

**Data Technician**

|  |
| --- |
|  |

|  |
| --- |
| Name: Alaa Mostafa |
| Course Date: 16/12/24 |
|  |

**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 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

|  |  |
| --- | --- |
| Data Protection Act | **What is Data Act?**  The Data Protection Act is a United Kingdom legislation that regulates the collection, use, storage, and disclosure of personal data.  **DPA Importance:**  The Data Protection Act is important because it provides guidance and best practice rules for organizations and the government on how to use personal data. It regulates the processing of personal data, protects the rights of data subjects, and enables enforcement by the Data Protection Authority (The ICO). The Act empowers individuals to take control of their personal data and supports organizations in their lawful processing of personal data. It also helps secure personal information online and prepares for Brexit. The principles set out in the Data Protection Act help businesses ensure that details of their staff, clients, and customers are properly protected.  **How to follow DPA:**  Make a list. You will have personal information saved on your phone, tablet  Ask yourself ‘why do I need this information?’ Think carefully about your reasons for having data.  Think security. People care about their information, and you must take steps to protect it.  Be transparent. You must tell people why you need their data, who you’ll share it with.  **DP Impacts:**  Data protection impacts recruitment, employee record-keeping, and many other HR activities. Employers must understand their data protection responsibilities and liabilities. It's important to keep up to date with data protection developments as the law needs to change regularly to reflect rapid developments such as the increased use of AI.  **Data Breach:**  A personal data breach means a breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorised disclosure of, or access to, personal data. This includes breaches that are the result of both accidental and deliberate causes. |
| GDPR | **What is GDPR?**  GDPR is a comprehensive data protection law that empowers individuals and harmonises data protection across the EU. Learn the key principles, rights, and requirements of GDPR and how it applies to you and your business.  **Importance of GDPR:**  5 reasons why GDPR is important.  1. Greater Data Protection Under the GDPR, stronger rights are given to individuals over how organisations process their data.  2. Build Trust the GDPR puts the protection of consumers’ personal data first.  3. Revalue Data Loopholes in legislation currently allow organisations to obtain ambiguous consent.  4. Impact on Organisations.  5. Transparency.  **How to Follow GDPR:**  1. Appoint a Data Protection Officer (if you need one) The first thing you need to do is to consider whether you need a Data Protection Officer.  2. Review GDPR Your GDPR implementor should familiarise themselves with GDPR.  3. Information audit.  4. Determine your lawful basis for processing data.  5. Implement processes.  **GDPR use with data:**  The UK GDPR covers the processing of personal data in two ways:  personal data processed wholly or partly by automated means (that is, information in electronic form); and  personal data processed in a non-automated manner which forms part of, or is intended to form part of, a ‘filing system’ (that is, manual information in a filing system).  **GDPR Breached:**  If you fail to comply with the UK General Data Protection Regulation (UK GDPR), you could face enforcement action by the Information Commissioner's Office (ICO). The ICO can issue sanctions for a breach of the regulation, including warnings, reprimands, compliance orders, and bans on processing or data transfers (permanent or temporary). Under the GDPR, the ICO has the power to issue fines of up to £17.5 million or 4% of an organisation’s global turnover, whichever is higher. You also have the right to claim compensation from an organisation if you have suffered damage as a result of it breaking data protection law. |
| Freedom of Information Act | **What is Freedom of ACT?**  The Freedom of Information Act 2000 provides a right of access to any recorded information held by a public authority in the UK. Organisations are not required to provide opinions, hypothetical responses or to create new data in order to respond to a request.  Personal data cannot be provided by submitting a Freedom of Information request, and individuals should not make requests regarding their own details or records  **Importance of FIC**  The Freedom of Information Act 2000 was established to increase transparency in the public sector. It gives people the right to request access to recorded information held by public sector organisations or be informed about whether information is held.  **Provide a real-world example of how you can follow it.**  The Freedom of Information Act (FOIA) does not apply to limited companies, sole traders, or charities. However, if you supply services on behalf of a public authority, you may hold information in connection with those services which could be requested under FOIA.  The public authority is responsible for responding to the request, and for deciding whether the information can be released to the public. You must support them by providing any information you have that they will need for their reply.  **How does it impact working with data**  *The Freedom of Information (FOI) Act 2000* was introduced to give the public the right to access any *information* recorded by public sector organisations. These organisations include:   * schools * councils * government departments * health trusts and hospitals * libraries * museums   Anyone is able to request information, regardless of how old they are, where they live or their nationality.  Requests must be made in writing, either by letter or by *email*. The organisation then has 20 working days to provide the information.  Many people incorrectly assume that public bodies must give them any information that they request  **What could happen if you breached it**  You may be breaching the Freedom of Information Act if you do any of the following: deliberately destroy, hide or alter requested information to prevent it being released. This last point is the only criminal offence in the Act that individuals and public authorities can be charged with |
| Computer Misuse Act | **What is Computer of Misuse ACT?**  The Computer Misuse Act 1990 is a British legislation that makes it illegal to gain unauthorized access to a computer or to make changes to files on a computer without permission. It was created to specifically legislate for cyber-dependent crimes such as hacking and misuse of communications systems.  **Importance CMA:**  It is used to protect against and prosecute hackers and cyber criminals. The CMA has provisions to cover a broad variety of criminal digital activity. In 2022, computer misuse accounted for 14% of total UK crime. Understanding this law is important for businesses with UK operations to keep cybercriminals out of their system  Provide a real-world example of how you can follow it:  Computer misuse Act  Crimes that come under the bracket of computer misuse are similar in many ways to online fraud, but there are some differences. The main difference is that fraud must involve an intent to cause personal gain or loss to another, while computer misuse can simply involve accessing or altering digital information. This could include:  Hacking into a website and changing the content on the site, without the permission of the site owner.  Gaining access to someone’s computer remotely, accessing confidential information, and then exposing it to the public or publishing it.  Even just unauthorised access to computer material can constitute an instance of the offence. It is important that you consult with a solicitor if you’re not sure whether you may have committed the offence so that you can take appropriate steps going forward.  **How does it impact working with data:**  The Computer Misuse Act (CMA) makes it illegal for anyone to break into a computer system, or to change programs or data without permission.  **What could happen if you breached it:**  If someone is found guilty of an offence under the act, they can face fines, imprisonment, or both. There are some defences available if someone is accused of breaking the Computer Misuse Act. These include having lawful authority or consent to access or modify the computer system or data |

