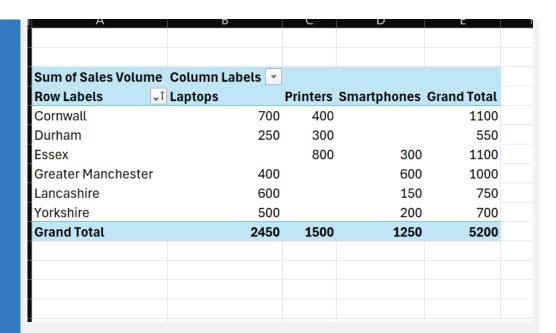
```
=SWITCH(TRUE, C2 > 600, "High", C2 >= 300, "Medium", "Low")
```



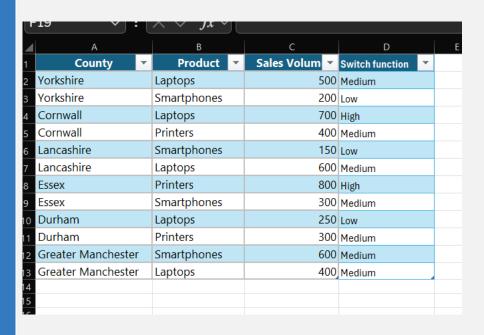
• Apply this formula to each row, and check if the products are categorised correctly.

Submission:

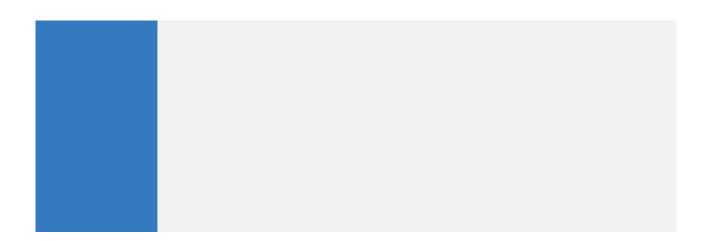
- A completed Pivot Table summarising sales by county and product.
- A new column in the dataset categorising products by sales volume using the SWITCH function.
 - Please paste your completed work below



