Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

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Course Date: 16/12/2024

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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 Data Protection Act controls what organisations, businesses and the government can do with your personal data. It means that everyone responsible for using personal data must follow strict rules about the information such as making such the information is used fairly, used for specific limited purposes, is kept up to date, is kept no longer than needed

	and is handled in a way that ensures appropriate security. There is stronger protection for more sensitive information such as religion, race and health. It also gives people the right to know what information is being stored about them and if they want that data to be deleted. • This is important as it means organisation cannot misuse people's personal data as they can only use it for a limited purposes and for a limited time frame. It also gives people more transparency in what information is being stored about them and allows them to make requests about that information if they want such as if they want it to be deleted. • If I am interested in the diversity of a business I run, one way I could see how diverse my company is to have employees fill out a survey. This survey would probably include some sensitive information such as race, religion, sexual orientation etc. Hence, I would have to make clear first via an agreement before the survey that I would only be using this information to see the diversity of the company and I am not going to give this information to anyone else without explicit consent. I would also have to show or delete any of the information that I get from this survey if someone requests it. • It means that you are more limited with what you can do with the data you have. You must only use the data for the explicit purpose that was given when the data was taken, and you must get rid of the information after a certain amount of time. It also means that people may lose information in the future as people may request to have it deleted. • The Information Commissioner can issue fines for breaking this law. The amount of the fine can vary but the maximum fine is 20 million Euros or 4% of the total annual worldwide turnover of the organisation in the proceeding financial year, whichever is higher. Sources Accessed 16/12/2024: Data protection: The Data Protection Act - GOV.UK Data Protection Act 2018 - Wikipedia What is the Punishment for Breaking the Data Protection Act?
GDPR	• The GDPR is a European Union regulation that governs information privacy in the European union (EU) and the European Economic Area (EEA) and the transfer of personal data outside of those areas. It lists seven protection and accountability principles for processing data, it states that you are required to handle data securely which can involve two-fact authentication or end-to-end encryption, and it lists the instances where it's legal to process personal data among many things. • This is important for businesses and companies as they must follow these rules if they want to collect or process data from the EU or the EEA. It also means that they must meet data security standards if they want to keep that data. It is also important for users in the EU or EEA as it ensures that their personal data is secure and gives them more rights as to what companies do with their data or if they want to give their data to other companies. • As an example, let us consider an online retailer that allows users to create an account on their website and some of their users are from the EU or the EEA. If that company has a data leak where people's unencrypted personal

	information is leaked such as passwords, addresses, banking information etc, then the company is required to tell a supervisory authority within 72 hours of the leak. Since this leak has a high risk of affecting the individuals whose data get leaked then the online retailer also needs to inform those individuals. They would also need to keep a record of this data leak. Failure to do this could result in a fine. • If you want to collect or store data from people in the EU or the EEA, you would be restricted in how you can do this as the GDPR has set number of purposes when you can. You would need to make sure that your reason for doing this falls in line with the GDPR. It also means that if you want to store this data you need to make sure that this data is adequately secure according to the security standards set in the GDPR. • There are two tiers of fines for violating the GDPR. The first tier of violations involves not adhering to data protection rules, unlawful basis for processing data and not following procedure for handling complaints around data and can result in fines of up to 10 million euros. The second tier of violations involve unsafeguarded transfer of data, not upholding the people's right to privacy and right to be forgotten and failure to comply with a supervisory authority and can result in fines of up to 20 million euros. Sources Accessed 17/12/2024 - General Data Protection Regulation - Wikipedia What is GDPR, the EU's new data protection law? - GDPR.eu Personal data breaches: a guide | ICO What are the GDPR Fines? - GDPR.eu
Freedom of Information Act	• The Freedom of Information act is an act of UK parliament that gives members of the public the right to access to information held by public authorities and obliges public authorities to publish certain information about their activities. Public authorities include government departments, NHS, state schools and police forces and the information may include printed documents, computer files, emails, letters or videos. • This is important as it gives people the right to know what information public authorities are keeping about them. This allows for more transparency between the people and public organisations and will build more trust between them. Since these public authorities can make decisions that will affect many people's live, it is important that they are held accountable which this act help do. • Let us consider a state school in the UK. The school will have records of the students at their school including personal data. This means that if a student's parents requests to see the data the school holds about the child, by law the school is required to obliged and satisfy the request. • If I was gathering information about people in the UK, I must be willing to provide information about the data I hold if someone requests it. • The penalty for violating this act is a fine. Sources Accessed 17/12/2024 - Freedom of Information Act 2000 - Wikipedia What is the FOI Act and are we covered? | ICO

