



Just IT

 B2Wgroup

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

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



	<ul style="list-style-type: none"> <li>• Impact on data use: it ensures data is collected fairly, used only for specific purposes, kept secure and not held longer than necessary.</li> <li>• Consequences: of breach: organisations can face heavy fines and reputational damage if they misuse or fail to protect data.</li> </ul>
<b>GDPR</b>	<p>GDOR is an EU regulation (adopted by the UK too) that strengthens and unifies data protection for individuals.</p> <p>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.</p>
<b>Freedom of Information Act</b>	<p>Freedom of information Act</p> <p>What it is: law that gives the public the right to access information held by public authorities (like government bodies, councils, NHS, schools).</p> <p>Impact on data use: promotes transparency by allowing citizens to request information, unless it Falls</p> <p>Consequences of breach: authorities can be challenged legally if they withhold information without valid reasons.</p>
<b>Computer Misuse Act</b>	<p>A UK law introduced in 1990 to protect against cybercrime, such as hacking spreading viruses, or authorized access to system.</p> <p>Impact on data: it makes it illegal to access, steal, or damage data without permission.</p>

## 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  
n 1

	B	C	D	E	F	G	H	
	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Revenue
	17/01/2023	CUST014	Male	64	Clothing	4	£30	
	26/12/2023	CUST025	Female	64	Beauty	1	£30	
	10/12/2023	CUST080	Female	64	Clothing	2	£30	
	03/10/2023	CUST122	Male	64	Electronics	4	£30	
	22/03/2023	CUST161	Male	64	Beauty	2	£30	
	02/01/2023	CUST163	Female	64	Clothing	3	£30	
	08/11/2023	CUST173	Male	64	Electronics	4	£30	
	07/06/2023	CUST187	Female	64	Clothing	2	£30	
	18/10/2023	CUST191	Male	64	Beauty	1	£30	
	22/09/2023	CUST218	Male	64	Beauty	3	£30	
	03/03/2023	CUST220	Male	64	Beauty	1	£30	
	02/02/2023	CUST223	Female	64	Clothing	1	£30	
	25/08/2023	CUST282	Female	64	Electronics	4	£30	
	03/06/2023	CUST363	Male	64	Beauty	1	£30	
	16/05/2023	CUST376	Female	64	Beauty	1	£30	
	01/03/2023	CUST399	Female	64	Beauty	2	£30	
	15/04/2023	CUST408	Female	64	Beauty	1	£30	
	28/12/2023	CUST429	Male	64	Electronics	2	£30	
	26/10/2023	CUST440	Male	64	Clothing	2	£30	
	25/02/2023	CUST473	Male	64	Beauty	1	£30	
	19/06/2023	CUST532	Female	64	Clothing	4	£30	
	27/05/2023	CUST561	Female	64	Clothing	4	£30	
	02/12/2023	CUST566	Female	64	Clothing	1	£30	
	07/02/2023	CUST596	Female	64	Electronics	1	£30	
	07/09/2023	CUST692	Female	64	Clothing	2	£30	
	19/07/2023	CUST698	Female	64	Electronics	1	£30	
	04/10/2023	CUST735	Female	64	Clothing	4	£30	
	12/05/2023	CUST758	Male	64	Clothing	4	£30	
	22/06/2023	CUST830	Female	64	Clothing	3	£30	
	06/06/2023	CUST882	Female	64	Electronics	2	£30	
	26/09/2023	CUST897	Female	64	Electronics	2	£30	
	13/12/2023	CUST009	Male	63	Electronics	2	£30	
	18/11/2023	CUST057	Female	63	Beauty	1	£30	
	16/03/2023	CUST153	Male	63	Electronics	2	£30	

