Coding Exercise

This is an exercise that tests your ability/knowledge with serialized data, collections, data associations, data modeling, type casting, and several other aspects of OOP/C#.NET. Please review the instructions below for how to present answers to each of the questions outlined.

Once you are finished with the exercise, please commit the project to your own personal public repository on GitHub (free) and send an email to your interviewers with the url to that repository. If you are unable to reach them, please send the email to hr@codysystems.com and they will forward it onto the right group.

Create a workflow which will output answers to the following details:
1. Output results to Console.WriteLine() in Program.cs
2. Include at the question # and the answer at a minimum.
3. NOTE: We will provide answers next to each most questions as a guide, but your answer should be programmatically determined in your work.

If you have any questions about the instructions, please feel free to contact your interviewers.

Coding Exercise

Number	Question	Answer
1	Do all files have entities?	TRUE
2	What is the total count for all entities?	418
3	What is the count for each type of Entity? Person, Organization, Vehicle, and Address	Person: 100 Organization: 106 Vehicle: 103 Address: 109
4	Provide a breakdown of entities which have associations in the following manor: - Per Entity Count - Total Count	- Per Entity Count: Person: 5 Organization: 5 Vehicle: 5 Address: 5 - Total Count: 20
5	Provide the vehicle detail that is associated to the address "4976 Penelope Via South Franztown, NH 71024"?	Id: bf897e8d-ca66-4930-9529-0fe0bb57dc86 Make: BMW Model: Explorer Year: 2022 Plate: h5hg0y8 State: <null> Vin: XG2R2OM1XHUO24562
6	What person(s) are associated to the organization "Thiel and Sons"?	None
7	How many people have the same first and middle name?	94
8	Provide a breakdown of entities where the EntityId contains "B3" in the following manor: - Total count by type of Entity - Total count of all entities	Person: 16 Vehicle: 12 Organization: 7 Address: 13
9	What improvements would you make to the object model to improve your overall workflow?	Answer will not be provided for this question. Note: Feel free to change/improve the object model provided if you feel it will improve your workflow. The only constraint is changes cannot require the data in the .json files to change (i.e. The files located in the DataSources directory).