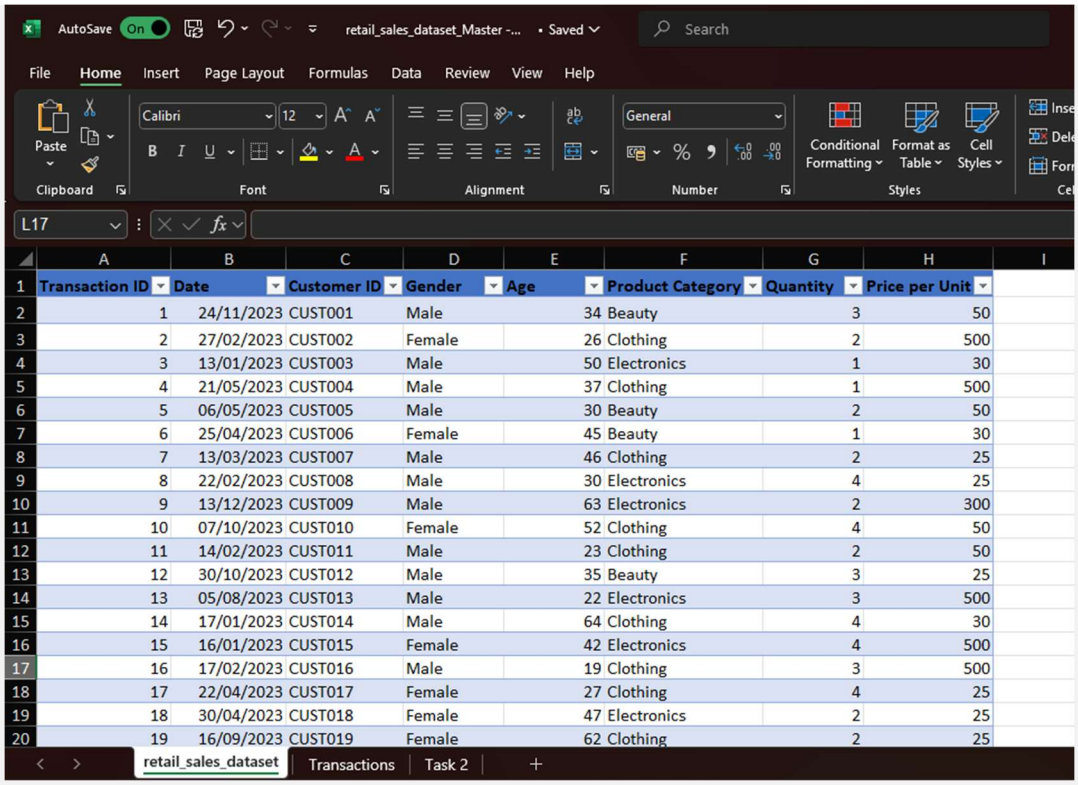
	FOI complaints and ICO enforcement powers | ICO
Computer Misuse Act	• The Computer Misuse Act is an act of UK parliament that was passed to protect personal data held by organisations and to define what was lawful or unlawful access to computers and data. It made it illegal to enter a computer without permission (hacking), make unauthorized modifications to data, deleting data without permission and using a computer to steal data among other things. • The act was introduced as a response to the 1988 court case Regina v Gold and Schifreen. This case saw two hackers overturn their guilty conviction for forgery and counterfeiting as they did not commit the hacking for profit. To stop this from setting a precedent for recreational hacking this act was introduced to update the UK laws. Hence, it is important as it prevents improper use of data and computers such as to harm other people. • If I had developed a computer program that modified data on their computer it ran, before I could let it run on someone else's device, I would need to get their permission first. Not getting their permission would be unauthorised modification of someone's data which is illegal under this act. • It means that to collect data from people you must get their permission, you cannot collect their data without them knowing. • Penalties for violating this law varies but can include fines and prison time. The penalty can be up to 10 years in prison and/or an unlimited fine. Sources Accessed 17/12/2024 - Computer Misuse Act 1990 - Wikipedia Computer Misuse Act (1990) - Ethical, legal and environmental impact - CCEA - GCSE Digital Technology (CCEA) Revision - BBC Bitesize What is the Computer Misuse Act? | ITPro

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'

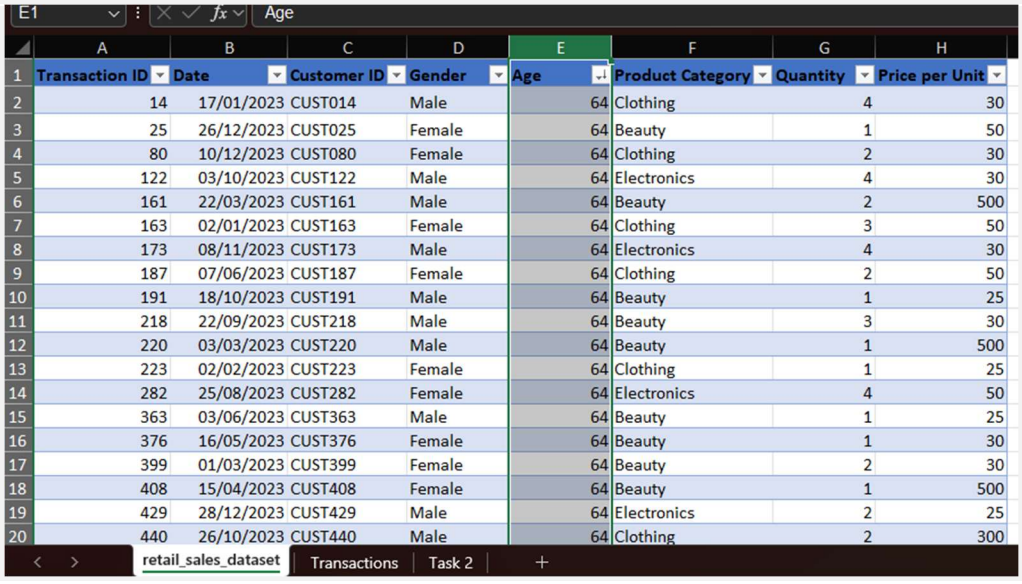
Print screen 1



	A	B	C	D	E	F	G	H
1	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit
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
10	9	13/12/2023	CUST009	Male	63	Electronics	2	300
11	10	07/10/2023	CUST010	Female	52	Clothing	4	50
12	11	14/02/2023	CUST011	Male	23	Clothing	2	50
13	12	30/10/2023	CUST012	Male	35	Beauty	3	25
14	13	05/08/2023	CUST013	Male	22	Electronics	3	500
15	14	17/01/2023	CUST014	Male	64	Clothing	4	30
16	15	16/01/2023	CUST015	Female	42	Electronics	4	500
17	16	17/02/2023	CUST016	Male	19	Clothing	3	500
18	17	22/04/2023	CUST017	Female	27	Clothing	4	25
19	18	30/04/2023	CUST018	Female	47	Electronics	2	25
20	19	16/09/2023	CUST019	Female	62	Clothing	2	25

