BIG DATA AND ANALYTICS

Practical Exercises
Exercise 1

Lesson Goal: To use best practices to clean up, prepare, and manage data

You are a Data Analytics Manager working with the customer retention team of a large general insurance company. The customer retention manager is asking you to build a predictive analytics model to determine which customers are likely to leave at their next renewal date.

In 150 words, describe each of the variables you believe would be important to feature in the model with an explanation as to why you believe it is important. Outline the importance of using clean data to help in your forecast.
Lesson Goal: To use best practices to collect, upload, and process data

In the above scenario (Exercise 1), your Director is keen to learn more about Big Data and how it can be used in the context of the General Insurance company.

Using the 4V model, explain each aspect of Big Data and explain how it is applicable in this context. Highlight some of the watch-outs with each aspect to ensure that a Big Data strategy is executed in the right way.
Lesson Goal: To recognize how to store data effectively, and extract meaning from it

To help drive process into your data collection plan, create a checklist of digital and physical storage types. In a table, note who had access to each, how they are secured, and the kind of data they are used for.

Complete your list of data storage types and print out the table for reference as part of the process within the organization.

<table>
<thead>
<tr>
<th>Type</th>
<th>Storage</th>
<th>Access</th>
<th>Security</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital</td>
<td>Hard Drives</td>
<td>Restricted</td>
<td>Password</td>
<td>Files and docs</td>
</tr>
<tr>
<td>Physical</td>
<td>Memos</td>
<td>Open</td>
<td>Cabinet</td>
<td>Updates and announcements</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shred when complete</td>
<td></td>
</tr>
</tbody>
</table>
Exercise 4

Lesson Goal: To recognize how to use data to drive decision-making and reporting

To help your manager understand the value of the data you are collecting on the business goals, create a report for device traffic to your website over the last 7 days.

Put this data in a table, then see how it could be interpreted using a bar chart showing the percentage of visits for each day versus the total visits for the week.

Do this using Google Analytics:

- Set your date range to the last 7 days
- In the left hand menu, go to Audience->Mobile->Device Category
- Press the secondary dimension button below the chart in Google Analytics and type “day” into the search bar of the secondary dimension dropdown
- Choose ‘Day of Week Name’
- At the bottom of the screen in the right hand corner, click the Show Rows menu and select 5000 rows
- This shows all data in the report now
- Click on the Export -> csv button at the top of the screen and open in Excel
- Use this data to create insights about mobile traffic and create a chart that compares mobile to desktop and tablet data types in a single view