1. The Word Counter (Basic)

The Goal: Write a program that takes a string of text and counts how many times each word appears.

- **Task:** Create a Dictionary<string, int>.
- **Logic:** Iterate through a list of words. If the word exists as a key, increment the value; if it doesn't, add it with a value of 1.
- **Bonus:** Make the search case-insensitive so "Apple" and "apple" are counted together.

2. Employee Directory (Intermediate)

The Goal: Manage a small database of employees using their ID numbers as keys.

- **Task:** Create a Dictionary<int, string> where the int is an Employee ID and the string is the Name.
- **Operations to Implement:**
    1. Add three employees.
    2. Check if ID **105** exists before trying to print it.
    3. Remove an employee by ID.
    4. Loop through the dictionary and print all records in the format: ID: [Key], Name: [Value].

3. Inventory Management (Data Structures)

The Goal: Store more complex data by using an object as the Dictionary value.

- **Task:** Create a class Product with properties Name, Price, and StockQuantity. Create a Dictionary<string, Product> where the key is a **SKU (Stock Keeping Unit)** string.
- **Logic:** * Add a few products.
    - Write a snippet that finds a product by SKU and reduces its StockQuantity by 1 (simulating a sale).

4. Grouping by Grade (The "List" Value)

The Goal: Learn how to map one key to multiple values using a collection as the value.

- **Task:** Create a Dictionary<string, List<string>>. The key is a **Grade Level** (e.g., "10th Grade"), and the value is a **List of Student Names**.
- **Logic:** * Add "Alice" and "Bob" to "10th Grade".
  - Add "Charlie" to "11th Grade".
  - Print out all students in "10th Grade" by accessing the list associated with that key.

5. The "Safe" Dictionary Lookup (Best Practices)

The Goal: Practice avoiding the common KeyNotFoundException.

- **Task:** Use the TryGetValue method.
- **Logic:** * Create a dictionary of currency codes and their full names (e.g., "USD" -> "United States Dollar").
    - Ask for a code from the user.
    - Use TryGetValue to safely retrieve the name. If it doesn't exist, print "Currency code not found" instead of letting the program crash.