retail_sales_dataset | Transactions | Task 2

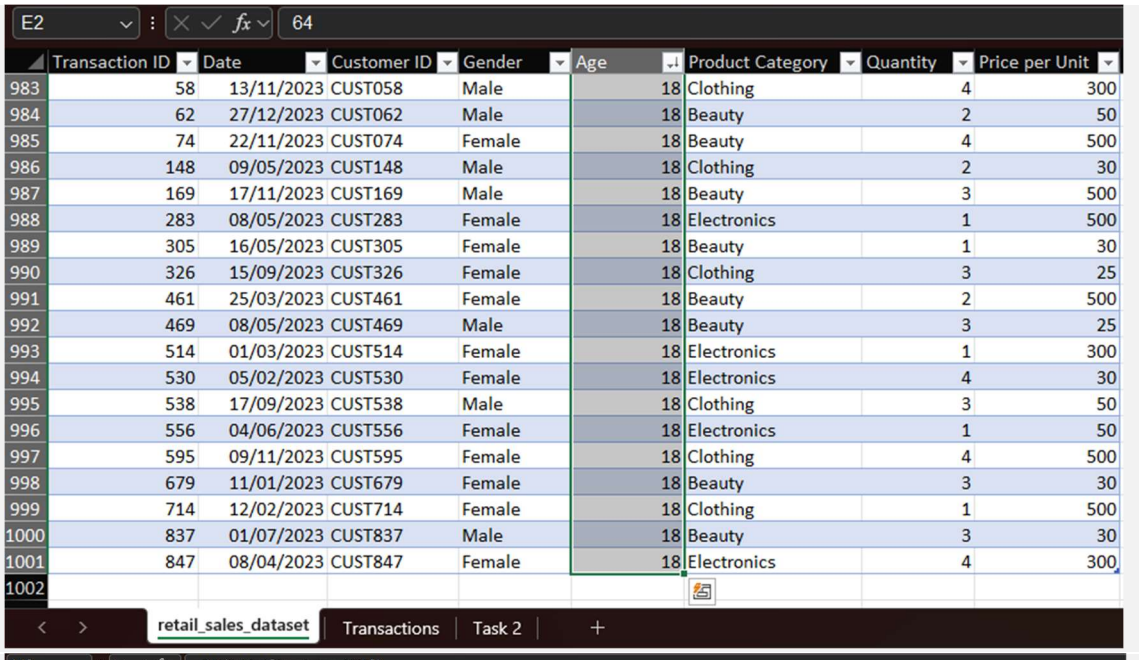
Print screen 2



	A	B	C	D	E	F	G	H
1	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit
2	14	17/01/2023	CUST014	Male	64	Clothing	4	30
3	25	26/12/2023	CUST025	Female	64	Beauty	1	50
4	80	10/12/2023	CUST080	Female	64	Clothing	2	30
5	122	03/10/2023	CUST122	Male	64	Electronics	4	30
6	161	22/03/2023	CUST161	Male	64	Beauty	2	500
7	163	02/01/2023	CUST163	Female	64	Clothing	3	50
8	173	08/11/2023	CUST173	Male	64	Electronics	4	30
9	187	07/06/2023	CUST187	Female	64	Clothing	2	50
10	191	18/10/2023	CUST191	Male	64	Beauty	1	25
11	218	22/09/2023	CUST218	Male	64	Beauty	3	30
12	220	03/03/2023	CUST220	Male	64	Beauty	1	500
13	223	02/02/2023	CUST223	Female	64	Clothing	1	25
14	282	25/08/2023	CUST282	Female	64	Electronics	4	50
15	363	03/06/2023	CUST363	Male	64	Beauty	1	25
16	376	16/05/2023	CUST376	Female	64	Beauty	1	30
17	399	01/03/2023	CUST399	Female	64	Beauty	2	30
18	408	15/04/2023	CUST408	Female	64	Beauty	1	500
19	429	28/12/2023	CUST429	Male	64	Electronics	2	25
20	440	26/10/2023	CUST440	Male	64	Clothing	2	300

