



Data Technician

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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

Gives rights to data subjects – people whose personal data is stored on computer systems. It is important as it gives data subjects the right to see, amend and delete personal data an organisation holds about them. As a doctor only you and



	<p>your patient are allowed to view their medical records and is illegal and an invasion of privacy if those records are shared externally without permission from the patient. It makes accessing data more secure on both ends. If you were to breach the data protection act, fines may be issued along with paying compensation to the parties who were damaged by this breach.</p>
GDPR	<p>The General Data Protection Regulation is a legal framework that governs the collection and processing of personal data for individuals in and outside the European Union (EU). It is important as it helps EU citizens understand how their data is used, gives individuals control over their personal data, provide a way for individuals to file complaints. An example of a GDPR is a credit card detail where only the person owning the credit card and their bank are aware of any personal information. If the bank were to provide that person's information to any third parties that would be a breach of the GDPR. Any breaches could result in criminal charges which could result in damaged reputation for you and your business along with fines and disciplinary action acting against you.</p>
Freedom of Information Act	<p>The freedom of information act gives the public the right to access recorded information held by public authorities in England, Wales, Northern Ireland and Scotland. It is important as it provides people the right to request information such as printed documents, emails, photographs etc, it gives people the right to be told if information is held, regardless of the purpose, as well as giving people the right to receive information they have requested. A real-world example of this would be BBC emails and if requested by the public the BBC is legally obligated to provide the public with those emails. If the freedom of information act was ever breached you may be faced with a contempt of court, and a public authority could be issued an enforcement notice.</p>
Computer Misuse Act	<p>It was introduced to stop hacking, cyber-crime and prevents illegal access to files. It is important as it prevents unauthorised access to a private network or device. A real-world example of this would be illegally accessing a device through hacking to steal or destroy</p>



someone else's data. If breached you could receive hefty fines or even prison sentences however it has been amended in recent years to give harsher punishments.

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 'filter' function, filter '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

1	A	B	C	D	E	F	G
1	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity
2	14	17/01/2023	CUST014	Male	64	Clothing	4
3	25	26/12/2023	CUST025	Female	64	Beauty	1
4	80	10/12/2023	CUST080	Female	64	Clothing	2
5	122	03/10/2023	CUST122	Male	64	Electronics	4
6	161	22/03/2023	CUST161	Male	64	Beauty	2
7	163	02/01/2023	CUST163	Female	64	Clothing	3
8	173	08/11/2023	CUST173	Male	64	Electronics	4
9	187	07/06/2023	CUST187	Female	64	Clothing	2
10	191	18/10/2023	CUST191	Male	64	Beauty	1
11	218	22/09/2023	CUST218	Male	64	Beauty	3
12	220	03/03/2023	CUST220	Male	64	Beauty	1
13	223	02/02/2023	CUST223	Female	64	Clothing	1
14	282	25/08/2023	CUST282	Female	64	Electronics	4
15	363	03/06/2023	CUST363	Male	64	Beauty	1
16	376	16/05/2023	CUST376	Female	64	Beauty	1
17	399	01/03/2023	CUST399	Female	64	Beauty	2
18	408	15/04/2023	CUST408	Female	64	Beauty	1
19	429	28/12/2023	CUST429	Male	64	Electronics	2
20	440	26/10/2023	CUST440	Male	64	Clothing	2
21	473	25/02/2023	CUST473	Male	64	Beauty	1
22	532	19/06/2023	CUST532	Female	64	Clothing	4
23	561	27/05/2023	CUST561	Female	64	Clothing	4
24	566	02/12/2023	CUST566	Female	64	Clothing	1



