

**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

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| **Data Protection Act** | * **What is it**   It is a legal framework designed to ensure personal data is collected, stored, and processed responsibly and securely. It lays out principles to ensure that personal information is used transparently, fairly, and lawfully, in line with individuals' rights.   * **Why is it important**   It ensures privacy and security for individuals, protecting sensitive information like financial data, health records, or personal identifiers. It builds trust between organizations and customers by demonstrating responsibility and compliance. Additionally, it prevents misuse or unauthorized sharing of personal data, safeguarding individuals from fraud, identity theft, or other abuses.   * **Provide a real-world example of how you can follow it**   A healthcare provider implementing secure digital systems to store patients' medical records ensures compliance by limiting access to authorized personnel and encrypting sensitive information. Additionally, the provider informs patients about how their data will be used and obtains explicit consent before sharing it with third parties.   * **How does it impact working with data**   Organizations must implement strict protocols for data collection, storage, processing, and deletion. This may involve training staff, ensuring secure systems, limiting data access, and maintaining detailed records of data processing activities. Non-compliance can result in heavy fines or reputational damage.   * **What could happen if you breached it**   It can lead to severe penalties, including large fines (up to millions depending on the violation under laws like GDPR), legal action, and loss of trust from customers and stakeholders. Additionally, it can result in reputational harm, reduced business opportunities, or stricter government oversight. |
| **GDPR** | * **What is it**   It is a legal framework established by the European Union (EU) that sets guidelines for the collection, storage, processing, and protection of personal data.   * **Why is it important**   It establishes strict guidelines to ensure the protection of individuals' personal data and their rights in a digital world where data is widely collected, stored, and processed.   * **Provide a real-world example of how you can follow it**   When a new customer browses and signs up on our website, we offer them the option to opt-in or opt-out of receiving marketing emails. In the user account centre, they can view, update, and delete their information at any time. To protect their data, we use encrypted databases, and only authorised employees have access to customer information.   * **How does it impact working with data**   Requires clear documentation of data practices, encourages collection of only essential data, imposes strict security standards, demands processes for responding to individual rights requests, alters how data analytics and profiling are conducted, increases accountability through audits, records, and policies. GDPR places a strong emphasis on transparency, accountability, and ethical data practices, transforming the way data is handled across industries.   * **What could happen if you breached it**   Hefty fines, legal action and compensation claims, reputational damage and loss of customer trust, disruption to business operations through audits or restrictions, increased scrutiny and ongoing compliance monitoring. |
| **Freedom of Information Act** | * **What is it**   It is a law that allows individuals to request information from public sector organizations, such as government departments, councils, and schools. It ensures that public authorities are transparent and accountable by requiring them to disclose non-sensitive information unless exempt.   * **Why is it important**   It fosters transparency and trust in public services by enabling the public to understand how decisions are made, how money is spent, and how services are run. It helps ensure accountability by allowing scrutiny of government activities and decisions.   * **Provide a real-world example of how you can follow it**   A journalist requests information about government spending on infrastructure projects. The relevant department processes the request under the FOIA, providing the requested documents within the legal timeframe unless the information is exempt (e.g., commercial confidentiality). This ensures compliance with the Act and public transparency.   * **How does it impact working with data**   Organizations subject to FOIA must maintain clear records, classify data properly, and establish processes for responding to information requests promptly. This includes training staff on what information can be shared and ensuring compliance with data protection laws (e.g., the GDPR) when personal data is involved. Proper data management and documentation practices are critical for meeting FOIA requirements.   * **What could happen if you breached it**   Reputational damage for the organization, enforcement actions by regulators like the Information Commissioner's Office (ICO), legal challenges from individuals or groups denied access to information without valid grounds. |
| **Computer Misuse Act** | * What is it   It is a UK law established in 1990 that aims to prevent unauthorized access to computer systems, including hacking, viruses, and other cybercrimes. It defines specific offenses, such as unauthorized access, modifying computer material, and intent to commit further offenses through unauthorized access.   * Why is it important   It protects individuals and organizations from malicious activities like data breaches, fraud, or damage to systems. It ensures a legal framework to deter cybercrimes and promotes the ethical use of technology, safeguarding sensitive data and business continuity.   * Provide a real-world example of how you can follow it   A bank encrypting customer data and restricting access to its systems only to authorized personnel demonstrates adherence to the CMA.   * How does it impact working with data   The CMA enforces responsibility when handling sensitive or personal data. Employees must use company systems ethically and legally, ensuring data is accessed only by authorized individuals. It influences how data is stored, accessed, and protected to prevent breaches or misuse.   * What could happen if you breached it   Criminal charges, leading to significant fines or imprisonment, depending on the offense's severity, damage to the organization’s reputation, affecting customer trust and business relationships, potential lawsuits from affected parties due to compromised data or systems. |

