what are the file operation in csharp uded for file handing ?

File operations in C# involve various tasks such as creating, reading, writing, copying, moving, and deleting files and directories. The System.IO namespace provides numerous classes to perform these file operations. Here are some common file operations you can perform in C#:

1. Creating Files

You can create a new file using the File class or FileStream class.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string filePath = "test.txt";
        File.Create(filePath).Dispose();
        Console.WriteLine("File created successfully.");
    }
}
```

2. Writing to Files

You can write data to a file using the StreamWriter class or the File class.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
```

```
        string filePath = "test.txt";
        string content = "Hello, World!";

        // Using StreamWriter
        using (StreamWriter writer = new StreamWriter(filePath))
        {
            writer.WriteLine(content);
        }

        // Using File class
        File.WriteAllText(filePath, content);
        Console.WriteLine("Data written to file successfully.");
    }
}
```

3. Reading from Files

You can read data from a file using the StreamReader class or the File class.

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

class Program
{
    static void Main()
    {
        string filePath = "test.txt";

        // Using StreamReader
        using (StreamReader reader = new StreamReader(filePath))
        {
```

```
            string content = reader.ReadToEnd();
            Console.WriteLine("Content read from file: " + content);
        }

        // Using File class
        string fileContent = File.ReadAllText(filePath);
        Console.WriteLine("Content read from file: " + fileContent);
    }
}
```

4. Copying Files

You can copy a file using the File class.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string sourceFilePath = "test.txt";
        string destinationFilePath = "copy_of_test.txt";

        File.Copy(sourceFilePath, destinationFilePath);
        Console.WriteLine("File copied successfully.");
    }
}
```

5. Moving Files

You can move a file using the File class.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string sourceFilePath = "test.txt";
        string destinationFilePath = "moved_test.txt";

        File.Move(sourceFilePath, destinationFilePath);
        Console.WriteLine("File moved successfully.");
    }
}
```

6. Deleting Files

You can delete a file using the File class.

csharp

```
using System;
using System.IO;

class Program
{
    static void Main()
    {
        string filePath = "test.txt";

        File.Delete(filePath);
        Console.WriteLine("File deleted successfully.");
    }
```

```
}
```

7. File Information

You can get information about a file using the FileInfo class.

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

class Program
{
    static void Main()
    {
        string filePath = "test.txt";

        FileInfo fileInfo = new FileInfo(filePath);

        Console.WriteLine("File Name: " + fileInfo.Name);
        Console.WriteLine("File Extension: " + fileInfo.Extension);
        Console.WriteLine("File Size: " + fileInfo.Length);
        Console.WriteLine("File Created On: " + fileInfo.CreationTime);
    }
}
```

Creating Files: Use File.Create or FileStream.

- **Writing to Files**: Use StreamWriter or File.WriteAllText.
- **Reading from Files**: Use StreamReader or File.ReadAllText.
- **Copying Files**: Use File.Copy.
- **Moving Files**: Use File.Move.
- **Deleting Files**: Use File.Delete.
- **File Information**: Use FileInfo.