Print  
screen  
n 2

	B	C	D	E	F	G	H	
	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Revenue
	17/01/2023	CUST014	Male	64	Clothing	4	£30	
	26/12/2023	CUST025	Female	64	Beauty	1	£30	
	10/12/2023	CUST080	Female	64	Clothing	2	£30	
	03/10/2023	CUST122	Male	64	Electronics	4	£30	
	22/03/2023	CUST161	Male	64	Beauty	2	£30	
	02/01/2023	CUST163	Female	64	Clothing	3	£30	
	08/11/2023	CUST173	Male	64	Electronics	4	£30	
	07/06/2023	CUST187	Female	64	Clothing	2	£30	
	18/10/2023	CUST191	Male	64	Beauty	1	£30	
	22/09/2023	CUST218	Male	64	Beauty	3	£30	
	03/03/2023	CUST220	Male	64	Beauty	1	£30	
	02/02/2023	CUST223	Female	64	Clothing	1	£30	
	25/08/2023	CUST282	Female	64	Electronics	4	£30	
	03/06/2023	CUST363	Male	64	Beauty	1	£30	
	16/05/2023	CUST376	Female	64	Beauty	1	£30	
	01/03/2023	CUST399	Female	64	Beauty	2	£30	
	15/04/2023	CUST408	Female	64	Beauty	1	£30	
	28/12/2023	CUST429	Male	64	Electronics	2	£30	
	26/10/2023	CUST440	Male	64	Clothing	2	£30	
	25/02/2023	CUST473	Male	64	Beauty	1	£30	
	19/06/2023	CUST532	Female	64	Clothing	4	£30	
	27/05/2023	CUST561	Female	64	Clothing	4	£30	
	02/12/2023	CUST566	Female	64	Clothing	1	£30	
	07/02/2023	CUST596	Female	64	Electronics	1	£30	
	07/09/2023	CUST692	Female	64	Clothing	2	£30	
	19/07/2023	CUST698	Female	64	Electronics	1	£30	
	04/10/2023	CUST735	Female	64	Clothing	4	£30	
	12/05/2023	CUST758	Male	64	Clothing	4	£30	
	22/06/2023	CUST830	Female	64	Clothing	3	£30	
	06/06/2023	CUST882	Female	64	Electronics	2	£30	
	26/09/2023	CUST897	Female	64	Electronics	2	£30	
	13/12/2023	CUST009	Male	63	Electronics	2	£30	
	18/11/2023	CUST057	Female	63	Beauty	1	£30	
	16/03/2023	CUST153	Male	63	Electronics	2	£30	



Print  
screen  
n 3

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Revenue	commission 2023	commission 2024			
2	17/01/2023	CUST014	Male		64 Clothing	4	£30	£120	£1.8	£2.40			
3	26/12/2023	CUST025	Female		64 Beauty	1	£30	£30	£0.5	£0.60			
4	10/12/2023	CUST080	Female		64 Clothing	2	£30	£60	£0.9	£1.20			
5	03/10/2023	CUST122	Male		64 Electronics	4	£30	£120	£1.8	£2.40			
6	22/03/2023	CUST161	Male		64 Beauty	2	£30	£60	£0.9	£1.20			
7	02/01/2023	CUST163	Female		64 Clothing	3	£30	£90	£1.4	£1.80			
8	08/11/2023	CUST173	Male		64 Electronics	4	£30	£120	£1.8	£2.40			
9	07/06/2023	CUST187	Female		64 Clothing	2	£30	£60	£0.9	£1.20			
10	18/10/2023	CUST191	Male		64 Beauty	1	£30	£30	£0.5	£0.60			
11	22/09/2023	CUST218	Male		64 Beauty	3	£30	£90	£1.4	£1.80			
12	03/03/2023	CUST220	Male		64 Beauty	1	£30	£30	£0.5	£0.60			commission 2023
13	02/02/2023	CUST223	Female		64 Clothing	1	£30	£30	£0.5	£0.60			commission 2024
14	25/08/2023	CUST282	Female		64 Electronics	4	£30	£120	£1.8	£2.40			
15	03/06/2023	CUST363	Male		64 Beauty	1	£30	£30	£0.5	£0.60	SUM		£75,420.00