retail_sales_dataset | Transactions | Task 2

Print screen 3

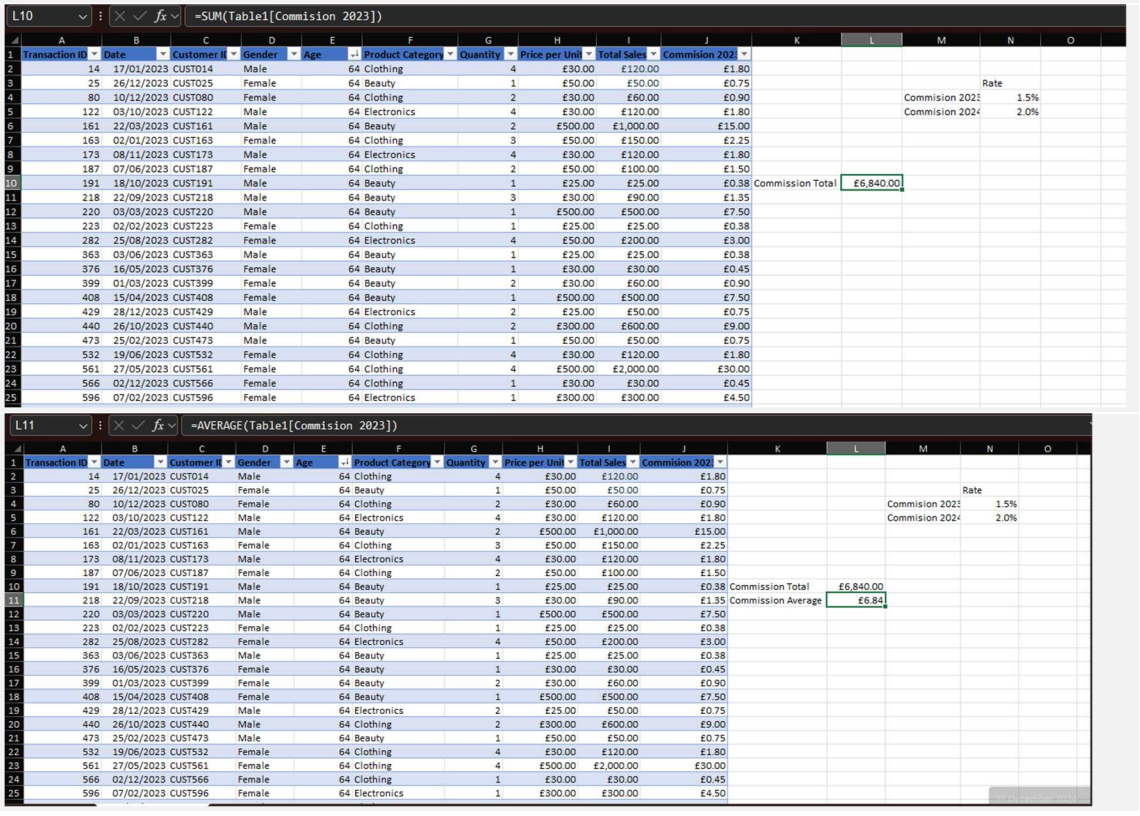


E2 | 64

	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit
983	58	13/11/2023	CUST058	Male	18	Clothing	4	300
984	62	27/12/2023	CUST062	Male	18	Beauty	2	50
985	74	22/11/2023	CUST074	Female	18	Beauty	4	500
986	148	09/05/2023	CUST148	Male	18	Clothing	2	30
987	169	17/11/2023	CUST169	Male	18	Beauty	3	500
988	283	08/05/2023	CUST283	Female	18	Electronics	1	500
989	305	16/05/2023	CUST305	Female	18	Beauty	1	30
990	326	15/09/2023	CUST326	Female	18	Clothing	3	25
991	461	25/03/2023	CUST461	Female	18	Beauty	2	500
992	469	08/05/2023	CUST469	Male	18	Beauty	3	25
993	514	01/03/2023	CUST514	Female	18	Electronics	1	300
994	530	05/02/2023	CUST530	Female	18	Electronics	4	30
995	538	17/09/2023	CUST538	Male	18	Clothing	3	50
996	556	04/06/2023	CUST556	Female	18	Electronics	1	50
997	595	09/11/2023	CUST595	Female	18	Clothing	4	500
998	679	11/01/2023	CUST679	Female	18	Beauty	3	30
999	714	12/02/2023	CUST714	Female	18	Clothing	1	500
1000	837	01/07/2023	CUST837	Male	18	Beauty	3	30
1001	847	08/04/2023	CUST847	Female	18	Electronics	4	300
1002								

retail_sales_dataset | Transactions | Task 2

Print screen 4



L10 | =SUM(Table1[Commision 2023])

	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Total Sales	Commision 2023
2	14	17/01/2023	CUST014	Male	64	Clothing	4	£30.00	£120.00	£1.80
3	25	26/12/2023	CUST025	Female	64	Beauty	1	£50.00	£50.00	£0.75
4	80	10/12/2023	CUST080	Female	64	Clothing	2	£30.00	£60.00	£0.90
5	122	03/10/2023	CUST122	Male	64	Electronics	4	£30.00	£120.00	£1.80
6	161	22/03/2023	CUST161	Male	64	Beauty	2	£500.00	£1,000.00	£15.00
7	163	02/01/2023	CUST163	Female	64	Clothing	3	£50.00	£150.00	£2.25
8	173	08/11/2023	CUST173	Male	64	Electronics	4	£30.00	£120.00	£1.80
9	187	07/06/2023	CUST187	Female	64	Clothing	2	£50.00	£100.00	£1.50
10	191	18/10/2023	CUST191	Male	64	Beauty	1	£25.00	£25.00	£0.38
11	218	22/09/2023	CUST218	Male	64	Beauty	3	£30.00	£90.00	£1.35
12	220	03/03/2023	CUST220	Male	64	Beauty	1	£500.00	£500.00	£7.50
13	223	02/02/2023	CUST223	Female	64	Clothing	1	£25.00	£25.00	£0.38
14	282	25/08/2023	CUST282	Female	64	Electronics	4	£50.00	£200.00	£3.00
15	363	03/06/2023	CUST363	Male	64	Beauty	1	£25.00	£25.00	£0.38
16	376	16/05/2023	CUST376	Female	64	Beauty	1	£30.00	£30.00	£0.45
17	399	01/03/2023	CUST399	Female	64	Beauty	2	£30.00	£60.00	£0.90
18	408	15/04/2023	CUST408	Female	64	Beauty	1	£500.00	£500.00	£7.50
19	429	28/12/2023	CUST429	Male	64	Electronics	2	£25.00	£50.00	£0.75
20	440	26/10/2023	CUST440	Male	64	Clothing	2	£300.00	£600.00	£9.00
21	473	25/02/2023	CUST473	Male	64	Beauty	1	£50.00	£50.00	£0.75
22	532	19/06/2023	CUST532	Female	64	Clothing	4	£30.00	£120.00	£1.80
23	561	27/05/2023	CUST561	Female	64	Clothing	4	£500.00	£2,000.00	£30.00
24	566	02/12/2023	CUST566	Female	64	Clothing	1	£30.00	£30.00	£0.45
25	596	07/02/2023	CUST596	Female	64	Electronics	1	£300.00	£300.00	£4.50

