DATA TECHNICIAN APPRENTICESHIP

LEVEL 3

MOCK DEMONSTRATION 2 - DATA ANALYSIS AND VALIDATION

ASSESSMENT TIME ALLOWED 45 MINUTES

(Please note that the demonstration should take about 30-35 minutes, the questions will be asked at the end of the demonstration)

Assessment title – A study of the AirBnB data gathered from Sunnyside, Queens, New York.

Scenario

A friend of your lives in Sunnyside, Queens, New York and is considering renting her property and returning to the UK.

The property that your friend owns is an apartment, that will accommodate up to 4 people.

Objectives

You have been asked to analyse the available files to assist your friend in letting her property through AirBnB.

Tasks:

1. Create a new folder called "Evidence" on your desktop, and then download and save the scenario demonstration documents into this folder. [S1, S2].

   - "AirBnB.csv"
   - "SD2 – Mock Assessment.pdf" (this document)

2. Create an audit report either in a separate word document or in a new worksheet of the AirBnB workbook. Use this document to record your progress through the tasks. [S9, S18].

3. Import the .csv file into a spreadsheet of your choice before working on the next tasks. [S1]

4. Format the datasets "Price per night", "Monthly service fee", "Annual service fee" to UK sterling currency. [S16].

5. Identify any further data quality issues such as missing data and typos and include records of the issues found in the audit plan. [S16]

6. Parse the hostname into first name and second name (e.g. separate the one column into two). [S16, K9].

7. Cross-check property type code with the room type column. The codes in "Property type code" are SR = Shared room, PR = Private room, AP=Entire home/apt. The correct records are in the "room type" column. Record any changes in the audit report. [S8].

8. Identify any "host id" duplicates and delete these. Record the data sets that have been deleted in your audit report. [S16]

9. Identify the top 5 entire home/Apt properties with a review rating of 3 or above, which has the highest cost per night. Illustrate your findings with a graph/chart and include in your audit report. [S7, K7].

10. Identify the number of properties constructed after 2012 and their property types. Illustrate your findings with a graph/chart and include in your audit report. [S7, K7].

11. Calculate and create a table which shows the average price per night for the room types which includes a summary of the average price for each review rating. Tidy up the format of the currency decimal places as appropriate. Sort the grand average total column into highest to lowest. Create a suitable graph or chart to illustrate your findings.
Include the table and graph/chart in the audit report. [S7, K7].

End of Scenario demonstration instructions (this will need to be seen by the assessor)

- ~~Upload your evidence folder into the SharePoint live folder.~~
- ~~Delete any downloaded files and the evidence folder on your desktop.~~
- ~~Delete these files from your own recycle bin.~~
- ~~Tear up any notes you have made during this assessment.~~

Skills KSB's evidenced in this assessment:

KSB	Description
S1	Source and migrate data from already identified different sources
S2	Collect, format and save datasets
S7	Apply basic statistical methods and algorithms to identify trends and patterns in data
S8	Apply cross checking techniques for identifying faults and data results for data project requirements
S9	Audit data results
S16	Clean data i.e. remove duplicates, typos, duplicate entries, out of date data, parse data (e.g. format telephone numbers according to a national standard) and test and assess confidence in the data and its integrity.
S18	Prioritise within the context of a project

Knowledge KSB's evidenced in this assessment:

KSB	Description
K7	Algorithms, and how they work using a step-by-step solution to a problem, or rules to follow to solve the problem and the potential to use automation

K9	Basic statistical methods and simple data modelling to extract relevant data and normalise unstructured data

Behaviours KSB's evidenced in this assessment:

KSB	Description
B2	Work independently and take responsibility
B3	Use own initiative
B4	A thorough and organised approach