Print  
screen  
n 4

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Revenue	commission 2023	commission 2024					
2	17/01/2023	CUST014	Male		64 Clothing	4	£30	£120	£1.8	£2.40					
3	26/12/2023	CUST025	Female		64 Beauty	1	£30	£30	£0.5	£0.60					
4	10/12/2023	CUST080	Female		64 Clothing	2	£30	£60	£0.9	£1.20					
5	03/10/2023	CUST122	Male		64 Electronics	4	£30	£120	£1.8	£2.40					
6	22/03/2023	CUST161	Male		64 Beauty	2	£30	£60	£0.9	£1.20					
7	02/01/2023	CUST163	Female		64 Clothing	3	£30	£90	£1.4	£1.80					
8	08/11/2023	CUST173	Male		64 Electronics	4	£30	£120	£1.8	£2.40					
9	07/06/2023	CUST187	Female		64 Clothing	2	£30	£60	£0.9	£1.20					
10	18/10/2023	CUST191	Male		64 Beauty	1	£30	£30	£0.5	£0.60					
11	22/09/2023	CUST218	Male		64 Beauty	3	£30	£90	£1.4	£1.80					
12	03/03/2023	CUST220	Male		64 Beauty	1	£30	£30	£0.5	£0.60					
13	02/02/2023	CUST223	Female		64 Clothing	1	£30	£30	£0.5	£0.60					
14	25/08/2023	CUST282	Female		64 Electronics	4	£30	£120	£1.8	£2.40					
15	03/06/2023	CUST363	Male		64 Beauty	1	£30	£30	£0.5	£0.60	SUM		£75,420.00		
16	05/03/2023	CUST376	Female		64 Beauty	1	£30	£30	£0.5	£0.60	AVERAGE		£75.42		
17	01/03/2023	CUST399	Female		64 Beauty	2	£30	£60	£0.9	£1.20	COUNT		1000		
18	15/04/2023	CUST408	Female		64 Beauty	1	£30	£30	£0.5	£0.60	MAX		£120		
19	28/12/2023	CUST429	Male		64 Electronics	2	£30	£60	£0.9	£1.20	MIN		£30		
20	26/10/2023	CUST440	Male		64 Clothing	2	£30	£60	£0.9	£1.20					
21	25/02/2023	CUST473	Male		64 Beauty	1	£30	£30	£0.5	£0.60					
22	19/06/2023	CUST532	Female		64 Clothing	4	£30	£120	£1.8	£2.40					
23	27/05/2023	CUST561	Female		64 Clothing	4	£30	£120	£1.8	£2.40					
24	02/12/2023	CUST566	Female		64 Clothing	1	£30	£30	£0.5	£0.60					
25	07/02/2023	CUST596	Female		64 Electronics	1	£30	£30	£0.5	£0.60					
26	07/09/2023	CUST692	Female		64 Clothing	2	£30	£60	£0.9	£1.20					
27	19/07/2023	CUST698	Female		64 Electronics	1	£30	£30	£0.5	£0.60	SUM		£75,420		
28	04/10/2023	CUST735	Female		64 Clothing	4	£30	£120	£1.8	£2.40	SUMIF-clothing		£26,820		
29	12/05/2023	CUST758	Male		64 Clothing	4	£30	£120	£1.8	£2.40	SUMIF-Male		£36,480		
30	22/06/2023	CUST830	Female		64 Clothing	3	£30	£90	£1.4	£1.80					
31	06/06/2023	CUST882	Female		64 Electronics	2	£30	£60	£0.9	£1.20					
32	26/09/2023	CUST897	Female		64 Electronics	2	£30	£60	£0.9	£1.20					
33	13/12/2023	CUST009	Male		63 Electronics	2	£30	£60	£0.9	£1.20					
34	18/11/2023	CUST057	Female		63 Beauty	1	£30	£30	£0.5	£0.60					
35	16/03/2023	CUST153	Male		63 Electronics	2	£30	£60	£0.9	£1.20					

Sheet2

retail\_sales\_dataset

Transactions

Task 2

Sheet1

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## 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 fuction, 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							



	A	B	C	D	E	F	G
1	Student name ▾	English ▾	Mathema ▾	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	
8	John	65	80	70	71.66667	80	
9	Edward	55	80	60	65	80	
10	Mary	55	70	65	63.33333	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						
18	4) Apply filter and sorting to show the best student in this classroom by average.						
19	5) Apply filter and sorting to show the best student in this classroom by highest average.						

