

**Data Technician**

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| Name: |
| Course Date: |
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**Table of contents**

[Day 1: Task 1 2](#_Toc77637984)

[Day 2: Task 1 2](#_Toc1634060488)

[Day 2: Task 2 3](#_Toc152114794)

[Day 2: Task 3 4](#_Toc257844391)

[Day 3: Task 1 4](#_Toc1014152162)

[Day 3: Task 2 5](#_Toc1498274088)

[Dataset: 5](#_Toc1056274673)

[Step 1: Create a Pivot Table 5](#_Toc782776295)

[Step 2: Use the SWITCH Function 5](#_Toc365195726)

[Submission: 6](#_Toc485671904)

[Day 3: Task 3 6](#_Toc1856180793)

[Day 4: Task 1 7](#_Toc381189142)

[Course Notes 9](#_Toc1368242635)

[Additional Information 10](#_Toc305684719)

# Day 1: Task 1

Please research and complete the below boxes on common 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   Data protection is the practice of keeping personal information safe, accurate, and used only for lawful purposes.   * Why is it important   It protects people’s privacy   * Provide a real-world example of how you can follow it   Regularly deleting old customer records that are no longer needed.   * How does it impact working with data   It requires businesses to handle sensitive data carefully and follow strict rules on storage and sharing.   * What could happen if you breached it   Fines and loss of customer trust. |
| GDPR | * What is it   GDPR (General Data Protection Regulation) is a law in the UK that sets rules on how personal data must be collected, stored, and used.   * Why is it important   It protects individuals’ privacy and gives them control over their personal data.   * Provide a real-world example of how you can follow it   Asking customers for clear consent before sending them marketing emails.   * How does it impact working with data   It requires businesses to collect only necessary data, keep it secure, and be transparent about its use.   * What could happen if you breached it   Heavy fines, legal action, and loss of customer trust. |
| Freedom of Information Act | * What is it   The Freedom of Information Act is a law that gives people the right to access information held by public authorities, unless there are valid exemptions (such as national security or personal data).   * Why is it important   Promotes transparency and accountability in public bodies.   * Provide a real-world example of how you can follow it   Submitting a request to a local council for records of public spending.   * How does it impact working with data   Requires proper record-keeping and clear classification of public information.   * What could happen if you breached it   Legal challenges, reputational damage, and potential penalties for withholding information unlawfully. |
| Computer Misuse Act | * What is it   The Computer Misuse Act is a UK law that makes unauthorized access to computer systems, hacking, spreading malware, and other cybercrimes illegal.   * Why is it important   Protects computer systems and data from unauthorized access, hacking, and cybercrime.   * Provide a real-world example of how you can follow it   Using strong passwords, access controls, and only accessing systems you are authorized to use.   * How does it impact working with data   Requires secure handling of data and systems and prevents unauthorized users from tampering with or stealing data.   * What could happen if you breached it   Criminal charges, fines, or imprisonment; reputational damage for individuals or organizations. |

# Day 2: Task 1

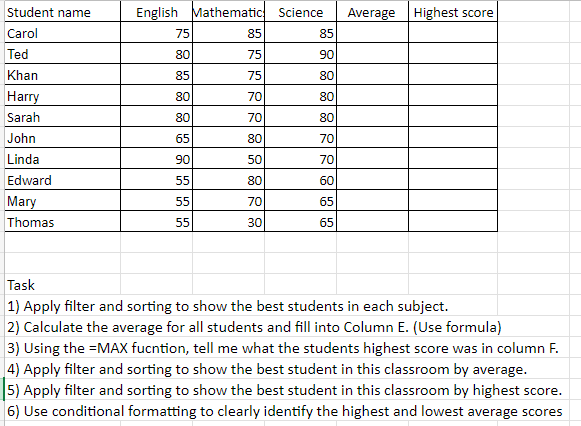
Please research and complete the following tasks within the retail-sales\_dataset.xlsx document, paste a print screen into the provided boxes below:

1. In the sheet ‘retail\_sales\_dataset’ add all available data between columns **A – J** into a ‘Table’. Remember to select only the data you want to convert.
2. Using the dropdown menu in the ‘Age’ column, sort the data by age, ‘largest to smallest’
3. Using the ‘SUM’ function, show me the commission total in cell ‘**M10’**
4. Using the ‘AVERAGE’ function, show me the average commission in cell **‘M11’**

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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 only in the Adult (35–64) age group. Within this segment, there are 8 female customers and 5 male customers.  In other words, Germany’s sales are limited to adult buyers, with no youth or young adult purchases recorded. |
| What country has sales in all markets? | Australia and the United Kingdom both have sales in all market categories. |
| What are the most profitable markets by country, age group, and gender? | Australia and United States. In Australia, there are sales across all age groups. The grand total of sales in the United States and Australia is the largest |
| Any other findings? | In Canada, Germany, and the United States, the age group <25 has zero sales. In Canada and France, there are zero sales among adults (35-64). The lowest sales are in Canada. |

# 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.
* In ‘Sales Volume’ you need to remove the space after each amount
* Confirm the data type is numerical

