

**Data Technician**

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| Name: |
| Course Date: |
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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 | A UK law that ensures personal data is handled lawfully and transparently. It is important because it protects individuals' privacy and builds trust between customers and organizations. A real-world example of compliance would be encrypting customer data and limiting access to authorized users. This law impacts working with data by enforcing secure storage, encryption, and data minimization practices. Breaching the DPA could lead to fines, legal action, and loss of reputation. |
| GDPR | A European Union regulation that strengthens data protection for individuals in the EU. It is important as it gives people more control over their personal data and imposes strict rules on organizations to handle data responsibly. An example of compliance is obtaining explicit consent before collecting or processing customer data, such as adding opt-in checkboxes on websites. GDPR impacts data handling by requiring encryption, maintaining detailed records, and promptly addressing breaches. Non-compliance could result in significant fines and reputational damage. |
| Freedom of Information Act | A law granting individuals the right to access information held by public authorities. It is crucial for promoting transparency and accountability in the public sector. A real-world example is a government department responding to a citizen's request for public spending data within the required timeframe. This law impacts data handling by ensuring accurate records, efficient request systems, and balancing transparency with privacy laws. Breaching FOIA could lead to legal action, fines, or damage to the organization's reputation. |
| Computer Misuse Act | A UK law designed to prevent unauthorized access to computer systems and data. It is vital for protecting systems from cybercrimes like hacking and data theft. Compliance involves measures such as using strong passwords, implementing multi-factor authentication, and restricting access to authorized personnel. The CMA impacts data handling by requiring organizations to safeguard systems against breaches and regularly update security protocols. Violations, such as unauthorized system access, could result in criminal charges, heavy fines, and reputational harm. |

# 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 – H** 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 ‘**P10’**
4. Using the ‘AVERAGE’ function, show me the average commission in cell **‘P11’**

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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? | Young Adults |
| What country has sales in all markets? | Australia and the United Kingdom |
| What are the most profitable markets by country, age group, and gender? | The most profitable markets are the United States by country, the "Adults" age group, and females by gender. |
| Any other findings? | Max daily sales figure of $69,650.00 was recorded on the 19th of December. The last weekend before Christmas. |

# 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 |  |

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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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| The datasets for Day 3, Tasks 1 and 2, were a bit messy and required some cleanup before proceeding. In Task 1, I noticed that the US data appeared three times in the pivot table, which was unexpected since pivot tables typically do not return duplicate entries. When I looked closely, I discovered that the column contained hidden inconsistencies, such as extra spaces. To resolve the issue, I used the TRIM function to clean up the data and ensure that the pivot table grouped the values correctly.  For Task 2, the SWITCH function initially did not work with the imported dataset due to unclean or corrupt values. Since the dataset was small, I decided to re-type it manually to remove the problematic entries. After re-typing, the function worked as intended.  Overall, it was a valuable learning experience for me because it highlighted the importance of data preparation in ensuring smooth analysis. |

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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 by submitting in MS Teams Assignment page.**