Commission Total £6,840.00

Rate
Commision 2023 1.5%
Commision 2024 2.0%

L11 | =AVERAGE(Table1[Commision 2023])

	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Total Sales	Commision 2023
2	14	17/01/2023	CUST014	Male	64	Clothing	4	£30.00	£120.00	£1.80
3	25	26/12/2023	CUST025	Female	64	Beauty	1	£50.00	£50.00	£0.75
4	80	10/12/2023	CUST080	Female	64	Clothing	2	£30.00	£60.00	£0.90
5	122	03/10/2023	CUST122	Male	64	Electronics	4	£30.00	£120.00	£1.80
6	161	22/03/2023	CUST161	Male	64	Beauty	2	£500.00	£1,000.00	£15.00
7	163	02/01/2023	CUST163	Female	64	Clothing	3	£50.00	£150.00	£2.25
8	173	08/11/2023	CUST173	Male	64	Electronics	4	£30.00	£120.00	£1.80
9	187	07/06/2023	CUST187	Female	64	Clothing	2	£50.00	£100.00	£1.50
10	191	18/10/2023	CUST191	Male	64	Beauty	1	£25.00	£25.00	£0.38
11	218	22/09/2023	CUST218	Male	64	Beauty	3	£30.00	£90.00	£1.35
12	220	03/03/2023	CUST220	Male	64	Beauty	1	£500.00	£500.00	£7.50
13	223	02/02/2023	CUST223	Female	64	Clothing	1	£25.00	£25.00	£0.38
14	282	25/08/2023	CUST282	Female	64	Electronics	4	£50.00	£200.00	£3.00
15	363	03/06/2023	CUST363	Male	64	Beauty	1	£25.00	£25.00	£0.38
16	376	16/05/2023	CUST376	Female	64	Beauty	1	£30.00	£30.00	£0.45
17	399	01/03/2023	CUST399	Female	64	Beauty	2	£30.00	£60.00	£0.90
18	408	15/04/2023	CUST408	Female	64	Beauty	1	£500.00	£500.00	£7.50
19	429	28/12/2023	CUST429	Male	64	Electronics	2	£25.00	£50.00	£0.75
20	440	26/10/2023	CUST440	Male	64	Clothing	2	£300.00	£600.00	£9.00
21	473	25/02/2023	CUST473	Male	64	Beauty	1	£50.00	£50.00	£0.75
22	532	19/06/2023	CUST532	Female	64	Clothing	4	£30.00	£120.00	£1.80
23	561	27/05/2023	CUST561	Female	64	Clothing	4	£500.00	£2,000.00	£30.00
24	566	02/12/2023	CUST566	Female	64	Clothing	1	£30.00	£30.00	£0.45
25	596	07/02/2023	CUST596	Female	64	Electronics	1	£300.00	£300.00	£4.50

Commission Total £6,840.00
Commission Average £6.84

Rate
Commision 2023 1.5%
Commision 2024 2.0%

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

1) Linda is the best English student, Carol is the best Mathematics student and Ted is the best Science student.

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

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

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

2)

A	B	C	D	E
Student name	English	Mathematics	Science	Average
Ted	80	75	90	=AVERAGE(B2,C2,D2)
Carol	75	85	85	=AVERAGE(B3,C3,D3)
Khan	85	75	80	=AVERAGE(B4,C4,D4)
Harry	80	70	80	=AVERAGE(B5,C5,D5)
Sarah	80	70	80	=AVERAGE(B6,C6,D6)
John	65	80	70	=AVERAGE(B7,C7,D7)
Linda	90	50	70	=AVERAGE(B8,C8,D8)
Edward	55	80	60	=AVERAGE(B9,C9,D9)
Mary	55	70	65	=AVERAGE(B10,C10,D10)
Thomas	55	30	65	=AVERAGE(B11,C11,D11)

3)

A	B	C	D	E	F
Student name	English	Mathematics	Science	Average	Highest score
Ted	80	75	90	=AVERAGE(B2,C2,D2)	=MAX(Table2[@[English]:[Science]])
Carol	75	85	85	=AVERAGE(B3,C3,D3)	=MAX(Table2[@[English]:[Science]])
Khan	85	75	80	=AVERAGE(B4,C4,D4)	=MAX(Table2[@[English]:[Science]])
Harry	80	70	80	=AVERAGE(B5,C5,D5)	=MAX(Table2[@[English]:[Science]])
Sarah	80	70	80	=AVERAGE(B6,C6,D6)	=MAX(Table2[@[English]:[Science]])
John	65	80	70	=AVERAGE(B7,C7,D7)	=MAX(Table2[@[English]:[Science]])
Linda	90	50	70	=AVERAGE(B8,C8,D8)	=MAX(Table2[@[English]:[Science]])
Edward	55	80	60	=AVERAGE(B9,C9,D9)	=MAX(Table2[@[English]:[Science]])
Mary	55	70	65	=AVERAGE(B10,C10,D10)	=MAX(Table2[@[English]:[Science]])
Thomas	55	30	65	=AVERAGE(B11,C11,D11)	=MAX(Table2[@[English]:[Science]])

4) Carol is the best student by average.

Student name	English	Mathematic	Science	Average	Highest score
Carol	75	85	85	81.66666667	85
Ted	80	75	90	81.66666667	90
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

5) Ted and Linda are tied for the top student by highest score.