#### **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? | 1. Collect and analyse data  * Look at customer data, especially those who leaving in the 12th month. * Try to understand the main reasons why customers leave, like price, product quality, or service. * Collect additional data (surveys, feedback, interviews) if necessary.  1. Highlighting Key Findings  * Find the most important reasons for customer leaving. * Think about which findings and key information would be useful to the board of directors to enable them to make the right decisions.  1. Develop possible solutions  * Suggest a few ways to keep customers. * Consider what resources are needed for each solution. * Show the potential benefits the company could get if the solutions are applied.  1. Prepare the presentation  * Make slides with clear charts and main points. * Highlight recommendations and options.  1. Practice and prepare for questions  * Think about possible questions from the board and prepare short answers. * Practice explaining findings, solutions, and expected benefits clearly and confidently. |
| What tools would you use for the delivery? | I would use PowerPoint for the presentation. For charts, I would use Excel. I could also use Adobe Photoshop to create some designs, or AI Midjourney to create attractive images and animations. |
| What is prospecting and why would you complete this before your delivery? | Prospecting means to know your audience. I would check what the board cares about, so I can focus on what is important for them. Since board members are often not technical, I would make sure to present the information clearly and simply, without going too much into technical details. This way, they can understand the key points and make decisions based on the insights. |
| Tell me best practices for public speaking and providing updates to senior leaders | I would keep the message short and start with the main idea. I would speak clearly, keep eye contact, and use simple examples. I would also think about my audience, make a clear structure, and keep the content simple. To engage the audience, I would use data visualisation and ask questions. I would show confidence during the delivery. |
| What will you show the board in your delivery? | For this assignment, I analysed an imaginary company that provides educational courses for children. The company is experiencing customer leaving, and I created a table to show how I would investigate the reasons behind this churn. I also prepared charts to clearly illustrate the findings and make the insights easy to understand for the board of directors.   * I determined how many months each client studied = DATEDIF([@StartDate], [@EndDate], "M") * I calculated the company's revenue = [@MonthlyCost] \* [@MonthsActive] * And the revenue the company could have earned but lost due to customer churn = [@MonthlyCost] \* 12 |
| How will you articulate the changes that are needed? | 1. Discount\_10% = [@[Annual\_Income]] \* 0.1 Calculates a 10% discount from the annual income of the student. 2. Discount\_5% = [@[Annual\_Income]] \* 0.05 Calculates a 5% discount from the annual income. 3. Bonus by Rating = IF([@[Student\_Rating]] <= 10, 100, 0) Assigns a bonus of £100 to the top 10 students based on their rating. All other students receive £0. 4. Revenue\_if\_+10%\_Retention = [@[Annual\_Income]] \* 1.1 Estimates the potential revenue if the company retains 10% more students. Multiplies the current annual income by 1.10. 5. Revenue\_if\_+20%\_Retention = [@[Annual\_Income]] \* 1.2 Estimates the potential revenue if the company retains 20% more students. Multiplies the current annual income by 1.20.   The analysis shows that many customers leave after the 12-month contract, and the main reason they give in the feedback survey is the renewal price. This finding is confirmed by the tables and charts. To address this, I would explain to the board that changes are needed in the renewal strategy. Possible solutions could include offering more flexible pricing or loyalty discounts for the second year. I would present these changes in simple language, highlight the benefits for retention, and point out potential risks and resources required.  Additionally, several strategies could help improve engagement and retention:   1. **Flexible pricing plans** – Offering different packages (basic, standard, premium) allows customers to choose the level that best suits their needs. 2. **Activity bonuses** – Rewarding customers for regular attendance, completing assignments, or using the service with points, discounts, or gifts. 3. **Personalized offers** – Tailoring renewal plans based on customer behaviour to make them feel valued and understood. 4. **Monthly Achievement Bonus** – Each month, the top students could receive a free tuition spot (e.g., 10 students of the month). This rewards achievement, motivates engagement, and enhances the company’s reputation. 5. **Client feedback** – Conducting short interviews before renewal to understand needs and provide a personalized offer, ensuring we respond promptly to trends and changes. 6. **Prestige-based reward** – Lowering tuition fees for students/customers with high attendance and excellent test scores—a win-win strategy that motivates students and improves the quality perception of our educational services. |
| Provide a list of online resources and videos that will support your preparation for public speaking | TED talks ([public speaking | Search Results | TED](https://www.ted.com/search?q=public+speaking)), Just IT training PDF. |
| Evaluate tools that provide visualisation.  Tell me what they are.  Tell me what you would choose when delivering your presentation and why | 1. **Power BI:** good for interactive dashboards, easy to connect with Excel. 2. **Tableau:** strong visuals, good for deep analysis, but more complex. 3. **Excel:** basic charts and pivot tables, good for quick visualisations. 4. **PowerPoint:** not a data tool, but useful to present charts and insights clearly to an audience. 5. **Adobe Photoshop:** not for data analysis, but can help to design or edit images, infographics, or make visuals more attractive.   They are tools that help to show and explain information in a clear way.   1. I would use **PowerPoint** to present my charts and key points in a clear way. 2. I would use **Excel** to create simple graphs and tables. 3. I could also use **Adobe Photoshop** to design or edit images and make them more attractive. 4. Maybe I would use **AI tools (Midjourney)** to create pictures or small animations, to make the presentation more engaging. |

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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.**