**Topic 74: How to Save a Python List or Dictionary in a File: JSON**

**What**  
This topic explains how to save a Python list or dictionary to a file using the JSON (JavaScript Object Notation) format. JSON is a widely used format for data storage that is both human-readable and easily parsed by both humans and machines.

**Why**

* **Saving data structures**: You can’t directly write Python lists or dictionaries to text files using the write() method because they are not strings. JSON allows you to easily serialize complex Python data structures into a format that can be written to files and later retrieved.
* **Interchangeable format**: JSON is a widely supported format across programming languages, making it a great choice for storing and sharing data.

**How**

1. **Import the JSON module**:  
   To use JSON functions in Python, first import the json module:

python

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import json

1. **Define the list or dictionary**:  
   Create the data structure you want to save, such as a list or dictionary:

python

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alphabet\_letters = ["a", "b", "c"]

Or a dictionary:

python

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customer\_29876 = {

"first name": "David",

"last name": "Elliott",

"address": "4803 Wellesley St."

}

1. **Open the file to save the data**:  
   Open a file in write mode ("w"). If the file does not exist, Python will create it for you:

python

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with open("alphabet\_list.json", "w") as f:

1. **Write the data using json.dump()**:  
   Use json.dump() to serialize the data structure and write it to the file:

python

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json.dump(alphabet\_letters, f)

or for a dictionary:

python

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with open("customer\_29876.json", "w") as f:

json.dump(customer\_29876, f)

**Things to Remember**

* **JSON format**: JSON is not limited to text files; it can store any Python data structure that is serializable, including lists, dictionaries, strings, numbers, and booleans.
* **Data types**: Lists, dictionaries, and other Python objects must be serialized into a JSON-compatible format before being saved. The json.dump() function is used for this purpose.
* **Human-readable**: The JSON format is text-based, so the data saved in the file will be human-readable and easy to edit manually if necessary.
* **File extension**: It is common to save JSON data with the .json file extension, which indicates that the file contains data in JSON format.