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

[illegible]



## 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:

Print screen 1					
	2	A	B	C	D
	3	Sum of Order_Quantity	Column Labels		
	4	Row Labels	F	M	Grand Total
	5	Australia	43	20	63
	6	Adults (35-64)	17	15	32
	7	Young Adults (25-34)	17	3	20
	8	Youth (<25)	9	2	11
	9	Canada	6	5	11
	10	Young Adults (25-34)	6	5	11
	11	France	7	13	20
	12	Young Adults (25-34)	1	9	10
	13	Youth (<25)	6	4	10
	14	Germany	8	5	13
	15	Adults (35-64)	8	5	13
	16	United States	2		2
	17	Adults (35-64)	2		2
	18	United Kingdom	5	9	14
	19	Adults (35-64)	1	3	4
	20	Young Adults (25-34)	3	1	4
	21	Youth (<25)	1	5	6
	22	United States	37	26	63
	23	Adults (35-64)	27	20	47
	24	Young Adults (25-34)	10	6	16
	25	United States	1		1
	26	Adults (35-64)	1		1
	27	Grand Total	108	79	187
	28				
	29				
	30				
In which markets do Germany have customers?	Adults 35-64				
What country has sales in all markets?	Australia				
What are the most profitable markets by country, age group, and gender?	Country: Australia Age group: adults Gender: females				
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:

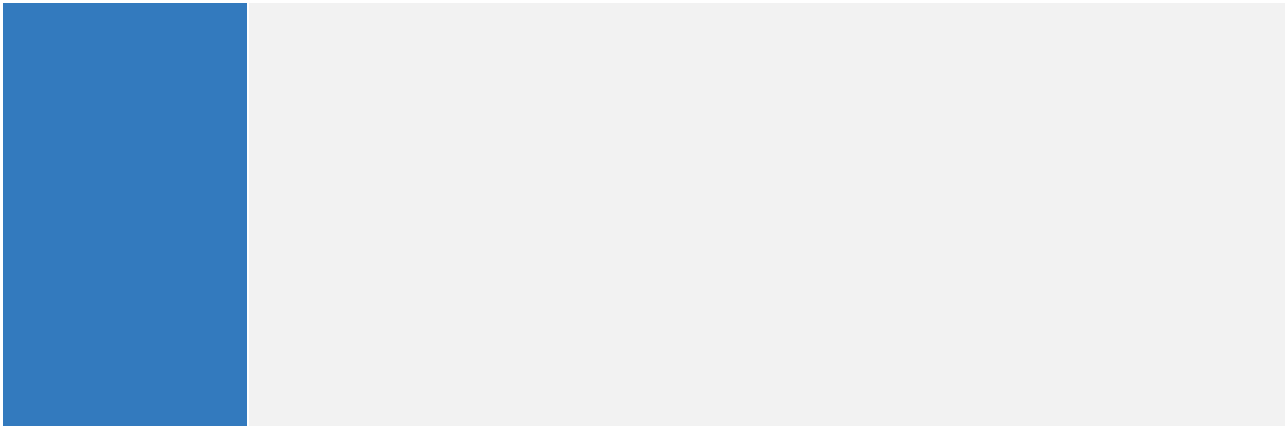
- A completed Pivot Table summarising sales by county and product.
- A new column in the dataset categorising products by sales volume using the SWITCH function.
  - Please paste your completed work below

