C# File and Folder Management Exercises

Exercise 1: Copy a Single File

1. **Objective**: Learn how to copy a single file.
2. **Steps**:
3. Create a console application.
4. In the `Main` method, use the `File.Copy` method to copy an existing file named "source.txt" to a new file named "destination.txt" in the same directory.
5. Check that "destination.txt" was created and contains the same content as "source.txt".

Exercise 2: Move a Single File

1. **Objective**: Move a file from one location to another.
2. **Steps**:
3. Create a file named "fileToMove.txt" in your project directory with some sample text.
4. Use `File.Move` to move it to a folder named "TargetFolder".
5. Ensure that the "TargetFolder" directory exists before running the program.

Exercise 3: Delete a Single File

1. **Objective**: Safely delete a file if it exists.
2. **Steps**:
3. In the `Main` method, check if a file named "deleteMe.txt" exists in the directory.
4. If the file exists, delete it using the `File.Delete` method.

Exercise 4: Create a Directory

1. **Objective**: Create a new directory if it doesn't already exist.
2. **Steps**:
3. In the `Main` method, use `Directory.CreateDirectory` to create a folder named "NewFolder".
4. Run the program to verify that the folder is created.

Exercise 5: List Files in a Directory

1. **Objective**: Retrieve and display a list of all files in a specified directory.
2. **Steps**:
3. Ensure there is a folder named "Documents" containing a few files.
4. In the `Main` method, use `Directory.GetFiles` to get a list of all files in the "Documents" folder.
5. Print each file name to the console.

Exercise 6: Copy All Files from One Folder to Another

1. **Objective**: Copy all files from a source folder to a destination folder.
2. **Steps**:
3. Create two folders named "SourceFolder" and "DestinationFolder".
4. Use `Directory.GetFiles` to get each file in "SourceFolder".
5. Copy each file to "DestinationFolder" using `File.Copy`.

Exercise 7: Delete All Files in a Folder

1. **Objective**: Delete all files within a specific folder.
2. **Steps**:
3. Ensure there is a folder named "TempFolder" with multiple files inside.
4. In the `Main` method, use `Directory.GetFiles` to retrieve all files in "TempFolder".
5. Delete each file using the `File.Delete` method.

Exercise 8: Copy a Folder with Subfolders and Files

1. **Objective**: Copy an entire folder, including its subfolders and files, to a new location.
2. **Steps**:
3. Create a folder named "SourceFolder" with subfolders and files inside.
4. Create a method that recursively copies each subfolder and file from "SourceFolder" to "DestinationFolder".
5. Verify that "DestinationFolder" has the same structure and content as "SourceFolder".

Exercise 9: Delete a Folder with All Subfolders and Files

1. **Objective**: Delete a folder and all of its contents.
2. **Steps**:
3. Create a folder named "OldFolder" with subfolders and files inside.
4. Use `Directory.Delete` with the recursive option set to delete "OldFolder" and all of its contents.

Exercise 10: Move a Folder with Subfolders and Files

1. **Objective**: Move a folder along with all its subfolders and files to a new location.
2. **Steps**:
3. Create a folder named "MoveThisFolder" with subfolders and files inside.
4. Use `Directory.Move` to move "MoveThisFolder" to a new location called "NewLocation/MoveThisFolder".
5. Verify that "MoveThisFolder" no longer exists in its original location and has been successfully moved with all its contents to the new location.