

**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

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| Data Protection Act | This piece of legislation governs how personal data is used and protected. It is important because it ensures that people’s privacy is protected and rights regarding their data is respected. This impacts any work in data because it means that companies must handle data securely and make sure any data is used within the bounds of the law. If breached, a business could be subject to severe fines that could go into the millions of pounds.  An example of how to follow this could be to shred any documents (if data is kept in physical form) when they are no longer in use. |
| GDPR | GDPR stands for General Data Protection Regulation. This was initially implemented as EU-wide regulation regarding data protection. The primary focus of this legislation is that it strengthens an individual’s rights over their own personal data and how it is used, as well as increasing accountability for any business keeping it. A good example of this being implemented is when a pop-up appears on a website asking a user if they consent to the website using their data for analytic or marketing purposes. This impacts businesses by forcing them to become more transparent about how they use customer data. Penalties for breaching include severe fines as well as reputational damage, especially in countries where there is a culture of privacy, such as Germany. |
| Freedom of Information Act | This legislation gives the public the right to request and access recorded information about themselves held by public authorities. It is important because it promotes transparency and accountability with the authorities, thus increasing the trust between the people and the government. An example would be requesting any information from the police that they may have about you, and they must comply. The impact on work is that this requires public sector workers to be vigilant and fast when arranging and handing over data, as they have a 20 day time limit. Potential consequences if this law is not complied with could be people losing their jobs in the public sector, legal action, and general public backlash, especially if it got in the media. |
| Computer Misuse Act | This legislation governs unauthorised access or use of computer systems. It’s important as it prevents hacking, cyber crime, and data theft. An example of this being implemented would be to regulate who has access to certain files in a computer system, and employees adhering to this by only accessing what they are allowed to. A impact of this on data work could include more monitoring of staff when they go about their work, ensuring they only access what they are supposed to, as well as locking certain files or systems from other staff. Penalties for breaching this law are quite severe, ranging from criminal charges, fines, and even imprisonment. |

# 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’

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| Print screen 1 |  |
| Print screen 2 |  |
| Print screen 3 |  |
| Print screen 4 |  |

# 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:



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| Print screen 1 |  |

# 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!

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| Print screen 1 | I used the IFS function to give a speed rating to rate the top speeds of each car, classifying them as “very fast, fast, moderate, and slow” for certain top speeds. |

# Day 3: Task 1

Please download the dataset ‘Day\_3\_Task\_1\_Bike\_Sales\_Pivot\_Lab.xlsx’ from [here](https://justit831-my.sharepoint.com/:x:/g/personal/danpe_justit_co_uk/Eb73L6LixCJHtafDJ4AOh-ABR9CVF0n9sdEgB4foSh261g?e=jh493A).

The lab instructions can be found [here](https://justit831-my.sharepoint.com/:b:/g/personal/danpe_justit_co_uk/EVySAtWQiEVDmrtCufrqTgwBuLVxX6mEKYqEAe0Mgl6b9Q?e=i05yOa). 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:

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| Print screen 1 |  |
| In which markets does Germany have customers? | Female and Male adults buy in the German market, as displayed below in yellow: |
| What country has sales in all markets? | The United States as sales in every market. |
| What are the most profitable markets by country, age group, and gender? | The most profitable market by country is the united states, as displayed below:  Most profitable by age group is adults:    Most profitable by gender is female: |
| Any other findings? | The data shows that more French young men buy than anyone else, and more Australian young women buy more bikes than other nationalities. |

# 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

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| Print screen 1 |  |

# Day 3: Task 3

Please download the dataset ‘Day\_3\_Task\_3\_Bike\_Sales\_Visualisations\_Lab.xlsx’ from [here](https://justit831-my.sharepoint.com/:x:/g/personal/danpe_justit_co_uk/ESeJLtyZhYxIpZXluVywvvkBxgx2EtpPUzmxLCzQBGTKNQ?e=naSu4B).