Sum of Sales Volume				
Column Labels				
Row Labels	Laptops	Printers	Smartphones	Grand Total
Cornwall	700	400		1100
Durham	250	300		550
Essex		800	300	1100
Greater Manchester	400		600	1000
Lancashire	600		150	750
Yorkshire	500		200	700
<b>Grand Total</b>	<b>2450</b>	<b>1500</b>	<b>1250</b>	<b>5200</b>

Print screen 1

County	Product	Sales Volume	Switch function
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



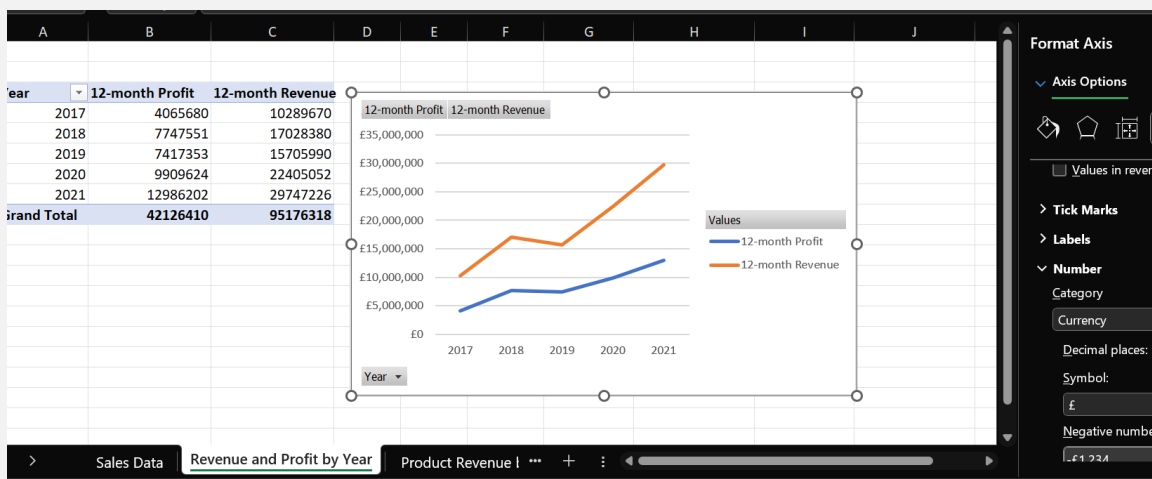
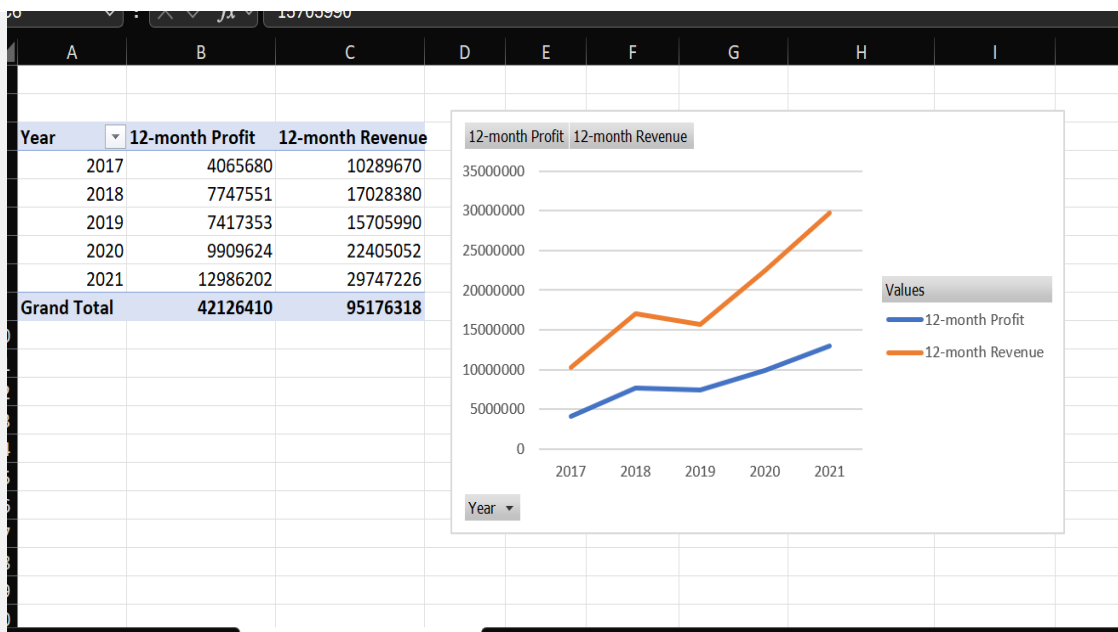