Student name	English	Mathematic	Science	Average	Highest score
Ted	80	75	90	81.66666667	90
Linda	90	50	70	70	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
Edward	55	80	60	65	80
Mary	55	70	65	63.33333333	70
Thomas	55	30	65	50	65

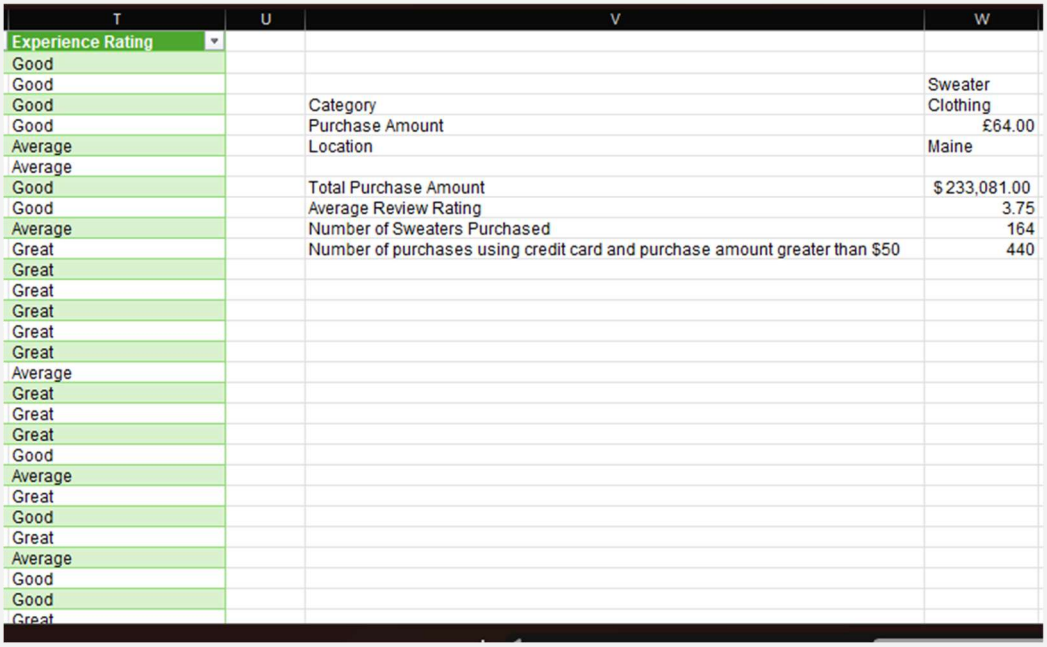
6)

Student name	English	Mathematic	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

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	I imported the data from shopping_trends.csv file. I did data validation on W3 and made it so you can only pick from the entries in the "Items Purchased" column. I then did Xlookup on the three cells below so that it found the correspond category, first purchase amount and first location. I entered the formula =SUM(shopping_trends[Purchase Amount (USD)]) into W8 to give the total purchase amount, entered =AVERAGE(shopping_trends[Review Rating]) into W9 to give the average review rating, entered =COUNTIF(shopping_trends[Item Purchased],"Sweater") into W10 to count the number of sweaters purchased and entered =COUNTIFS(shopping_trends[Payment Method],"Credit Card",shopping_trends[Purchase Amount (USD)],">50.00") to count the number of purchases made with a credit card that were greater than $50. I added a new column in the table for experience rating based on the review score. I entered the formula =IFS(K2>4,"Great",K2>3,"Good",K2>2,"Average",TRUE,"Bad") into T2 and continued the formula in the below columns. This means that if the review rating the great than 4 the experience was great, greater than 3 the experience was good, greater than 2 the experience was average and below 2 the experience was bad.



T	U	V	W
Experience Rating			
Good			
Good			Sweater
Good		Category	Clothing
Good		Purchase Amount	£64.00
Average		Location	Maine
Average			
Good		Total Purchase Amount	$ 233,081.00
Good		Average Review Rating	3.75
Average		Number of Sweaters Purchased	164
Great		Number of purchases using credit card and purchase amount greater than $50	440
Great			
Great			
Great			
Great			
Great			
Average			
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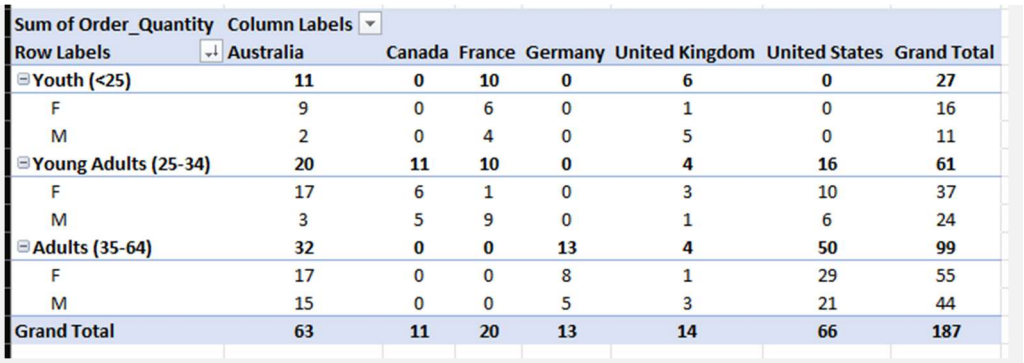
Good			
Great			

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?	Adults 35-64.
What country has sales in all markets?	United Kingdom.
What are the most profitable markets by country, age group, and gender?	United States.
Any other findings?	