Print screen 2

J16

A	B	C	D	E	F	G	H		
1	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Total
2	1	24/11/2023	CUST001	Male	34	Beauty	3	50	
3	2	27/02/2023	CUST002	Female	26	Clothing	2	500	
4	3	13/01/2023	CUST003	Male	50	Electronics	1	30	
5	4	21/05/2023	CUST004	Male	37	Clothing	1	500	
6	5	06/05/2023	CUST005	Male	30	Beauty	2	50	
7	6	25/04/2023	CUST006	Female	45	Beauty	1	30	
8	7	13/03/2023	CUST007	Male	46	Clothing	2	25	
9	8	22/02/2023	CUST008	Male	30	Electronics	4	25	
L0	9	13/12/2023	CUST009	Male	63	Electronics	2	300	
L1	10	07/10/2023	CUST010	Female	52	Clothing	4	50	
L2	11	14/02/2023	CUST011	Male	23	Clothing	2	50	
L3	12	30/10/2023	CUST012	Male	35	Beauty	3	25	
L4	13	05/08/2023	CUST013	Male	22	Electronics	3	500	
L5	14	17/01/2023	CUST014	Male	64	Clothing	4	30	
L6	15	16/01/2023	CUST015	Female	42	Electronics	4	500	
L7	16	17/02/2023	CUST016	Male	19	Clothing	3	500	
L8	17	22/04/2023	CUST017	Female	27	Clothing	4	25	
L9	18	30/04/2023	CUST018	Female	47	Electronics	2	25	
L10	19	16/09/2023	CUST019	Female	62	Clothing	2	25	
L11	20	05/11/2023	CUST020	Male	22	Clothing	3	300	
L12	21	14/01/2023	CUST021	Female	50	Beauty	1	500	
L13	22	15/10/2023	CUST022	Male	18	Clothing	2	50	
L14	23	12/04/2023	CUST023	Female	35	Clothing	4	30	

retail_sales_dataset

Print screen 3

K17

A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Total	commission	sale		
2	1	24/11/2023	CUST001	Male	34	Beauty	3	50	150	2.25			
3	2	27/02/2023	CUST002	Female	26	Clothing	2	500	1000	15			
4	3	13/01/2023	CUST003	Male	50	Electronics	1	30	30	0.45			
5	4	21/05/2023	CUST004	Male	37	Clothing	1	500	500	7.5			
6	5	06/05/2023	CUST005	Male	30	Beauty	2	50	100	1.5			
7	6	25/04/2023	CUST006	Female	45	Beauty	1	30	30	0.45	commission2	1.50%	
8	7	13/03/2023	CUST007	Male	46	Clothing	2	25	50	0.75			
9	8	22/02/2023	CUST008	Male	30	Electronics	4	25	100	1.5			
10	9	13/12/2023	CUST009	Male	63	Electronics	2	300	600	9			
11	10	07/10/2023	CUST010	Female	52	Clothing	4	50	200	3			
12	11	14/02/2023	CUST011	Male	23	Clothing	2	50	100	1.5	count	1048575	
13	12	30/10/2023	CUST012	Male	35	Beauty	3	25	75	1.125	CountA	1000	
14	13	05/08/2023	CUST013	Male	22	Electronics	3	500	1500	22.5	CountIf	307	
15	14	17/01/2023	CUST014	Male	64	Clothing	4	30	120	1.8	CountIfS	8	
16	15	16/01/2023	CUST015	Female	42	Electronics	4	500	2000	30			
17	16	17/02/2023	CUST016	Male	19	Clothing	3	500	1500	22.5			
18	17	22/04/2023	CUST017	Female	27	Clothing	4	25	100	1.5			
19	18	30/04/2023	CUST018	Female	47	Electronics	2	25	50	0.75			
20	19	16/09/2023	CUST019	Female	62	Clothing	2	25	50	0.75			
21	20	05/11/2023	CUST020	Male	22	Clothing	3	300	900	13.5			
22	21	14/01/2023	CUST021	Female	50	Beauty	1	500	500	7.5			
23	22	15/10/2023	CUST022	Male	18	Clothing	2	50	100	1.5			
24	23	12/04/2023	CUST023	Female	35	Clothing	4	30	120	1.8			

retail_sales_dataset



Print screen n 4

The screenshot shows a Microsoft Excel spreadsheet titled "retail_sales_dataset_Master.xlsx". The "Formulas" tab is selected in the ribbon. A formula audit ribbon is displayed above the formula bar, showing options like "Trace Precedents", "Trace Dependents", "Show Formulas", "Error-checking", and "Watch Window". The formula bar displays the formula =commission2. The status bar at the bottom right shows "Average_com 0.00652314". The main table has columns: Age, Product Category, Quantity, Price per Unit, Total_sale, commission, and sale. Row 9 contains the formula =AVERAGE(B2:B24) in cell M9, which is highlighted with a green border. The formula audit ribbon shows "Average_com 0.00652314" under the "Show Formulas" section.