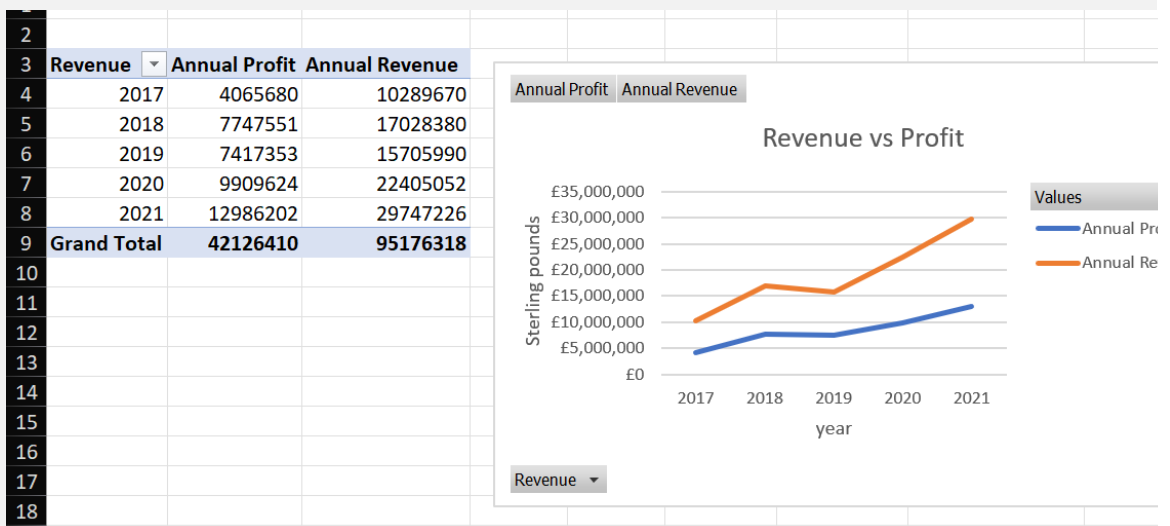
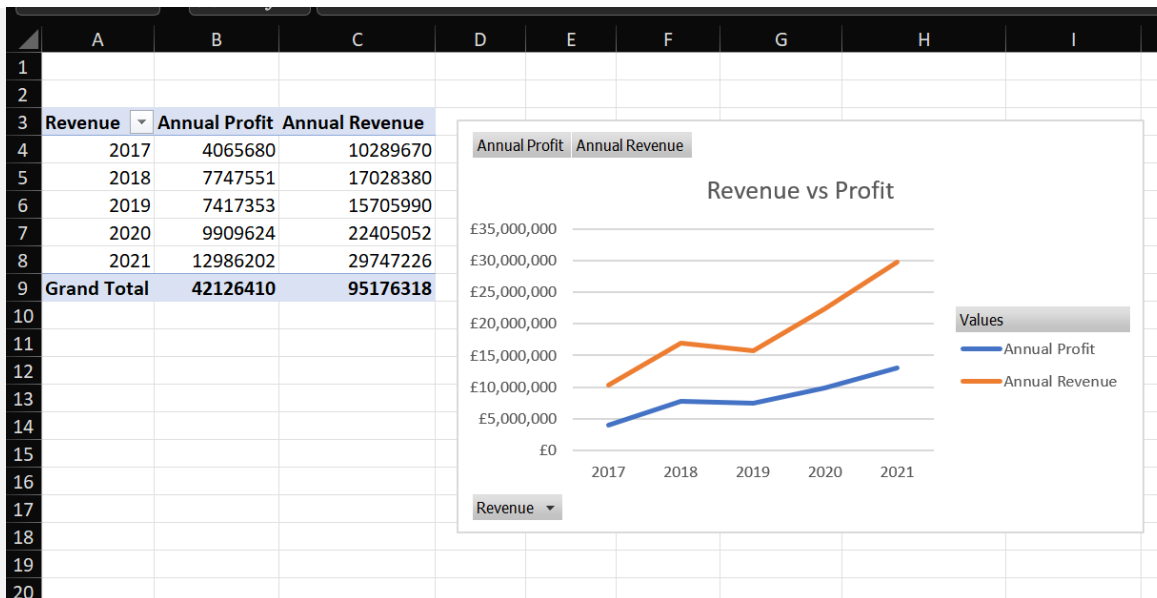
## Day 3: Task 3