Sum of Order_Quantity	Column Labels						
Row Labels	Australia	Canada	France	Germany	United Kingdom	United States	Grand Total
Youth (<25)	11	0	10	0	6	0	27
F	9	0	6	0	1	0	16
M	2	0	4	0	5	0	11
Young Adults (25-34)	20	11	10	0	4	16	61
F	17	6	1	0	3	10	37
M	3	5	9	0	1	6	24
Adults (35-64)	32	0	0	13	4	50	99
F	17	0	0	8	1	29	55
M	15	0	0	5	3	21	44
Grand Total	63	11	20	13	14	66	187

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
Laptops	700
Printers	400
Durham	550
Laptops	250
Printers	300
Essex	1100
Printers	800
Smartphones	300
Greater Manchester	1000
Laptops	400
Smartphones	600
Lancashire	750
Laptops	600
Smartphones	150
Yorkshire	700
Laptops	500
Smartphones	200
Grand Total	5200

County	Product	Sales Volume	Categorsation	Categorsation2
Yorkshire	Laptops	500	=SWITCH(TRUE, C2 > 600, "High", C2 >= 300, "Medium", "Low")	=IFS(C2>600,"High",C2>=300,"Medium",TRUE,"Low")
Yorkshire	Smartphones	200	=SWITCH(TRUE, C3>600, "High", C3>=300, "Medium", "Low")	=IFS(C3>600,"High",C3>=300,"Medium",TRUE,"Low")
Cornwall	Laptops	700	=SWITCH(TRUE, C4>600, "High", C4>=300, "Medium", "Low")	=IFS(C4>600,"High",C4>=300,"Medium",TRUE,"Low")
Cornwall	Printers	400	=SWITCH(TRUE, C5>600, "High", C5>=300, "Medium", "Low")	=IFS(C5>600,"High",C5>=300,"Medium",TRUE,"Low")
Lancashire	Smartphones	150	=SWITCH(TRUE, C6>600, "High", C6>=300, "Medium", "Low")	=IFS(C6>600,"High",C6>=300,"Medium",TRUE,"Low")
Lancashire	Laptops	600	=SWITCH(TRUE, C7>600, "High", C7>=300, "Medium", "Low")	=IFS(C7>600,"High",C7>=300,"Medium",TRUE,"Low")
Essex	Printers	800	=SWITCH(TRUE, C8>600, "High", C8>=300, "Medium", "Low")	=IFS(C8>600,"High",C8>=300,"Medium",TRUE,"Low")
Essex	Smartphones	300	=SWITCH(TRUE, C9>600, "High", C9>=300, "Medium", "Low")	=IFS(C9>600,"High",C9>=300,"Medium",TRUE,"Low")
Durham	Laptops	250	=SWITCH(TRUE, C10>600, "High", C10>=300, "Medium", "Low")	=IFS(C10>600,"High",C10>=300,"Medium",TRUE,"Low")
Durham	Printers	300	=SWITCH(TRUE, C11>600, "High", C11>=300, "Medium", "Low")	=IFS(C11>600,"High",C11>=300,"Medium",TRUE,"Low")
Greater Manchester	Smartphones	600	=SWITCH(TRUE, C12>600, "High", C12>=300, "Medium", "Low")	=IFS(C12>600,"High",C12>=300,"Medium",TRUE,"Low")
Greater Manchester	Laptops	400	=SWITCH(TRUE, C13>600, "High", C13>=300, "Medium", "Low")	=IFS(C13>600,"High",C13>=300,"Medium",TRUE,"Low")