Print screen 1





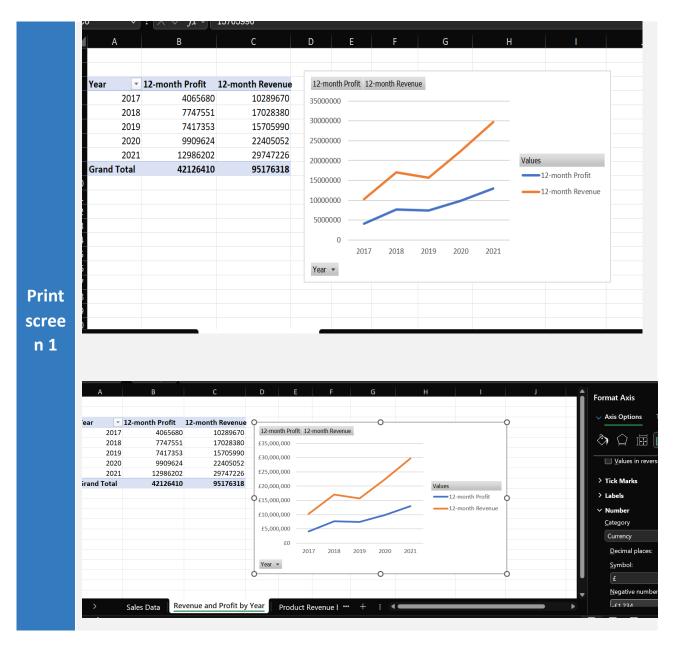


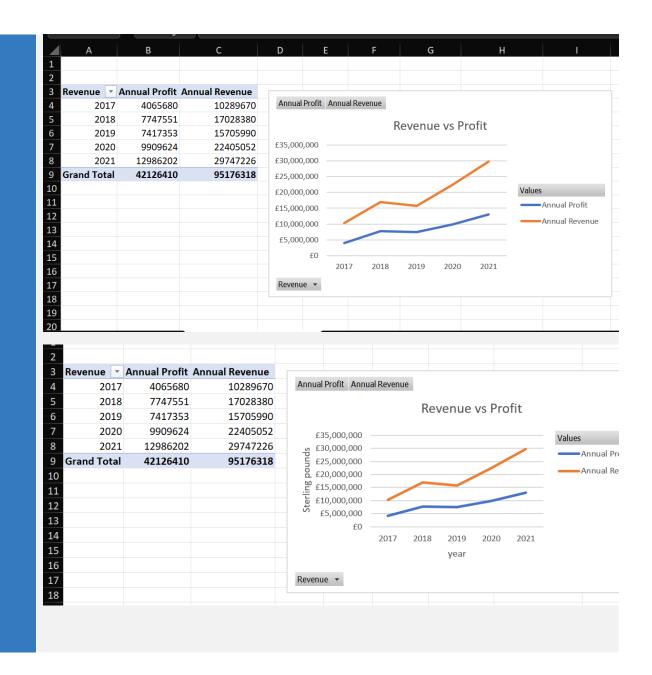


Day 3: Task 3

Please download the dataset 'Day_3_Task_3_Bike_Sales_Visualisations_Lab.xlsx' and the lab instructions. 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:





Day 4: Task 1

You have been asked to deliver your analysis findings to the board of directors, with your 1 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?	I would review my excel analysis and make sure that the data is correct. Then processed to create charts (e.g. bar or line graphs) to show when and where customers are leaving. It will be important for me to practice explaining the key points and simplifying them down, so it is easy to understand.
What tools would you use for the delivery?	First, I would use Microsoft excel where I would have all my data and graphs with all the in-depth information. This would help me when using Microsoft PowerPoint. I will use tool to help present the key points. Where I can visually show them the trends which help solidify my explanation.
What is prospecting and why would you complete this before your delivery?	 Prosecting is checking and reviewing data before presenting. I would do it to make sure the information is accurate, and I can answer basic questions confidently.

Start strong: introduce what I am talking about in one clear sentence Use visuals: point to excel/PowerPoint graphs and charts to ensure I am being clear as possible instead of just reading numbers. Pause between points: after making key points give people brief moment to absorb the information and Tell me best practices ask questions. for public speaking Maintain eye contact: looking at your audience and providing while you present shows confidence instead of updates to senior reading off your notes to much. leaders Ensure you keep your tone steady, you do not want to sound like you rushing but at the same time you do not want to talk to quiet or slow where it is hard to hear. I will show them a collum chart or bar chart, it will have the customers tenure (months on the x axis and the number on customer lost on the Y axis. The benefit of this is visualisation is powerful so in What will you show depth explanation will not be needed because the the board in your problem will visually present itself. delivery? After clearly stating the issue and showing the data How will you to back it up I would recommend new solutions to articulate the help combat this problem. changes that are For example, a new renewal strategy such as a needed? graduated pricing structure for customers that choose to renew.

An option for this could be a loyalty discount offer.
 A 15%-10% discount off their first renewal.

 This type of change could be viable option in the future to improve customer retention, increase lifetime value and protect the company revenue.

Provide a list of online resources and videos that will support your preparation for public speaking

https://share.google/CqkJkmo7usUL4aNLy

Evaluate tools that provide visualisation.

Tell me what they are.

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

For my presentation to the bored I will use Microsoft excel and PowerPoint

- Use Excel: to create the chart
- Why? This is where your data is. it is the easiest and fastest place for you to build a simple, clear bar chart that shows the customer churn spiking at 12 months.
- Use PowerPoint: to present the chart
- Why? PowerPoint is designed for presentations; you can put your main charts on a slide and design it in a way that looks professional and easy for the bored to understand. You can also add your recommendations in other slides.

Overall presenting your findings in the most proficient way as possible.

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.

