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**Topic 26 - Dictionaries: How to Code One**  
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**Creating Dictionaries in Python**

In the previous chapter, we learned that a **dictionary** is a set of paired *keys* and *values*, allowing us to efficiently store and access related information. Now, let’s look at the code for creating a dictionary.

**Example: Building a Customer Dictionary**

Suppose we want to create a dictionary for customer 29876 with these details:

* **First Name**: David
* **Last Name**: Elliott
* **Address**: 4803 Wellesley St.

Here’s the code:

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customer\_29876 = {

"first name": "David",

"last name": "Elliott",

"address": "4803 Wellesley St."

}

This code structure is similar to a **list**, but there are key differences between lists and dictionaries.

**Comparing Lists and Dictionaries**

Let’s look at the similarities and differences between lists and dictionaries.

1. **Variable Name and Equal Sign**: Both dictionaries and lists begin with a variable name and an equal sign:

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jobs\_to\_do = ["email", "texting", "calls"] # List

customer\_29876 = {"first name": "David", "last name": "Elliott", "address": "4803 Wellesley St."} # Dictionary

1. **Items Separated by Commas**: Both data structures separate items with commas:

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jobs\_to\_do = ["email", "texting", "calls"] # List

customer\_29876 = {"first name": "David", "last name": "Elliott", "address": "4803 Wellesley St."} # Dictionary

1. **Enclosure in Brackets**:
   * **List**: Enclosed in square brackets []
   * **Dictionary**: Enclosed in curly brackets {}

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jobs\_to\_do = ["email", "texting", "calls"] # List uses square brackets

customer\_29876 = {"first name": "David", "last name": "Elliott", "address": "4803 Wellesley St."} # Dictionary uses curly brackets

1. **Structure of Items**:
   * **List**: Each item is a single element.
   * **Dictionary**: Each item is a *key-value* pair, separated by a colon :.

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customer\_29876 = {

"first name": "David", # Key: "first name", Value: "David"

"last name": "Elliott", # Key: "last name", Value: "Elliott"

"address": "4803 Wellesley St." # Key: "address", Value: "4803 Wellesley St."

}

**Best Practices for Naming**

While lists usually have plural names (e.g., jobs\_to\_do), dictionary names are often singular, as they represent a single entity with related data points.

**Keys and Values**

In this example, both *keys* and *values* are **strings**. However, Python dictionaries are flexible, and keys and values don’t have to be strings. You’ll learn more about this in later lessons.