

**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 | DPA is a UK Act initially passed in 1988. It is in place to protect individuals and their data and establishes rules and regulations on how personal data can be used by companies or the government.  It is important due to the fact that provides guidance and rules for companies and government on how to use personal data. It can be followed by protecting information by limiting access to authorised personnel behind encryption or passwords, or keycodes and access cards. In my work, only the most relevant people access personal data from our members, and this information is stored securely in a database that requires a login to access.  DPA impacts the using, accessing and managing data for organisations, by making sure companies are transparent over how they manage data and by making sure these organisations implement security procedures to protect the data and prevent possible breaches or leaks.  There are substantial consequences for those that breach DPA, in the form of fines, warnings, bans and or legal action from those affected. |
| GDPR | The General Data Protection Regulation (GDPR) is a European Union (EU) law that protects people's personal information. It came into effect in May 2018.  It is important because it protects individuals' personal data, builds trust, and holds companies accountable. It's considered one of the world's strictest data protection laws.  In the real world, you can restrict access to personal data to only those that ultimately need it, as we do in my company, and by appointing a DPO to make sure data is audited, and used under best practices.  GDPR significantly impacts how organisations can work with data by requiring them to collect, store, and process personal information with transparency, accountability, and explicit user consent, giving individuals greater control over their data and imposing strict rules on how companies can use it.  If breached, the consequences could be fines, reputational damage, and potential regulatory investigations from authorities as well as legal action by those affected. |
| Freedom of Information Act | The Freedom of Information Act 2000 is an Act of the Parliament of the United Kingdom that creates a public right of access to information held by public authorities. It is the implementation of freedom of information legislation in the United Kingdom on a national level.  FOI Act is important because it gives the public the legal right to access information held by public authorities, promoting transparency, accountability, and informed public debate by allowing citizens to scrutinise government actions and decisions.  To follow the government or organisation has to have a transparency policy whereas the anyone can request (and, subject to certain exemptions, receive) information held by a public authority. A request for information must be made in writing by letter, email or fax, provided it is received in legible form and is capable of being used for subsequent reference.  The Freedom of Information Act (FOI) significantly impacts how organisations work with data by requiring them to readily disclose information held by them to the public upon request, which means they must actively manage and categorise their data to ensure they can easily access and provide relevant information when faced with an FOI request.  If breached, the consequences could be fines, enforcement action by data protection authorities, and in severe cases, criminal prosecution. |
| Computer Misuse Act | The Computer Misuse Act 1990 (CMA) is the main legislation that criminalises unauthorised access to computer systems and data, and the damaging or destroying of these. The Act has the intention of protecting the integrity and security of computer systems and data through criminalising access to them which has not been authorised by the owner of the system or data.  The Act has the intention of protecting the integrity and security of computer systems and data through criminalising access to them which has not been authorised by the owner of the system or data.  In my company we have access to sensitive data and files. To follow the Act, we only access authorised systems, do not share passwords, and we have a whistleblowing policy in place if we see anyone acting suspicious regarding data.  The Computer Misuse Act 1990 impacts working with data by making it illegal to access, alter, or share data without proper authorization, requiring strong security measures and adherence to data protection protocols.  If breached, there can be criminal charges, including fines and 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 ‘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 | 1)    2)    3)    4)    5)    6) |

# 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 | [VLOOKUP\_XLOOKUP Dataset working copy](https://justit831-my.sharepoint.com/:x:/g/personal/soraiatavares_bootcamp_justit_co_uk/EdJrK5cMWMRFrmmnKSwGSqIBu6k_1010bacrlGtdYWzOAA?e=qRTxtK) |

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| Print screen 2 | [Day2 Task3 Dataset working copy](https://justit831-my.sharepoint.com/:x:/g/personal/soraiatavares_bootcamp_justit_co_uk/EVOmZIsoPohLlKzl8IJUQUcBfMMsd77pA0miYY5780HhHQ?e=1fL2aa) |

# 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 a foothold in the Adults (35-64) market, with the Female segment having a bigger expression. |
| What country has sales in all markets? | Australia has sales in every market, being the Female segment where you can see the most purchases. |
| What are the most profitable markets by country, age group, and gender? | The most profitable market by country is the United States’ Adults (35-64) market where the Female segment has generated the most profit. |
| Any other findings? | It is clear, based on the data, that the consumer based in the US tends to shop more closer to the Christmas date, specially within the Adult market. |

