

Directory & File Operations Using try-catch for exception handling

Kailas Patil • 15:27

10 points

that uses try-catch to demonstrate . :

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- Creating directories & Files
- Checking existence of Directory & Files
- Listing all files and subdirectories
- Creating, writing, reading files- Write Text,Append Text
- Copying, moving, deleting, rename files and directories
- Using try-catch for exception handling

Code:

```
using System;
using System.IO;

class FileDirectoryDemo
{
    static void Main()
    {
        try
        {
            string dirPath = @"C:\TestDir";
            string filePath = Path.Combine(dirPath, "file.txt");
            string copyPath = Path.Combine(dirPath, "file_copy.txt");

            // 1. Creating Directory
            if (!Directory.Exists(dirPath))
            {
                Directory.CreateDirectory(dirPath);
                Console.WriteLine("Directory created: " + dirPath);
            }
        }
    }
}
```

```
        }
    else
    {
        Console.WriteLine("Directory already exists.");
    }

    // 2. Creating File
    if (!File.Exists(filePath))
    {
        File.WriteAllText(filePath, "Hello, this is first line.\n");
        Console.WriteLine("File created: " + filePath);
    }
    else
    {
        Console.WriteLine("File already exists.");
    }

    // 3. Checking existence
    Console.WriteLine("Directory exists? " +
Directory.Exists(dirPath));
    Console.WriteLine("File exists? " + File.Exists(filePath));

    // 4. Listing all files and subdirectories
    Console.WriteLine("\nFiles in directory:");
    foreach (string file in Directory.GetFiles(dirPath))
    {
        Console.WriteLine(" - " + file);
    }

    // 5. Writing, Reading, Appending
    File.AppendAllText(filePath, "This is new content.\n");
    Console.WriteLine("Text appended.");

    File.AppendAllText(filePath, "Appended line.\n");
    Console.WriteLine("Text appended.");

    string content = File.ReadAllText(filePath);
    Console.WriteLine("\nFile Content:\n" + content);

    // 6. Copying file
    File.Copy(filePath, copyPath, true);
    Console.WriteLine("File copied to: " + copyPath);

    // 7. Renaming file (Move)
    string renamedPath = Path.Combine(dirPath, "renamed_file.txt");
    File.Move(copyPath, renamedPath, true);
    Console.WriteLine("File renamed to: " + renamedPath);
```

```
// 8. Deleting file
File.Delete(renamedPath);
Console.WriteLine("Renamed file deleted.");
}
catch (UnauthorizedAccessException ex)
{
    Console.WriteLine("Access Error: " + ex.Message);
}
catch (IOException ex)
{
    Console.WriteLine("IO Error: " + ex.Message);
}
catch (Exception ex)
{
    Console.WriteLine("General Error: " + ex.Message);
}
}
```