**Part 41 - C# Tutorial - Inner Exceptions**

**The InnerException property returns the Exception instance that caused the current exception.**  
  
To look at the **inner exception**, you have to make this program cuase an exception fail. To do that you have 3 options  
**1.** Enter a Character instead of a number (Causes Format Exception)  
**2.** Or Enter a very big number that an interger cannot hold (Causes Over Flow Exception)  
**3.** Or Enter Zero for Second Number (Causes Divide By Zero Exception)

using System;  
using System.IO;  
class ExceptionHandling  
{  
    public static void Main()  
    {  
        try  
        {  
            try  
            {  
                Console.WriteLine("Enter First Number");  
                int FN = Convert.ToInt32(Console.ReadLine());  
  
  
                Console.WriteLine("Enter Second Number");  
                int SN = Convert.ToInt32(Console.ReadLine());  
  
  
                int Result = FN / SN;  
                Console.WriteLine("Result = {0}", Result);  
            }  
            catch (Exception ex)  
            {  
                string filePath = @"C:\Sample Files\Log.txt";  
                if (File.Exists(filePath))  
                {  
                    StreamWriter sw = new StreamWriter(filePath);  
                    sw.Write(ex.GetType().Name + ex.Message + ex.StackTrace);  
                    sw.Close();  
                    Console.WriteLine("There is a problem! Plese try later");  
                }  
                else  
                {  
                    //To retain the original exception pass it as a parameter  
                    //to the constructor, of the current exception  
                    throw new FileNotFoundException(filePath + " Does not Exist", ex);  
                }  
            }  
        }  
        catch (Exception ex)  
        {  
            //ex.Message will give the current exception message  
            Console.WriteLine("Current or Outer Exception = " + ex.Message);  
  
  
            //Check if inner exception is not null before accessing Message property  
            //else, you may get Null Reference Excception  
            if(ex.InnerException != null)  
            {  
                Console.WriteLine("Inner Exception = ", ex.InnerException.Message);  
            }  
        }  
    }  
}