The lab instructions can be found [here.](https://justit831-my.sharepoint.com/:b:/g/personal/danpe_justit_co_uk/Ec1IWsNPl_ZMuaSbNcaLyVcByy3JcZaQgoG1FeFwO9neRQ?e=6lsJG1) 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:

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| Print screen 1 |  |

# 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:

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| How would you prepare for the delivery? | I would prepare the delivery by reviewing the primary data from company, ensuring the analysis is accurate, clearly presented, then check all of the formulas to verify that there are no mistakes regarding the customer retention information. I would then package the information into summaries of key findings, ensuring the message is tailored to the business executives in a simple and easy to understand format using visual charts of the most relevant information.  I’d also anticipate any questions the board may ask, making sure to have a number of answers prepared. |
| What tools would you use for the delivery? | I would use Microsoft Excel to prepare the data and create the visuals using charts and pivot tables, and for the presentation itself, Microsoft PowerPoint would be used. This would ensure the information is packaged in a polished, professional manner without an overload of information. |
| What is prospecting and why would you complete this before your delivery? | Prospecting generally means researching and engaging with potential customers or leads, though in this case, it would mean understanding the audience I’m presenting to, which would be a board of directors. I would have to work out what matters most of them, examples being revenue loss, customer data, ROI, and so on to tailor my delivery to cover those points. Doing this would mean my findings are presented in a way that aligns with their goals and leads to good decision making on their part. |
| Tell me best practices for public speaking and providing updates to senior leaders | Public speaking relies heavily on how you present yourself. Talking in a clear, concise way without stumbling will help keep the audience’s attention. Eye contact is important, only sparing a glance for a few seconds to each person, long enough to complete a thought, before looking to the next, which will make them feel more included. Bad practices are to look over their heads or stare in one space.  Using notes is helpful, only so long as they are very short, allowing the speaker to complete the thought in his own way, using his natural voice, in stead of reading directly from it which would sound robotic.  Avoid pacing around, as this can be an obvious show of nerves, and instead stand up straight with a demeanour of confidence. Physical expressions when speaking, like moving your arms or hands around to accompany your words also adds a charismatic flair to the presentation and exudes confidence.  When talking about the information, it would be important to keep the dialogue simple and ensure they understand what is being discussed, without the need to over explain or define technical terms. |
| What will you show the board in your delivery? | During my delivery, I will show the board a series of data visualisations. These data visualisations will highlight customer drop off at the 12-month mark, so would have to show data over multiple years ideally. On top of that, I would show pricing trends and compare them to renewal rates, highlighting if a price increase aligns with customer loss.  If it were available, I would also show direct customer feedback or survey results which would help to explain the dissatisfaction more.  A forecast on the impact on revenue would also help to highlight the problem if not addressed.  Finally, I would suggest options to mitigate the problem such as loyalty discounts or personalised offers. |
| How will you articulate the changes that are needed? | After explaining that the data shows a pattern of customers leaving directly correlates with the renewal period I would recommend reviewing the pricing range to incentives customers to stay and opening more communication around renewals. Each suggestion would be linked to the data and would highlight the potential return on investment of my suggestions, keeping the language simple and focused on the business. |
| Provide a list of online resources and videos that will support your preparation for public speaking | <https://www.youtube.com/watch?v=Ns_z4wEtdRM&t=1s>   * 7 Public speaking tips for beginners   <https://www.youtube.com/watch?v=UQt-8tCvMPQ>   * 3 Daily Public Speaking Exercises   <https://www.youtube.com/watch?v=5m-C5mwpmxU>   * The 3-2-1 Speaking Trick That Forces You To Stop Rambling!   <https://professional.dce.harvard.edu/blog/10-tips-for-improving-your-public-speaking-skills/>   * 10 tips for improving your public speaking skills |
| Evaluate tools that provide visualisation.  Tell me what they are.  Tell me what you would choose when delivering your presentation and why | For the data visualization, I would use Excel, packaging the data into a pivot table, from which I can make a series of visual graphs and data charts.  A line chart would be effective to show periods over multiple years to see where the sharp drop offs are, where we would be looking for consistent drop offs at month 12.  A bar chart would also be effective to compare month by month to see what drop off are like from the date of a renewal price compared to other times. For a more in depth analysis, a stacked column chart would also help here if we wanted to break it down by contract types or customer groups.  Additionally, a simple pie chart could show what percentage of customers leave at the renewal time, vs at other times which would further pin point the problem.  To deliver this presentation I would use Microsoft PowerPoint with all of the relevant excel charts put into it. The reason being that this is the most professional format for a boardroom meeting and it helps keep the visuals clear, with limited text for context only so as to not overload the audience with information. |

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| **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:

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| **Additional Information** |

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.**