Age	Product Category	Quantity	Price per Unit	Total_sale	commission	sale
34	Beauty	3	50	150	2.25	
26	Clothing	2	500	1000	15	
50	Electronics	1	30	30	0.45	
37	Clothing	1	500	500	7.5	
30	Beauty	2	50	100	1.5	
45	Beauty	1	30	30	0.45	
46	Clothing	2	25	50	0.75	
30	Electronics	4	25	100	1.5	
63	Electronics	2	300	600	9	
52	Clothing	4	50	200	3	
23	Clothing	2	50	100	1.5	
35	Beauty	3	25	75	1.125	
22	Electronics	3	500	1500	22.5	
64	Clothing	4	30	120	1.8	
42	Electronics	4	500	2000	30	
19	Clothing	3	500	1500	22.5	
27	Clothing	4	25	100	1.5	
47	Electronics	2	25	50	0.75	
62	Clothing	2	25	50	0.75	
22	Clothing	3	300	900	13.5	
50	Beauty	1	500	500	7.5	
18	Clothing	2	50	100	1.5	
35	Clothing	4	30	120	1.8	

The screenshot shows a Microsoft Excel spreadsheet titled "retail_sales_dataset_Master (version 1).xlsm". The "Formulas" tab is selected in the ribbon. A formula audit ribbon is displayed above the formula bar, showing options like "Trace Precedents", "Trace Dependents", "Show Formulas", "Error-checking", and "Watch Window". The formula bar displays the formula =Year_num. The status bar at the bottom right shows "Average: 1900.117304 Count: 1048576 Sum: 1992415502". The main table has columns: Transaction ID, Date, Customer ID, Gender, Age, Product Category, Quantity, Price per Unit, Total_sale, Date_num, Month_num, Year_num, Date_text, Month_text, and Year_text. The "Year_num" column is highlighted with a green border. The formula audit ribbon shows "Year_num" under the "Show Formulas" section.

Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Total_sale	Date_num	Month_num	Year_num	Date_text	Month_text	Year_text
14	17/01/2023	CUST014	Male	64	Clothing	4	30	120	17	1	2023	Tuesday	January	2023
25	26/12/2023	CUST025	Female	64	Beauty	1	50	50	26	12	2023	Tuesday	December	2023
80	10/12/2023	CUST080	Female	64	Clothing	2	30	60	10	12	2023	Sunday	December	2023
122	03/10/2023	CUST122	Male	64	Electronics	4	30	120	3	10	2023	Tuesday	October	2023
161	22/03/2023	CUST161	Male	64	Beauty	2	500	1000	22	3	2023	Wednesday	March	2023
163	02/01/2023	CUST163	Female	64	Clothing	3	50	150	2	1	2023	Monday	January	2023
173	08/11/2023	CUST173	Male	64	Electronics	4	30	120	8	11	2023	Wednesday	November	2023
187	07/06/2023	CUST187	Female	64	Clothing	2	50	100	7	6	2023	Wednesday	June	2023
191	18/10/2023	CUST191	Male	64	Beauty	1	25	25	18	10	2023	Wednesday	October	2023
218	22/09/2023	CUST218	Male	64	Beauty	3	30	90	22	9	2023	Friday	September	2023
220	03/03/2023	CUST220	Male	64	Beauty	1	500	500	3	3	2023	Friday	March	2023
223	02/02/2023	CUST223	Female	64	Clothing	1	25	25	2	2	2023	Thursday	February	2023
282	25/08/2023	CUST282	Female	64	Electronics	4	50	200	25	8	2023	Friday	August	2023
363	03/06/2023	CUST363	Male	64	Beauty	1	25	25	3	6	2023	Saturday	June	2023
376	16/05/2023	CUST376	Female	64	Beauty	1	30	30	16	5	2023	Tuesday	May	2023
399	01/03/2023	CUST399	Female	64	Beauty	2	30	60	1	3	2023	Wednesday	March	2023
408	15/04/2023	CUST408	Female	64	Beauty	1	500	500	15	4	2023	Saturday	April	2023
429	28/12/2023	CUST429	Male	64	Electronics	2	25	50	28	12	2023	Thursday	December	2023
440	26/10/2023	CUST440	Male	64	Clothing	2	300	600	26	10	2023	Thursday	October	2023
473	25/02/2023	CUST473	Male	64	Beauty	1	50	50	25	2	2023	Saturday	February	2023
532	19/06/2023	CUST532	Female	64	Clothing	4	30	120	19	6	2023	Monday	June	2023
561	27/05/2023	CUST561	Female	64	Clothing	4	500	2000	27	5	2023	Saturday	May	2023
566	02/12/2023	CUST566	Female	64	Clothing	1	30	30	2	12	2023	Saturday	December	2023

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 function, 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