# 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’

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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** | Task1:    Task2:  Task3:    Task4:    Task5:      Task6: |

# 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** |  |

# 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?** | Adults |
| **What country has sales in all markets?** | Australia and United Kingdom |
| **What are the most profitable markets by country, age group, and gender?** | By country: Australia and United State  By age group: Adults (35-64)  By gender: Female |
| **Any other findings?** | The youth group are the lowest profitable market globally. |

# 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:**

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| **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, 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:

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| **How would you prepare for the delivery?** | Identify and understand my audience’s priorities, structure my presentation, visualise the data, develop actionable recommendations, anticipate questions, practice my presentation and prepare a report for audience to review. |
| **What tools would you use for the delivery?** | Powerpoint, Excel and Tableau |
| **What is prospecting and why would you complete this before your delivery?** | Prospecting is the process of researching, identifying, and gathering relevant information about the audience before delivering the presentation. It involves understanding their priorities, concerns, knowledge levels, and decision-making styles to tailor my delivery for maximum impact.  Each board member may have specific interests (e.g., financial outcomes, customer satisfaction), and prospecting allows me to customize my delivery to address their priorities and concerns. Aligning my presentation with the audience’s expectations and using language they find relatable enhances my credibility and demonstrates thorough preparation. |
| **Tell me best practices for public speaking and providing updates to senior leaders** | Start by preparing thoroughly to understand your audience, master your content, and clarify your objectives. Next, structure your message clearly, focusing on key points and organizing your updates logically. Be concise and relevant by prioritizing critical insights and aligning with the leaders' strategic priorities.  During delivery, speak with confidence, maintain strong body language, and use visuals wisely to simplify complex data. Tailor your tone and delivery to match the room’s formality while engaging the audience with clarity and professionalism.  Encourage engagement by practicing active listening, inviting questions, and addressing concerns. Anticipate and prepare for questions by understanding potential objections and risks in advance. End with clear next steps, summarizing your message and outlining actionable items.  Finally, practice and refine your presentation through rehearsals and use feedback for growth to continuously improve your communication skills. |
| **What will you show the board in your delivery?** | In the delivery to the board, start by presenting the key findings, such as customer churn patterns at the 12-month renewal point and its link to pricing. Follow this with the financial impact, quantifying revenue loss and highlighting the cost-benefit of addressing churn. Use benchmark comparisons to provide context by showing how the company performs relative to industry standards.  Integrate customer insights, such as feedback and segmentation, to deepen understanding of why churn occurs. Build on this with recommendations, including short-term solutions (e.g., renewal incentives) and long-term strategies (e.g., pricing model adjustments). Highlight the ROI of proposed solutions, showcasing how improved retention directly benefits the bottom line.  Wrap up with next steps, outlining clear actions and timelines, and use visual aids and tools like dashboards and graphs to make the data compelling and accessible. |
| **How will you articulate the changes that are needed?** | To articulate the changes needed, start by setting the context, explaining the current problem and its impact on revenue and retention. Define the desired outcome, such as reducing churn and aligning with strategic goals like sustainable growth.  Present the changes needed with a focus on short-term actions and long-term strategies, supported by data and insights. Justify these changes by highlighting the ROI and linking them to competitor benchmarks or customer feedback.  Address potential risks and mitigation strategies, ensuring concerns are proactively managed. End with a clear plan, breaking down actionable next steps, timelines, and ownership. Tailor my delivery to emphasize collaboration and organizational value, creating a cohesive and persuasive case for change. |
| **Provide a list of online resources and videos that will support your preparation for public speaking** | <https://youtu.be/Ns_z4wEtdRM>  <https://youtu.be/WD1qypDgt1A>  <https://youtu.be/JNOXZumCXNM> |
| **Evaluate tools that provide visualisation.**  **Tell me what they are.**  **Tell me what you would choose when delivering your presentation and why** | **Excel:** Microsoft Excel offers basic data visualization tools through charts, graphs, and PivotTables.  **Tableau:** A leading data visualization tool designed for business intelligence. Tableau allows users to create rich, interactive visualizations.  **PowerBI:** A powerful business analytics tool that allows you to create interactive dashboards, reports, and data visualizations.  I would choose Microsoft Power BI because it offers a comprehensive range of visualization options, enabling me to present data through interactive dashboards that allow the board to engage with the information in a dynamic and meaningful way. Additionally, Power BI excels at delivering valuable business insights and actionable data, making it an ideal tool for informed decision-making. |

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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.**