[1242] Reading Text Files

To read a text file using StreamReader, first create a new StreamReader object and pass the name of the file to the constructor. Do that inside of a "using" block to have C# close the file automatically when the StreamReader object goes out of scope.

Next, fall into a While loop watching for StreamReader.EndOfStream to become true.

As long as EndOfStream is false, you can read the next line of the file with StreamReader.ReadLine().

Typically, a program will read a line from the file, process that line and then check to see if EndOfStream is true. If it is not true, the program will get the next line and process it and continue until EndOfStream becomes true.

Here's a simple example:

```
int ln = 0;
using (StreamReader sr = new StreamReader("file.txt"))
while (!sr.EndOfStream)
{
   string line = sr.ReadLine();
   ln++;
   Console.WriteLine(ln + ": " + line);
}
```

Handling Exceptions

As we said before, whenever you are interacting with hardware, there is a chance that a System Exception will occur. You need to catch and handle those exceptions. At the very least, you need to explain to the user what happened so that they can try to fix the problem.

Here's a version of the previous program with exception handling enabled:

```
try
{
   int ln = 0;
   using (StreamReader sr = new StreamReader("file.txt"))
   while (!sr.EndOfStream)
   {
      string line = sr.ReadLine();
      ln++;
      Console.WriteLine(ln + ": " + line);
   }
} catch (IOException ex)
{
```

```
    Console.WriteLine("A filesystem error occurred.  " + ex.Message);
    Console.WriteLine("Unable to continue.");
    return;
}
```