1.1 Sorting the best student in English

Print screen 1

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

1.2 Sorting the best student in Mathematics

	A	B	C	D	E	F
1	Student	English	Mathematics	Science	Average	HighestScore
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	Thosmas	55		30	65	

1.3 Sorting the best student in science

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



2) Calculating the average for all students

E3 $=\text{AVERAGE}(@\text{English},@\text{Mathematics},@\text{Science})$

A	B	C	D	E	F
Student name	English	Mathematics	Science	Average	Highest score
Carol	75	85	85	=AVERAGE(@English,@Ma	
Ted	80	75	90	=AVERAGE(@English,@Ma	
Khan	85	75	80	=AVERAGE(@English,@Ma	
Harry	80	70	80	=AVERAGE(@English,@Ma	
Sarah	80	70	80	=AVERAGE(@English,@Ma	
John	65	80	70	=AVERAGE(@English,@Ma	
Linda	90	50	70	=AVERAGE(@English,@Ma	
Edward	55	80	60	=AVERAGE(@English,@Ma	
Mary	55	70	65	=AVERAGE(@English,@Ma	
Thomas	55	30	65	=AVERAGE(@English,@Ma	

A	B	C	D	E	F
Student	English	Mathematics	Science	Average	HighestScore
Carol	75	85	85	81.66666667	
John	65	80	70	71.66666667	
Edward	55	80	60	65	
Ted	80	75	90	81.66666667	
Khan	85	75	80	80	
Harry	80	70	80	76.66666667	
Sarah	80	70	80	76.66666667	
Mary	55	70	65	63.33333333	
Linda	90	50	70	70	
Thomas	55	30	65	50	

3) The student in the classroom which has the highest score

F3 $=\text{MAX}(@\text{English},@\text{Mathematics},@\text{Science})$

A	B	C	D	E	F
Student name	English	Mathematics	Science	Average	Highest score
Carol	75	85	85	=AVERAGE(@English,@Ma	
Ted	80	75	90	=AVERAGE(@English,@Ma	
Khan	85	75	80	=AVERAGE(@English,@Ma	
Harry	80	70	80	=AVERAGE(@English,@Ma	
Sarah	80	70	80	=AVERAGE(@English,@Ma	
John	65	80	70	=AVERAGE(@English,@Ma	
Linda	90	50	70	=AVERAGE(@English,@Ma	
Edward	55	80	60	=AVERAGE(@English,@Ma	
Mary	55	70	65	=AVERAGE(@English,@Ma	
Thomas	55	30	65	=AVERAGE(@English,@Ma	

A	B	C	D	E	F
Student_name	English	Mathematics	Science	average	Highest_score
Ted	80	75	90	81.66666667	90
Carol	75	85	85	81.66666667	85
Khan	85	75	80	80	85
Harry	80	70	80	76.66666667	80
Sarah	80	70	80	76.66666667	80
John	65	80	70	71.66666667	80
Linda	90	50	70	70	90
Edward	55	80	60	65	80
Mary	55	70	65	63.33333333	70
Thomas	55	30	65	50	65

4) Filtering and sorting the best student by the average



	A	B	C	D	E	F
1	Student	English	Mathematics	Science	Average	HighestScore
2	Carol	75	85	85	81.66666667	85
3	John	65	80	70	71.66666667	80
4	Edward	55	80	60	65	80
5	Ted	80	75	90	81.66666667	90
6	Khan	85	75	80	80	85
7	Harry	80	70	80	76.66666667	80
8	Sarah	80	70	80	76.66666667	80
9	Mary	55	70	65	63.33333333	70
10	Linda	90	50	70	70	90
11	Thomas	55	30	65	50	65

5) Filtering and sorting the best student by highest score

	A	B	C	D	E	F
1	Student_name	English	Mathematics	Science	average	Highest_score
2	Ted	80	75	90	81.66666667	90
3	Linda	90	50	70	70	90
4	Carol	75	85	85	81.66666667	85
5	Khan	85	75	80	80	85
6	Harry	80	70	80	76.66666667	80
7	Sarah	80	70	80	76.66666667	80
8	John	65	80	70	71.66666667	80
9	Edward	55	80	60	65	80
10	Mary	55	70	65	63.33333333	70
11	Thomas	55	30	65	50	65

6) Identifying and sorting the students from the highest to the lowest score by colour

