Directory operations in C# are performed using the System.IO namespace, which provides various classes and methods to manage directories and their contents. Here are some common directory operations:

1. Creating a Directory

You can create a new directory using the Directory.CreateDirectory method.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string directoryPath = "C:\\MyDirectory";
        Directory.CreateDirectory(directoryPath);
        Console.WriteLine("Directory created successfully.");
    }
}
```

2. Checking if a Directory Exists

You can check if a directory exists using the Directory.Exists method.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string directoryPath = "C:\\MyDirectory";
        if (Directory.Exists(directoryPath))
```

```
        {
            Console.WriteLine("Directory exists.");
        }
        else
        {
            Console.WriteLine("Directory does not exist.");
        }
    }
}
```

3. Deleting a Directory

You can delete a directory using the Directory.Delete method. You can specify whether to delete subdirectories and files within the directory.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string directoryPath = "C:\\MyDirectory";
        if (Directory.Exists(directoryPath))
        {
            Directory.Delete(directoryPath, true); // true to delete subdirectories and files
            Console.WriteLine("Directory deleted successfully.");
        }
        else
        {
            Console.WriteLine("Directory does not exist.");
        }
```

```
    }
}
```

4. Listing Files in a Directory

You can list all files in a directory using the Directory.GetFiles method.

```
csharp
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string directoryPath = "C:\\MyDirectory";
        if (Directory.Exists(directoryPath))
        {
            string[] files = Directory.GetFiles(directoryPath);
            foreach (string file in files)
            {
                Console.WriteLine(file);
            }
        }
        else
        {
            Console.WriteLine("Directory does not exist.");
        }
    }
}
```

5. Listing Subdirectories

You can list all subdirectories in a directory using the Directory.GetDirectories method.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string directoryPath = "C:\\MyDirectory";
        if (Directory.Exists(directoryPath))
        {
            string[] subdirectories = Directory.GetDirectories(directoryPath);
            foreach (string subdirectory in subdirectories)
            {
                Console.WriteLine(subdirectory);
            }
        }
        else
        {
            Console.WriteLine("Directory does not exist.");
        }
    }
}
```

6. Moving a Directory

You can move a directory using the Directory.Move method.

csharp

```
using System;
using System.IO;
```

```
class Program
{
    static void Main()
    {
        string sourceDirectoryPath = "C:\\MyDirectory";
        string destinationDirectoryPath = "C:\\NewDirectory";
        if (Directory.Exists(sourceDirectoryPath))
        {
            Directory.Move(sourceDirectoryPath, destinationDirectoryPath);
            Console.WriteLine("Directory moved successfully.");
        }
        else
        {
            Console.WriteLine("Source directory does not exist.");
        }
    }
}
```

7. Copying Files from One Directory to Another

Although there's no direct method to copy directories, you can copy the contents of one directory to another by copying each file individually.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string sourceDirectoryPath = "C:\\SourceDirectory";
        string destinationDirectoryPath = "C:\\DestinationDirectory";
```

```
        if (Directory.Exists(sourceDirectoryPath))
        {
            // Ensure the destination directory exists
            Directory.CreateDirectory(destinationDirectoryPath);

            // Copy all files
            string[] files = Directory.GetFiles(sourceDirectoryPath);
            foreach (string file in files)
            {
                string fileName = Path.GetFileName(file);
                string destFile = Path.Combine(destinationDirectoryPath, fileName);
                File.Copy(file, destFile, true);
            }

            Console.WriteLine("Files copied successfully.");
        }
        else
        {
            Console.WriteLine("Source directory does not exist.");
        }
    }
}
```

Summary

- **Creating Directories**: Directory.CreateDirectory
- **Checking Existence**: Directory.Exists
- **Deleting Directories**: Directory.Delete
- **Listing Files**: Directory.GetFiles
- **Listing Subdirectories**: Directory.GetDirectories

- **Moving Directories**: Directory.Move
- **Copying Files**: Copy each file individually using File.Copy