Throw & Custom Exceptions Lab

Lab 1: Throw Exception

Replace the entire contents of the **Program.cs** file with the following code.

```
long size;
FileStream fs = null;
string fileName = @"D:\Samples\Test.txt";

try {
  fs = File.Open(fileName, FileMode.Open);
  size = fs.Length;
}
catch {
  throw;
}
finally {
  fs?.Close();
}
```

Try It Out

Run the application and view the output.

Lab 2: Throw Specific Exception

Change the code in the **catch** block to the following code shown in bold.

```
long size;
FileStream fs = null;
string fileName = @"D:\Samples\Test.txt";

try {
  fs = File.Open(fileName, FileMode.Open);
  size = fs.Length;
}
catch (Exception ex) {
  throw new FileNotFoundException($"Unable to open the file
'{fileName}'", ex);
}
finally {
  fs?.Close();
}
```

Try It Out

Run the application and view the output.

Lab 3: Create Custom Exception

Right mouse-click on the project and add a new class named **FileTooLargeException.cs**. Replace the entire contents of this new file with the following code.

```
using System.Text;

namespace CSharpSamples;

public class FileTooLargeException : Exception {
  public long FileSize { get; set; }

  public FileTooLargeException(string message, long size) :
base(message) {
    FileSize = size;
  }

  public override string ToString() {
    StringBuilder sb = new(256);

    sb.AppendLine($"Message: {Message}");
    sb.AppendLine($"File Size: {FileSize.ToString()}");

    return sb.ToString();
  }
}
```

Lab 4: Throw Custom Exception

Replace the entire contents of the **Program.cs** file with the following code.

```
long size;
FileStream fs = null;
string fileName = @"D:\Samples\CSharpSamples.sln";

try {
  fs = File.Open(fileName, FileMode.Open);
  size = fs.Length;
  if (size > 100) {
    // Throw our custom exception
    throw new FileTooLargeException($"The file '{fileName}' is too
large.", size);
  }
}
catch (FileTooLargeException ex) {
  Console.WriteLine(ex.ToString());
}
catch (Exception ex) {
  Console.WriteLine(ex.ToString());
}
finally {
  fs?.Close();
}
```

Try It Out

Run the application and view the output.