	A	B	C	D	E	F
1	Student_name	English	Mathematics	Science	average	Highest_score
2	Ted	80	75	90	81.66666667	90
3	Linda	90	50	70	70	90
4	Carol	75	85	85	81.66666667	85
5	Khan	85	75	80	80	85
6	Harry	80	70	80	76.66666667	80
7	Sarah	80	70	80	76.66666667	80
8	John	65	80	70	71.66666667	80
9	Edward	55	80	60	65	80
10	Mary	55	70	65	63.33333333	70
11	Thomas	55	30	65	50	65

6.1 Identifying only the student with highest score

	A	B	C	D	E	F
1	Student_name	English	Mathematics	Science	average	Highest_score
2	Ted	80	75	90	81.66666667	90
3	Linda	90	50	70	70	90

6.2 Identifying only the student with the lowest score



	A	B	C	D	E	F
1	Student_name	English	Mathematics	Science	average	Highest_score
2	Thomas	55	30	65	50	65

Day 2: Task 3

The screenshot shows a Microsoft Excel spreadsheet with the following details:

- Worksheet:** retail_sales_dataset
- Cells:** A1 through O50.
- Columns:** A through O.
- Rows:** 1 through 50.
- Data:** The dataset includes columns for Transaction ID, Date, Customer ID, Gender, Age, Product Category, Quantity, Price per Unit, Total Sale, Date num, Month num, Year num, Date text, Month text, and Year text.
- Formatting:** The 'Year num' column (O) is highlighted in green across all rows.
- Toolbar:** Standard Excel toolbar with Home, Insert, Draw, Page Layout, Formulas, Data, Review, View, Automate, Table, Comments, Share, Paste, Calibri (Body), General, Conditional Formatting, Insert, Delete, Format, Editing, Add-ins, Analyse Data.

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

Print screen n 1

	A	B	C	D	E	F
1	Student name	English	Mathematic	Scienc	Average	Highest scor
2	Carol	75	85	85	81.666667	
3	Edward	55	80	60	65	
4	John	65	80	70	71.666667	
5	Ted	80	75	90	81.666667	
6	Khan	85	75	80	80	
7	Mary	55	70	65	63.333333	
8	Harry	80	70	80	76.666667	
9	Sarah	80	70	80	76.666667	
10	Linda	90	50	70	70	
11	Thomas	55	30	65	50	
12					#DIV/0!	

Print screen n 2

	A	B	C	D	E	F	G	H	I
1	Student name	English	Mathematic	Scienc	Average	Highest scor			
2	Carol	75	85	85	81.666667	85			
3	Edward	55	80	60	65	80			
4	John	65	80	70	71.666667	80			
5	Ted	80	75	90	81.666667	90			
6	Khan	85	75	80	80	85			
7	Mary	55	70	65	63.333333	70			
8	Harry	80	70	80	76.666667	80			
9	Sarah	80	70	80	76.666667	80			
10	Linda	90	50	70	70	90			
11	Thomas	55	30	65	50	65			
12					#DIV/0!	0			



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		Circling the non-whole validated numbers																																																
In which markets does Germany have customers?	Print screen 1	<table border="1"><thead><tr><th>A</th><th>B</th></tr></thead><tbody><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3 Row Labels</td><td>Count of Product_Description</td></tr><tr><td>4 (blank)</td><td></td></tr><tr><td>5 (blank)</td><td></td></tr><tr><td>6 Youth (<25)</td><td>10</td></tr><tr><td>7 Australia</td><td>4</td></tr><tr><td>8 France</td><td>3</td></tr><tr><td>9 United Kingdom</td><td>3</td></tr><tr><td>10 Young Adults (25-34)</td><td>31</td></tr><tr><td>11 Australia</td><td>9</td></tr><tr><td>12 Canada</td><td>6</td></tr><tr><td>13 France</td><td>5</td></tr><tr><td>14 United Kingdom</td><td>2</td></tr><tr><td>15 United States</td><td>9</td></tr><tr><td>16 Adults (35-64)</td><td>47</td></tr><tr><td>17 Australia</td><td>14</td></tr><tr><td>18 Germany</td><td>6</td></tr><tr><td>19 United States</td><td>1</td></tr><tr><td>20 United Kingdom</td><td>4</td></tr><tr><td>21 United States</td><td>21</td></tr><tr><td>22 United States</td><td>1</td></tr><tr><td>23 Grand Total</td><td>88</td></tr></tbody></table>	A	B	1		2		3 Row Labels	Count of Product_Description	4 (blank)		5 (blank)		6 Youth (<25)	10	7 Australia	4	8 France	3	9 United Kingdom	3	10 Young Adults (25-34)	31	11 Australia	9	12 Canada	6	13 France	5	14 United Kingdom	2	15 United States	9	16 Adults (35-64)	47	17 Australia	14	18 Germany	6	19 United States	1	20 United Kingdom	4	21 United States	21	22 United States	1	23 Grand Total	88
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22 United States	1																																																	
23 Grand Total	88																																																	



