

**Data Technician**

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| Course Date: 14 April 2025 |
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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 | The **Data Protection Act (DPA)** is a law designed to regulate how personal data is used, stored, and processed. It ensures that individuals have control over their information while setting guidelines for businesses and organizations that handle personal data.  **Why is it Important?**  The DPA is crucial because:   * It **protects individuals' privacy**, preventing unauthorized access and misuse of their personal data. * It establishes **clear legal obligations** for businesses and organizations handling sensitive information. * It fosters **trust and transparency** between individuals and organizations that process their data.   **Real-World Example of Compliance**  Consider an online retailer handling customers' payment details:   * They encrypt financial information to prevent unauthorized access. * They only retain necessary data and delete unused records. * They obtain explicit consent before using customer details for marketing purposes.   **Impact on Working with Data**  For organizations handling data, the DPA means:   * They must **ensure security** to prevent data leaks or cyberattacks. * They need to **train employees** on data privacy best practices. * They must be **transparent** about how data is collected, used, and stored.   **Consequences of a Breach**  Failing to comply can lead to:   * **Hefty fines** from regulatory bodies. * **Legal action** from affected individuals. * **Reputational damage** that affects public trust and business credibility. |
| GDPR | The **GDPR** is a data protection regulation designed to safeguard individuals' privacy and give them control over their personal data. It applies to businesses and organizations handling the personal data of people in the **European Union (EU)** and the **UK**, regardless of where the organization is based.  **Why is it Important?**   * **Protects personal data** from unauthorized use, ensuring privacy. * **Empowers individuals** by allowing them to control how their data is processed. * **Encourages transparency**, requiring businesses to disclose how they use personal information. * **Holds organizations accountable**, enforcing strict security and ethical data handling measures.   **Real-World Example of Compliance**  Imagine a healthcare provider storing patient records:   * They must ensure that medical data is **securely stored** and only accessed by authorized personnel. * Patients must give **explicit consent** before their data is shared for research or other purposes. * The organization must have **clear policies** on data retention, deleting unnecessary records responsibly.   **Impact on Working with Data**  For businesses and organizations, GDPR means:   * **Stronger security measures** to prevent data leaks or breaches. * **Regular audits** to ensure compliance and avoid penalties. * **Clearer consent requirements**, ensuring users actively agree to data collection and usage. * **Defined policies on data retention**, preventing excessive data hoarding.   **Consequences of a Breach**  Failing to comply with GDPR can result in:   * **Severe fines** (up to €20 million or 4% of global annual revenue). * **Legal action** from affected individuals. * **Reputational damage**, leading to lost consumer trust and business impact. |
| Freedom of Information Act | The **Freedom of Information Act (FOIA)** is a law that gives individuals the right to access information held by public authorities. It promotes transparency and accountability by ensuring that government bodies disclose data when requested—unless there are valid exemptions, such as national security concerns.  **Why is it Important?**   * **Encourages openness**, ensuring the public can access governmental records. * **Holds public institutions accountable** for their decisions and spending. * **Improves trust**, allowing individuals to better understand how policies and services operate. * **Supports journalism and research**, enabling investigations into public sector activities.   **Real-World Example of Compliance**  Imagine a citizen wants to know how their local government spends tax money:   * They submit an **FOI request** asking for public records on budgeting. * The government must **respond within the legal timeframe** (usually 20 working days in the UK). * Unless exemptions apply, the requested data is **provided in a clear and accessible format**.   **Impact on Working with Data**  For organizations covered by FOIA:   * They must **maintain accurate records** to provide clear responses. * They need **data management systems** to track and disclose information efficiently. * Employees should be **trained** in handling FOI requests properly. * Sensitive information must be **protected**, ensuring compliance with privacy laws.   **Consequences of a Breach**  If a public institution fails to comply:   * **Legal consequences**, including penalties for refusing valid requests. * **Loss of public trust**, damaging their reputation. * **Investigations and corrective actions**, possibly requiring policy changes. |
| Computer Misuse Act | The **Computer Misuse Act** is a UK law designed to prevent unauthorized access to computer systems and combat cybercrime. It criminalizes hacking, fraud, and misuse of computer networks, ensuring that technology is used legally and ethically.  **Why is it Important?**   * **Protects individuals and businesses** from cyberattacks and data breaches. * **Establishes legal consequences** for hacking, malware distribution, and unauthorized data access. * **Encourages responsible use** of digital systems, preventing fraud and misuse. * **Supports cybersecurity efforts**, helping safeguard personal and financial information.   **Real-World Example of Compliance**  Imagine a company handling sensitive customer data:   * Employees follow strict **security protocols** to prevent unauthorized access. * They use **strong passwords** and **multi-factor authentication** to protect systems. * The company invests in **cybersecurity training** to ensure staff understands risks and responsibilities.   **Impact on Working with Data**  For businesses and individuals, this law means:   * **Data protection measures** must be in place to prevent breaches. * Organizations must **monitor and secure networks** against cyber threats. * Employees need **clear policies** on ethical data usage and system access. * Cybersecurity practices must **align with legal standards** to prevent liability.   **Consequences of a Breach**  Violating the **Computer Misuse Act** can lead to:   * **Legal penalties**, including imprisonment for severe offenses. * **Financial fines**, with significant costs for businesses involved in breaches. * **Reputational damage**, harming trust and credibility. |

# 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 |  |

# 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? | Germany has customers in the Adults (35-64) market only. |
| What country has sales in all markets? | Australia and United Kingdom have sales in all markets. |
| What are the most profitable markets by country, age group, and gender? | US is most profitable for the Adults (35 - 64) market.  From the data, females are purchasing more than males.    Australia is most profitable for the Young Adults (25 -34) market.  From the data, females are purchasing more than males.    France is most profitable for the Youth (<25) market.  From the data, females are purchasing more than males. |
| Any other findings? | United States was mentioned 3 times thus data cleaning required. |

# 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, 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? | Create a presentation to present my analysis and findings. |
| What tools would you use for the delivery? | MS Excel, Word and Acrobat. |
| What is prospecting and why would you complete this before your delivery? | To find potential customers and add the data from prospecting to my analysis so we have current real data. |
| Tell me best practices for public speaking and providing updates to senior leaders | Being confident in what you are delivering. Do not ramble.  Keep eye contact with your audience. Keep to the details of the analysis. |
| What will you show the board in your delivery? | Analysis chart of which age groups and genders of customers are leaving at the 12-month point. |
| How will you articulate the changes that are needed? | By having a strategy and data to show, that by making the necessary changes would benefit both customer and supplier. |
| Provide a list of online resources and videos that will support your preparation for public speaking | [Strategic Narrative — How to articulate the need for change. | fassforward](https://www.fassforward.com/our-thinking/strategic-narrative-how-to-articulate-the-need-for-change)  [10 Tips to Improve Your Public Speaking Skills | Coursera](https://www.coursera.org/articles/public-speaking?msockid=118e17aba6ce649517180447a77565b3)  [Public Speaking For Beginners](https://www.youtube.com/watch?v=i5mYphUoOCs)  [7 Public Speaking Tips for Beginners](https://www.youtube.com/watch?v=Ns_z4wEtdRM&t=1s) |
| Evaluate tools that provide visualisation.  Tell me what they are.  Tell me what you would choose when delivering your presentation and why | Bar chart, line graph, pie chart, scatter plot and dash board in excel.  I would choose a line graph to show trend overtime and a bar chart to compare data across categories, such as gender and age group. |

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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.**