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**Topic 40 - How to Get Information Out of a Dictionary Within Another Dictionary**

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**What**

When you have a dictionary containing multiple inner dictionaries, you can access specific information in the inner dictionaries by chaining keys.

**Why**

Nested dictionaries are useful for storing complex data, but accessing specific information within them requires understanding how to navigate these nested structures.

**How**

1. **Setting Up a Dictionary with Nested Dictionaries**:

python

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customers = {

0: {

"first name": "John",

"last name": "Ogden",

"address": "301 Arbor Rd."

},

1: {

"first name": "Ann",

"last name": "Sattermyer",

"address": "PO Box 1145"

},

2: {

"first name": "Jill",

"last name": "Somers",

"address": "3 Main St."

}

}

1. **Accessing an Entire Inner Dictionary**:
   * To access all information about a specific customer:

python

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print(customers[2])

# Output: {'first name': 'Jill', 'last name': 'Somers', 'address': '3 Main St.'}

1. **Accessing Specific Information in an Inner Dictionary**:
   * For a specific field, such as an address, use both the outer and inner keys:

python

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print(customers[2]["address"])

# Output: 3 Main St.

* + Here’s a breakdown:
    - customers[2] refers to the dictionary associated with customer ID 2.
    - customers[2]["address"] retrieves the value of the "address" key within that specific inner dictionary.

**Summary**

With nested dictionaries, you access data by first specifying the key for the outer dictionary and then the key for the desired field within the inner dictionary.

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