A6 ▾ X ✓ fx Grand Total

	A	B
1		
2		
3	Row Labels	Count of Product_Description
4	④ Adults (35-64)	6
5	Germany	6
6	Grand Total	6
7		

	A	B
3	Row Labels	Count of Product_Description
4	④ (blank)	
5	(blank)	
6	④ Youth (<25)	10
7	Australia	4
8	United Kingdom	3
9	France	3
10	④ Young Adults (25-34)	31
11	United States	9
12	Australia	9
13	Canada	6
14	France	5
15	United Kingdom	2
16	④ Adults (35-64)	47
17	United States	21
18	Australia	14
19	Germany	6
20	United Kingdom	4
21	United States	1
22	United States	1
23	Grand Total	88
24		

What country has sales in all markets?



What are the most profitable markets by country, age group, and gender?

A	B
1	
2	
3	Row Labels
4	(blank)
5	(blank)
6	Youth (<25) 16050
7	France 10507
8	United Kingdom 2788
9	Australia 2755
10	Young Adults (25-34) 53962
11	Australia 18639
12	United States 13636
13	France 10474
14	Canada 9123
15	United Kingdom 2090
16	Adults (35-64) 93496
17	United States 43605
18	Australia 28932
19	Germany 13636
20	United Kingdom 4194
21	United States 2086
22	United States 1043
23	Grand Total 163508
24	

Any other findings?

By which country and age range created the most revenue ?



	A	B
1		
2		
3	Row Labels	Sum of Revenue
4	④ Adults (35-64)	206256
5	Australia	63668
6	Germany	30010
7	United States	4590
8	United Kingdom	9230
9	United States	96463
10	United States	2295
11	④ Young Adults (25-34)	119646
12	Australia	41773
13	Canada	20080
14	France	23050
15	United Kingdom	4602
16	United States	30141
17	④ Youth (<25)	35330
18	Australia	6065
19	France	23125
20	United Kingdom	6140
21	④ (blank)	
22	(blank)	
23	Grand Total	361232
24		

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
1	
2	
3 Row Labels	Sum of Sales Volume
4 Cornwall	1100
5 Laptops	700
6 Printers	400
7 Durham	550
8 Laptops	250
9 Printers	300
10 Essex	1100
11 Printers	800
12 Smartphones	300
13 Greater Manchester	1000
14 Laptops	400
15 Smartphones	600
16 Lancashire	750
17 Laptops	600
18 Smartphones	150
19 Yorkshire	700
20 Laptops	500
21 Smartphones	200
22 (blank)	
23 (blank)	
24 Grand Total	5200

A	B	C	D	E
County	Product	Sales Volume	Product Category	Column#
2 Yorkshire	Laptops	500	=SWITCH(TRUE,C2>600,"HIGH",C2>=300,"MEDIUM","LOW")	=IFS(C2>600,"HIGH",C2>=300,"MEDIUM")
3 Yorkshire	Smartphones	200	=SWITCH(TRUE,C3>600,"HIGH",C3>=300,"MEDIUM","LOW")	=IFS(C3>600,"HIGH",C3>=300,"MEDIUM")
4 Cornwall	Laptops	700	=SWITCH(TRUE,C4>600,"HIGH",C4>=300,"MEDIUM","LOW")	=IFS(C4>600,"HIGH",C4>=300,"MEDIUM")
5 Cornwall	Printers	400	=SWITCH(TRUE,C5>600,"HIGH",C5>=300,"MEDIUM","LOW")	=IFS(C5>600,"HIGH",C5>=300,"MEDIUM")
6 Lancashire	Smartphones	150	=SWITCH(TRUE,C6>600,"HIGH",C6>=300,"MEDIUM","LOW")	=IFS(C6>600,"HIGH",C6>=300,"MEDIUM")
7 Lancashire	Laptops	600	=SWITCH(TRUE,C7>600,"HIGH",C7>=300,"MEDIUM","LOW")	=IFS(C7>600,"HIGH",C7>=300,"MEDIUM")
8 Essex	Printers	800	=SWITCH(TRUE,C8>600,"HIGH",C8>=300,"MEDIUM","LOW")	=IFS(C8>600,"HIGH",C8>=300,"MEDIUM")
9 Essex	Smartphones	300	=SWITCH(TRUE,C9>600,"HIGH",C9>=300,"MEDIUM","LOW")	=IFS(C9>600,"HIGH",C9>=300,"MEDIUM")
10 Durham	Laptops	250	=SWITCH(TRUE,C10>600,"HIGH",C10>=300,"MEDIUM","LOW")	=IFS(C10>600,"HIGH",C10>=300,"MEDIUM")
11 Durham	Printers	300	=SWITCH(TRUE,C11>600,"HIGH",C11>=300,"MEDIUM","LOW")	=IFS(C11>600,"HIGH",C11>=300,"MEDIUM")
12 Greater Manchester	Smartphones	600	=SWITCH(TRUE,C12>600,"HIGH",C12>=300,"MEDIUM","LOW")	=IFS(C12>600,"HIGH",C12>=300,"MEDIUM")
13 Greater Manchester	Laptops	400	=SWITCH(TRUE,C13>600,"HIGH",C13>=300,"MEDIUM","LOW")	=IFS(C13>600,"HIGH",C13>=300,"MEDIUM")