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:

Print  
screen  
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## 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:

<b>How would you prepare for the delivery?</b>	<p>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.</p> <p>It will be important for me to practice explaining the key points and simplifying them down, so it is easy to understand.</p>
<b>What tools would you use for the delivery?</b>	<p>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.</p>
<b>What is prospecting and why would you complete this before your delivery?</b>	<ul style="list-style-type: none"><li>• Prospecting is checking and reviewing data before presenting.</li><li>• I would do it to make sure the information is accurate, and I can answer basic questions confidently.</li></ul>





<b>Tell me best practices for public speaking and providing updates to senior leaders</b>	<ul style="list-style-type: none"> <li>• Start strong: introduce what I am talking about in one clear sentence</li> <li>• Use visuals: point to excel/PowerPoint graphs and charts to ensure I am being clear as possible instead of just reading numbers.</li> <li>• Pause between points: after making key points give people brief moment to absorb the information and ask questions.</li> <li>• Maintain eye contact: looking at your audience while you present shows confidence instead of reading off your notes too much.</li> <li>• 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 too quiet or slow where it is hard to hear.</li> </ul>
<b>What will you show the board in your delivery?</b>	<ul style="list-style-type: none"> <li>• I will show them a column chart or bar chart, it will have the customer's tenure (months) on the x-axis and the number of customers lost on the y-axis.</li> <li>• The benefit of this is visualisation is powerful so in-depth explanation will not be needed because the problem will visually present itself.</li> </ul>
<b>How will you articulate the changes that are needed?</b>	<ul style="list-style-type: none"> <li>• After clearly stating the issue and showing the data to back it up I would recommend new solutions to help combat this problem.</li> <li>• For example, a new renewal strategy such as a graduated pricing structure for customers that choose to renew.</li> </ul>



	<ul style="list-style-type: none"> <li>• An option for this could be a loyalty discount offer. A 15%-10% discount off their first renewal.</li> <li>• This type of change could be viable option in the future to improve customer retention, increase lifetime value and protect the company revenue.</li> </ul>
Provide a list of online resources and videos that will support your preparation for public speaking	<a href="https://share.google/CqkJkmo7usUL4aNly">https://share.google/CqkJkmo7usUL4aNly</a>
<p>Evaluate tools that provide visualisation.</p> <p>Tell me what they are.</p> <p>Tell me what you would choose when delivering your presentation and why</p>	<p>For my presentation to the bored I will use Microsoft excel and PowerPoint</p> <ul style="list-style-type: none"> <li>• Use Excel: to create the chart</li> <li>• 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.</li> <li>• Use PowerPoint: to present the chart</li> <li>• 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.</li> </ul> <p>Overall presenting your findings in the most proficient way as possible.</p>





## 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:

A large, empty light gray rectangular area intended for taking notes or writing.





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.**