# 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 |  |
| Print screen 2 |  |
| Print screen 3 |  |

# 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 the delivery of my findings to the board of directors, I would begin by thoroughly understanding the problem at hand. This involves diving deep into the data to pinpoint why customers are leaving at the 12-month renewal point. I would analyse pricing trends, customer behaviour, competitor strategies, and any feedback from clients to build a comprehensive view of the issue.  Next, I would structure my presentation in a clear and logical manner. The presentation would begin with a concise overview, followed by an in-depth exploration of the findings, supported by data visualisations that clearly highlight the key trends. Finally, I would propose actionable recommendations and outline the next steps.  Lastly, I would anticipate potential questions or concerns that might arise. By understanding the board’s key priorities and potential areas of scepticism, I can prepare thoughtful responses in advance. |
| What tools would you use for the delivery? | I would use MS Powerpoint or Google Slides to display my findings in a clear and visually appealing manner.  I would use tools like Tableau, Power BI or MS Excel for creating compelling visualisations of the data such as graphs, trends or heat maps, in order to convey the key insights in a easy to follow way. |
| What is prospecting and why would you complete this before your delivery? | Prospecting is the process of researching and identifying potential leads or opportunities before a sales pitch or presentation. In this case, prospecting involves understanding the board's concerns, their key interests, and their level of knowledge about the issue at hand. Completing prospecting before the delivery is important because:  Knowing the board’s interests will help me tailor the presentation to address their concerns and highlight the most relevant aspects of the analysis.  Understanding the board’s perspective allows me to frame the findings and recommendations in a way that resonates with them, which is crucial for gaining buy-in.  By understanding the board's priorities, I can anticipate their questions and concerns and be ready with well-thought-out answers. |
| Tell me best practices for public speaking and providing updates to senior leaders | When delivering updates to senior leaders, I focus on making the presentation interactive by encouraging engagement through questions or input, and using tools like live polls or Q&A sessions to keep the board involved. I also prepare for potential questions by ensuring I have clear, data-backed answers ready, and I address any concerns or assumptions openly to maintain transparency.  After the presentation, I share key materials through email or shared platforms for easy access, and offer stakeholders the opportunity to ask follow-up questions, ensuring they can revisit the content and provide additional feedback. |
| What will you show the board in your delivery? | In my delivery to the board, I would begin by presenting the key findings from my analysis, focusing on the main issue—customer churn at the 12-month renewal point. I would use data visualisations to highlight trends and patterns that support this finding. Additionally, I would include relevant customer feedback to provide context and deeper insight into why customers are leaving.  I would also present a competitor analysis, comparing our pricing model and renewal process with industry standards to identify any gaps. Following that, I would outline my recommendations for addressing the issue, such as adjusting pricing strategies or implementing loyalty programs, and demonstrate the potential impact these changes could have on customer retention and revenue. Lastly, I would show a financial model to project the expected outcomes of these recommendations, ensuring the board understands the value of making these changes. |
| How will you articulate the changes that are needed? | To articulate the changes that are needed, I would begin by clearly outlining the problem—customers are leaving at the 12-month renewal point due to pricing concerns. I would then present the data and feedback that demonstrate how this issue is impacting customer retention.  Next, I would propose specific, actionable changes, such as revising the renewal pricing strategy, offering loyalty incentives, or improving customer communication before the renewal period. I would explain how each of these changes directly addresses the root causes identified in the analysis.  Finally, I would emphasise the expected outcomes of these changes, including improved customer retention, higher satisfaction, and increased revenue. By focusing on the data-driven rationale behind the recommendations and the tangible benefits, I would make a compelling case for why these changes are necessary and beneficial for the company's long-term success. |
| Provide a list of online resources and videos that will support your preparation for public speaking | <https://www.edx.org/resources/public-speaking-tips>  <http://fearlesspresentations.com/101-public-speaking-tips/>  <https://www.youtube.com/watch?v=N5t3NTix1hw> <https://masterclass.ted.com/blog/top-ted-talks-on-public-speaking> |
| Evaluate tools that provide visualisation.  Tell me what they are.  Tell me what you would choose when delivering your presentation and why | When evaluating tools that provide visualization, I considered several options that are widely used for presenting data effectively. Here are some of the best tools I explored:  Tableau – A powerful tool for creating interactive dashboards and visualizations. It supports large datasets and offers a variety of chart types.  Microsoft Power BI – A business analytics tool that allows real-time data tracking, interactive reports, and strong integration with Microsoft products.  Excel Charts & PowerPoint – Classic yet effective tools for simple yet clear data representation, including bar graphs, pie charts, and trend lines. |

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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.**