

**Data Technician**

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| Course Date: 14/04/25 |
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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 is a law that regulates the processing of personal data, ensuring it's used lawfully and fairly. The reason why it is important is to protect personal data from being misused or stolen and hold organizations accountable for their lawful processing. An example is when a company is fined for improperly sharing user data with third-party developers, which violates data protection principles. This impacts the organisation's working data and how they work with data by requiring lawful, fair, and transparent processing, while this gives the individuals control over their data and ensures protection. Breaching the Data Protection Act can lead to significant financial penalties and six months or more imprisonment time. |
| GDPR | The General Data Protection Regulation Act is a European Union law that came into force on May 25, 2018, and creates guidelines and rules for how organisations can handle and use the personal data of their users within the EU. It is important because it protects individual personal data ensuring that organizations handle it responsibly and mandates that the data is collected and processed lawfully, and fairly with the individual consent. An example is an organization using its customer data for targeted marketing. Before GDPR, the company might have sent out personalized emails to all customers just informing them only it does give choice but now under GDPR, they need to obtain explicit consent for each use of the personal data. Its impact on the data is an increase in individual rights which impacts the organisations like how they collect data, use data, and share data with third parties. This forces organisations to protect and follow the new guidelines set on personal data or they will be fine for breaching GDPR. |
| Freedom of Information Act | the Freedom of Information Act grants members of the public the right to access information held by public authorities like the NHS, schools,  and councils. It is important because it ensures openness and accountability from public authorities and will respond back 20 working days after the request is made by the public. An example is a journalist using FOI to request information from the Metropolitan Police about the number of arrests made for specific crimes in a particular area over a specified period. The Freedom of Information Act impacts the data by granting the public the right to access recorded information held by public authorities. This means that any data held by these organizations can potentially be subject to FOI requests. Breaching the Freedom of Information Act can lead to various consequences, including fines, court action, and even prosecution for criminal offences. |
| Computer Misuse Act | It's a law that criminalises unauthorised access to the computer system and the data and the action that damages or impairs the system. This is to protect the integrity and security of a computer system from hacking and misusing data unlawfully. An example is a situation where someone gains unauthorized access to a network and steals confidential information such as customer data, bank details, credit card information. This impacts the working data to be attacked by viruses or malware that steals the data for personal gain which the individual or organisation will lose access to it. Breaching the Computer Misuse Act can result in serious legal consequences, including fines, imprisonment, and even confiscation of assets. |

# 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 only the adult group 5 males and 8 female. |
| What country has sales in all markets? | Australia has a complete customer profile across all markets. |
| What are the most profitable markets by country, age group, and gender? | * In the United States female adults age from 35 to 65 are most consistent high- value purchase. * In Australia the female adults age from 35 to 65 are most consistent high- value purchase. * In the United Kingdom young adults male age from 25 to 34 are most consistent high- value purchase. * In Germany male adults age from 35 to 65 are most consistent high- value purchase. |
| Any other findings? | Some countries have gapes in the market which they are missing exponential revenue like France there is no adult male buyers which a potential gape for marketing. |

# 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? | To prepare for delivering my analysis to the board, I would begin by reviewing the customer data of 12 months. The structure of my presentation would be first introduction the purpose and the summary of my findings. Secondly, I would create a 12-month chart that would show the patterns, trends and root causes. Then i would give them the answer to what's happening and why the customers are leaving using the data to back me up. After that I would give the board recommendations what to change and the expected outcomes. |
| What tools would you use for the delivery? | The tools I would use are Excel and power BI. I would use excel to clean and organise data and do my analysis. For power BI I would use it for data-driven visuals and dynamic dashboards. |
| What is prospecting and why would you complete this before your delivery? | Prospecting is the process of researching and understanding your audience before delivering a presentation. And the reason why I would complete it before my delivery is to help how to present my findings and analysis to the board and it will help me learn what they want or need for the company. |
| Tell me best practices for public speaking and providing updates to senior leaders | * Practice the delivery. * Be concise and structured. * Use storytelling like frame the churn problems as a story with challenges and the solution. * Maintain professionalism. * Maintain eye contact and posture it show confident. * Speak clearly and at steady pace   Anticipate question like being ready to explain my analysis and my solutions. |
| What will you show the board in your delivery? | A clear chart graph highlighting the drops in the customers at the 12 months mark. Then the Finacial impact like lost revenue because of lost customers. After that then a data comparing pre-renewal vs. post-renewal customer behaviour. And a survey data explaining why customers are leaving and my recommendation would be to create a personalized a renewal offers to lowers the numbers of customers leaving. |
| How will you articulate the changes that are needed? | I would explain the problem using clear data: “At the 12-month mark, we are seeing a significant increase in customer leaving in the renewal period. Then explain how it's happening like because of our updated prices turn our loyalty customers away from us. And finally I would present my solution would be testing a loyalty pricings strategy. |
| Provide a list of online resources and videos that will support your preparation for public speaking | Videos:  <https://www.youtube.com/watch?v=1UFIYQCMvko>  <https://www.youtube.com/watch?v=tShavGuo0_E>  Website:  <https://www.toastmasters.org/>  <https://www.coursera.org/learn/public-speaking> |
| Evaluate tools that provide visualisation.  Tell me what they are.  Tell me what you would choose when delivering your presentation and why | * Excel is great for quick access to the data and seeing small data set of charts and tables. * Power BI is the best tool to use for visualisation of Interactive dashboards, live data, advanced analytics. * Tableau is a high-end visualisation tool for big data storytelling.   I would choose Power BI for dynamic visuals and PowerPoint to structure the story. Power BI would demonstrate real time patterns and trends also comparison during my delivery. PowerPoint keeps the delivery organized and allows smooth transitions when presenting to the board. |

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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.**