# 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’

|  |  |
| --- | --- |
| 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:



|  |  |
| --- | --- |
| Print screen 1 | Highest in Maths    Highest in Science:  2.Average.    3.Max Highest score    4.Best student by highest average.    5.Best student by Highest score.    6.Conditinal formatting operator |

# 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!

|  |  |
| --- | --- |
| Print screen 1 | Sum, Sumif , Sumifs, Average, Averageif, Averageifs, Count, countIf, countfs    Answers    IF, IFS and Switch , Floor Formulas    VLOOKUP    Xlookup      Date formula’s |

# 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:

|  |  |
| --- | --- |
| Print screen 1 |  |
| In which markets does Germany have customers? |  |
| What country has sales in all markets? |  |
| What are the most profitable markets by country, age group, and gender? |  |
| Any other findings? |  |

# 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

|  |  |
| --- | --- |
| Print screen 1 | Step 1:    Step2: |

# 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:

|  |  |
| --- | --- |
| 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:

|  |  |
| --- | --- |
| How would you prepare for the delivery? | 1 Plan Thoroughly Before diving into the data, it's crucial to have a detailed plan. Start by understanding the project's scope and objectives. What are the key questions that need answering?  2 Set Milestones are checkpoints that help you gauge the progress of your project.  3 Communicate Clearly with stakeholders so can deliver exactly what they are after.  Present the power point presentation as above to deliver exact what your audience looking for. |
| What tools would you use for the delivery? | There are several tools like Tableau, Power BI, Excel, Power Point, Git hub AI. |
| What is prospecting and why would you complete this before your delivery? | I would understand the data and insight of it and understand stakeholder's requirement.  So can deliver more accurate data and it’s insight which can help to improve business’s sales or profit. |
| Tell me best practices for public speaking and providing updates to senior leaders | Make sure you understand the depth of the data insight.  So when you speak about data you have enough knowledge to convey to the senior leaders.  Establish an Executive Presence Think of someone who effortlessly commands attention, show professionalism, and inspires confidence in every interaction. |
| What will you show the board in your delivery? | Cut to the point what exactly board are interested in data insight with good visualisation and interactive data. |
| How will you articulate the changes that are needed? | By Recommending them what change is necessary for business.  Show them the data where we are lacking, and we can improve them with like promotion for adult and good marketing online. |
| Provide a list of online resources and videos that will support your preparation for public speaking |  |
| Evaluate tools that provide visualisation.  Tell me what they are.  Tell me what you would choose when delivering your presentation and why | POWER BI, GIT HUB, Tableau, Excel, PowerPoint  These are all visualisation tools help you to provide powerful tool to demonstrate your data in interactive way.  I have worked with Tableau before so would choose Tableau and will choose Power BI.  As they both are immensely powerful tool to demonstrate the data. |

|  |
| --- |
| **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:

|  |
| --- |
|  |

|  |
| --- |
| **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.**