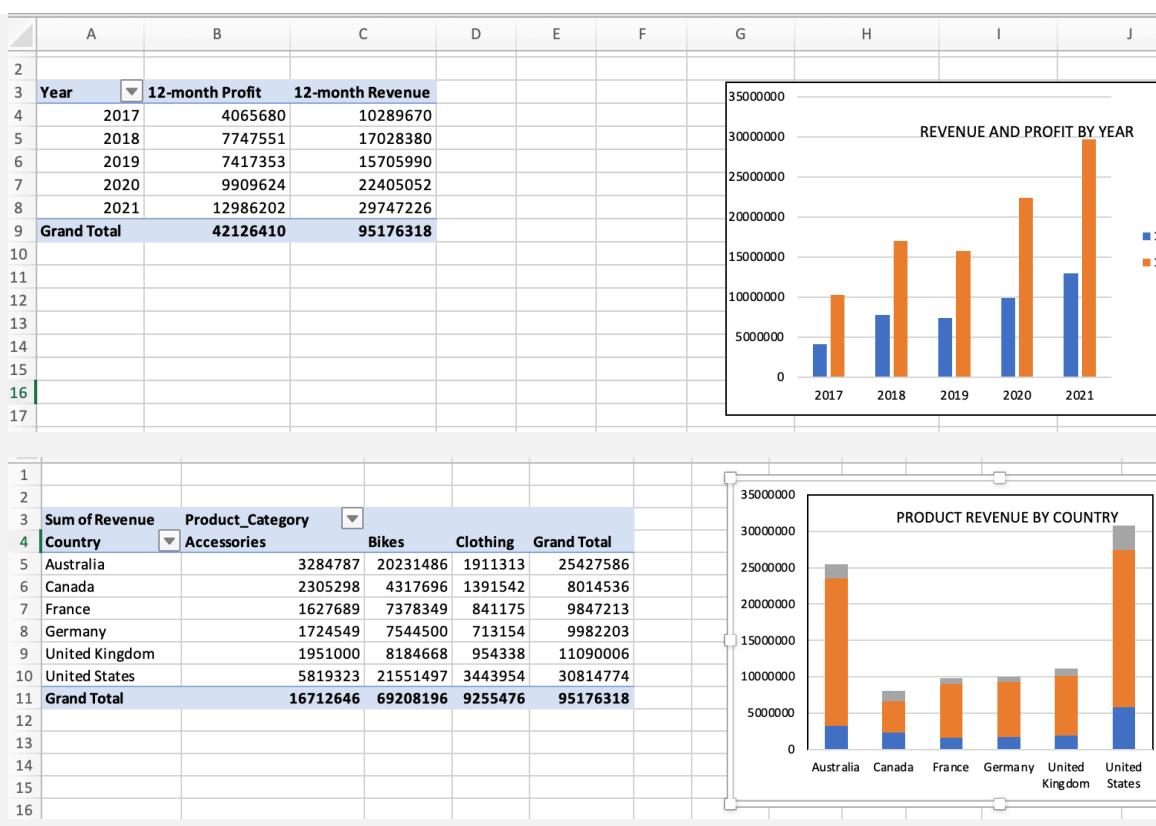
Day 3: Task 3

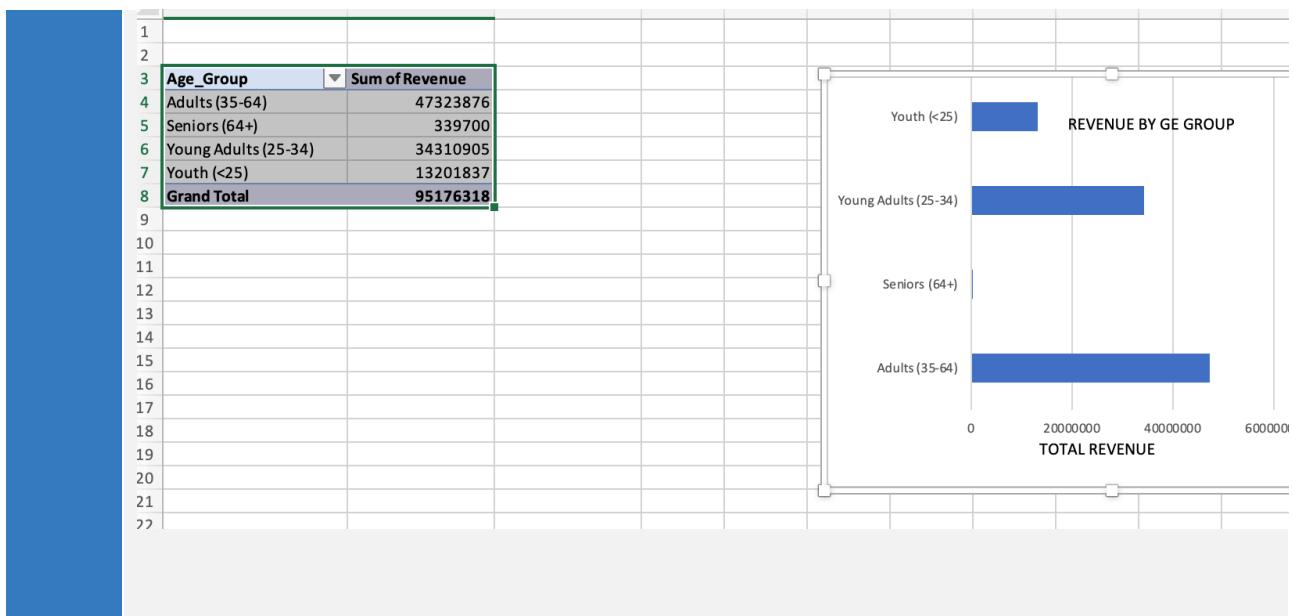
Please download the dataset 'Day_3_Task_3_Bike_Sales_Visualisations_Lab.xlsx' from [here](#).

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
n 1





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?	<p>The best preparation method would be by establishing standard of practice, templates and knowing your audience.</p>
What tools would you use for the delivery?	<ul style="list-style-type: none"> *Flash cards *Power points slide *Excel *pre-defined and pre-formatted reports *Build visual data



	*Build dashboard
What is prospecting and why would you complete this before your delivery?	<p>Prospecting is researching and analysing potential customers as well as identifying market trends and opportunities for the company's product or services.</p> <p>In order to help identifying and assess the customers that are leaving the company at the 12 months, this can be completed before the delivery.</p>
Tell me best practices for public speaking and providing updates to senior leaders	<p>Some of the best practices used are knowing your audience meaning acknowledging who you are presenting to and basing the way you structure your speech on that knowledge. In addition, speaking directly to the audience is another good practice. This makes your audience more captivated in what you have to say.</p>
What will you show the board in your delivery?	<p>-Strategies to encourage people to stay longer than the common 12- month period. This can be done through many ways such as provide a warmer, and thoughtful environment which would motivate the team to work harder and more productively making them not want to leave.</p>



How will you articulate the changes that are needed?	The delivering of a good speech based on your visualisations. Highlighting the key point on how to avoid the occurrence of this problem
Provide a list of online resources and videos that will support your preparation for public speaking	<p>Toastmasters International</p> <p>TED talks</p> <p>Public Speaking Video.url</p>
Evaluate tools that provide visualisation.	In order to provide visualisation in Excel we can use power view, slicer filtering, charts, scatter, bubble charts and line charts. These can help to further simplify the speech at hand and therefore making the speech easier to understand.
Tell me what they are.	In this case I will use a bar chart to get a clear image of the problem, therefore making it simpler for the board of directions to pick out key points which can help them to improve their issues and problems that may occur in the future .
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.