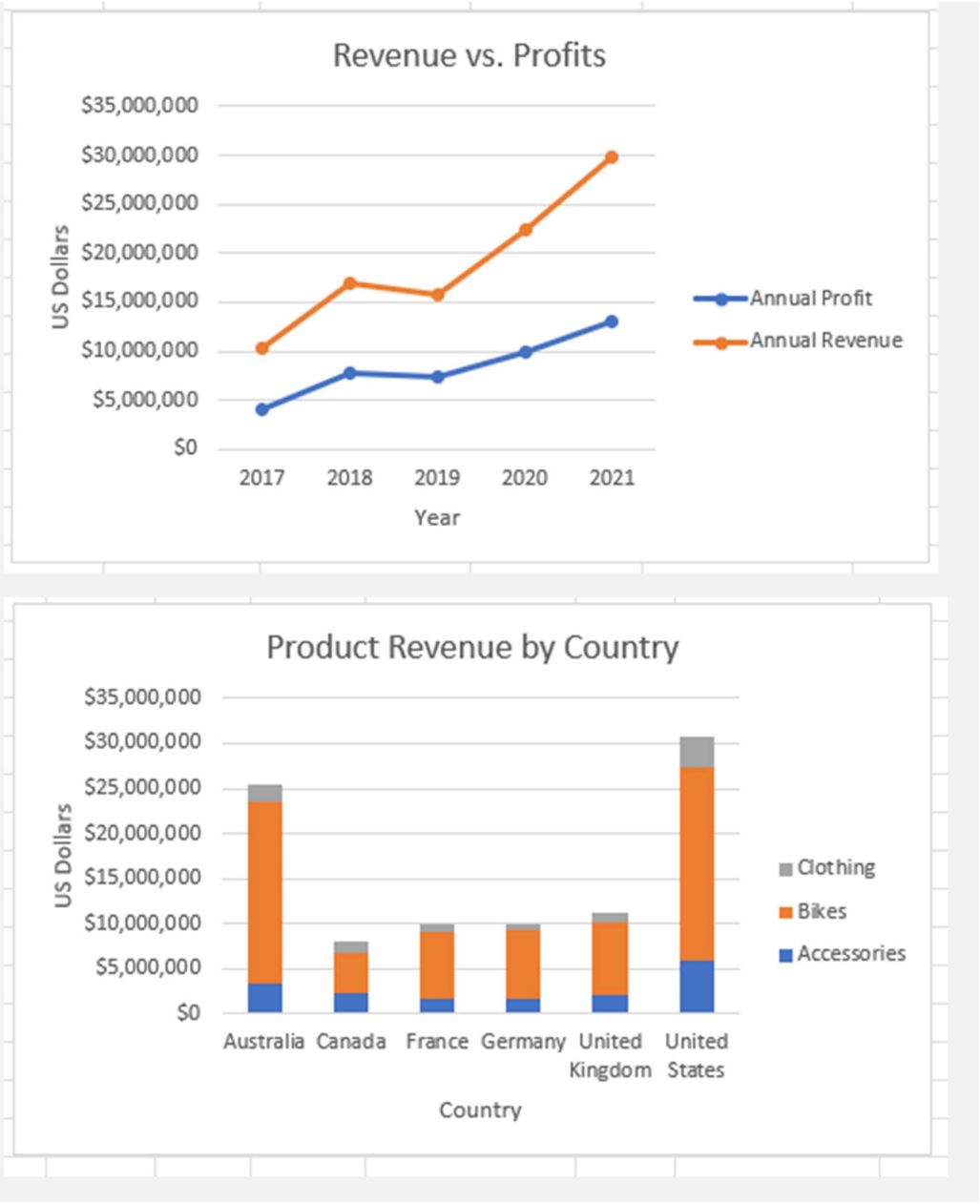
Day 3: Task 3

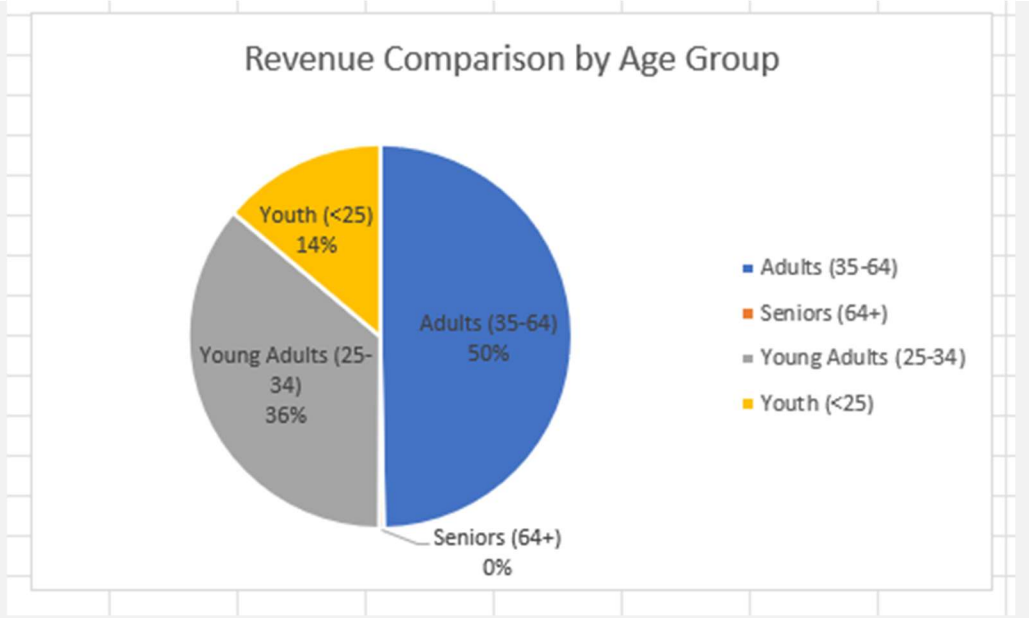
Please download the dataset 'Day_3_Task_3_Bike_Sales_Visualisations_Lab.xlsx' from here.

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





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?	I would prepare a presentation that summarises my findings such that it is understandable and not too complicated. This can be done by data visualisation such as charts and graphs. I would remember the key points for each slide in my presentation and them practise performing by recording myself or doing the presentation to a friend and asking for feedback.
What tools would you use for the delivery?	I would use PowerPoint to create the presentation and use programs that help with data visualisation such as excel and Power BI.
What is prospecting and why would you complete this before your delivery?	Prospecting is what your aim is for the presentation. So, what information to want to get across and why. In this example, prospecting would be to get across your findings to the board of directors. This is important as it gives the

	purpose for your presentation and will give you more motivation to do well.
Tell me best practices for public speaking and providing updates to senior leaders	• Make sure you are prepared, this can involve checking your notes, recording a trial run of the presentation or presenting to a friend and asking for feedback. • Make sure you have good visuals, this means you will have to spend less time explaining the information. • Make sure you are watching the audience's reaction to your presentation and are changing if the audience are not engaged. • Don't speak like a robot, make sure you are adding personality when your talk. • Try and make the introduction engaging.
What will you show the board in your delivery?	I will try and convey my findings in a way that is not too complicated and will convey the main points of the findings. I will do this through a presentation that includes visual representations of data such as charts that will back up my claims and my findings.
How will you articulate the changes that are needed?	I will provide some urgency to make the changes as this could cause a lot of money loss but also be positive that this is a good change to make to make it seem appealing to the board.
Provide a list of online resources and videos that will support your preparation for public speaking	10 Tips for Improving Your Public Speaking Skills - Professional & Executive Development | Harvard DCE How To Prepare for Public Speaking and Different Events | Indeed.com What To Do Before A Speech - Public Words 7 Public Speaking Tips for Beginners

Evaluate tools that provide visualisation. **Tell me what they are.** **Tell me what you would choose when delivering your presentation and why**	Tools that provide visualisation include PowerPoint, Excel and Power BI. I would choose a combination of the three by having a presentation made in powerpoint that includes charts and data visualisations from excel and Power BI.

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.