

Online Training

- C#.NET Online Training Program
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Introduction & Environment

Setup

- How Computer Works
- Introduction to Programming Languages
- How Computer Programs Works
- Different Types of Applications
- Programming Methodologies
- Algorithm, Pseudocode, Programs, and Flowcharts
- Introduction to .NET Framework
- .NET Framework Architecture and Components
- Introduction to C#
- Programming Language
- How to Download and Install Visual Studio on Windows
- Creating First Console Application using Visual Studio
- .NET Developer Roadmap for 2025
- Coding Standard Best Practices

C# .NET Basics

- Basic Structure of C# Program
- Methods and Properties of Console Class in C#
- Data Types in C#
- Literals in C#
- Type Casting in C#
- Variables in C#
- Operators in C#
- Control Flow Statements in C#
- If-Else Statements in C#
- Switch Statements in C#
- Loops in C#
- While Loop in C#
- Do While Loop in C#
- For Loop in C#
- Break Statement in C#
- Continue Statement in C#
- Goto Statement in C#
- Functions in C#
- User-Defined Functions in C#
- Call By Value and Call By Reference in C#
- Recursion in C#
- User Input and Output in C#
- Command Line Arguments in C#
- String in C#
- Static Keyword in C#
- Static vs Non-Static Members in C#
- Const and Read-Only in C#
- Properties in C#
- Why we Should Override ToString Method in C#
- Override Equals Method in C#
- Difference Between Convert.ToString and ToString Method in C#
- Checked and Unchecked Key words in C#
- Stack and Heap Memory in .NET
- Boxing and Unboxing in C#

OOPs in C#

- Object Oriented Programming (OOPs) in C#
- Class and Objects in C#
- Constructors in C#
- Types of Constructors in C#
- Why We Need Constructors in C#
- Static vs Non-Static Constructors in C#
- Private Constructors in C#
- Destructors in C#
- Garbage Collection in .NET Framework
- Differences Between Finalize and Dispose in C#
- Access Specifiers in C#
- Encapsulation in C#
- Abstraction in C#
- Inheritance in C#
- Types of Inheritance in C#
- How to use Inheritance in Application Development
- IsA and HasA Relationship in C#
- Generalization and Specialization in C#
- Abstract Class and Abstract Methods in C#
- Abstract Class and Abstract Methods Interview Questions in C#
- How to Use Abstract Classes and Methods in C#
- Application
- Interface in C#
- Interface Interview Questions and Answers in C#
- Interface Realtime Examples in C#
- Multiple Inheritance in C#
- Multiple Inheritance Realtime Example in C#
- Polymorphism in C#
- Method Overloading in C#
- Operator Overloading in C#
- Method Overriding in C#
- Method Hiding in C#
- Partial Class and Partial Methods in C#
- Sealed Class and Sealed Methods in C#
- Extension Methods in C#
- Static Class in C#
- Variable Reference and Instance of a Class in C#

OOPs Real-Time Examples

- Real-time Examples of Encapsulation Principle in C#
- Real-Time Examples of Abstraction Principle in C#
- Real-Time Examples of Inheritance Principle in C#
- Real-Time Examples of Polymorphism Principle in C#
- Real-Time Examples of Interface in C#
- Real-Time Examples of Abstract Class in C#

Exception Handling

- Exception Handling in C#
- Multiple Catch Blocks in C#
- Finally Block in C#
- How to Create Custom Exceptions in C#
- Inner Exception in C#
- Exception Handling Abuse in C#

Events, Delegates and Lambda Expression

- Course Structure of Events, Delegates and Lambda Expression
- Roles of Events, Delegates and Event Handler in C#
- Delegates in C#
- Multicast Delegates in C#
- Delegates Real-Time Example in C#
- Generic Delegates in C#
- Anonymous Method in C#
- Lambda Expressions in C#
- Events in C# with Examples

Multi-Threading

- Multithreading in C#
- Thread class in C#
- How to Pass Data to Thread
- Function in Type Safe Manner in C#
- How to Retrieve Data from a Thread Function in C#
- Join Method and Joinive Property of Thread Class in C#
- Thread Synchronization in C#
- Lock in C#
- Monitor Class in C#
- Mutex Class in C#
- Semaphore Class in C#
- SemaphoreSlim Class in C#
- Deadlock in C#
- Performance Testing of a Multithreaded Application
- Thread Pool in C#
- Foreground and Background Threads in C#
- AutoResetEvent and ManualResetEvent in C#
- Thread Life Cycle in C#
- Threads Priorities in C#
- How to Terminate a Thread in C#
- Inter Thread Communication in C#
- How to Debug a Multi-threaded Application in C#

Collections in C#

- Arrays in C#
- 2D Arrays in C#
- Advantages and Disadvantages of Arrays in C#
- Collections in C#
- ArrayList in C#
- Hashtable in C#
- Non-Generic Stack in C#
- Non-Generic Queue in C#
- Non-Generic SortedList in C#
- Advantages and Disadvantages of Non-Generic Collection in C#
- Generic Collections in C#
- Generics in C#
- Generic Constraints in C#
- Generic List Collection in C#
- How to Sort a List of Complex Type in C#
- Comparison Delegate in C#
- Dictionary Collection Class in C#
- Conversion Between Array List and Dictionary in C#
- List vs Dictionary in C#
- Generic Stack Collection Class in C#
- Generic Queue Collection Class in C#
- Foreach Loop in C#
- Generic HashSet Collection Class in C#
- Generic SortedList Collection Class in C#
- Generic SortedSet Collection Class in C#
- Generic SortedDictionary Collection Class in C#
- Generic LinkedList Collection Class in C#
- Concurrent Collection in C#
- ConcurrentDictionary Collection Class in C#
- ConcurrentQueue Collection Class in C#
- ConcurrentStack Collection Class in C#
- ConcurrentBag Collection Class in C#
- BlockingCollection in C#

File Handling

- File Handling in C#
- FileStream Class in C#
- StreamReader and StreamWriter in C#
- Text Class in C#
- FileWriter and TextReader in C#
- BinaryWriter and BinaryReader in C#
- StringWriter and StringReader in C#
- FileInfo Class in C#
- DirectoryInfo Class in C#
- Export and Import Excel Data in C#

Asynchronous Programming

- Introduction to Concurrency
- Async and Await in C#
- Task in C#
- How to Return a Value from Task in C#
- How to Execute Multiple Tasks in C#
- How to Limit Number of Concurrent Tasks in C#
- How to Cancel a Task in C# using Cancellation Token
- How to Create Synchronous Method using Task in C#
- Retry Pattern in C#
- Only One Pattern in C#
- How to Control the Result of a Task in C#
- Task-Based Asynchronous Programming in C#
- Chaining Tasks by Using Continuation Tasks
- How to Attach Child Tasks to a Parent Task in C#
- ValueTask in C#
- How to Cancel a Non-Cancellable Task in C#
- Asynchronous Streams in C#
- How to Cancel Asynchronous Stream in C#

Parallel Programming

- Task Parallel Library in C#
- Parallel For in C#
- Parallel Foreach Loop in C#
- Parallel Invoke in C#
- Maximum Degree of Parallelism in C#
- How to Cancel Parallel Operations in C#
- Atomic Methods Thread Safety and Race Conditions in C#
- Interlocked vs Lock in C#
- Parallel LINQ in C#
- Multithreading vs Asynchronous Programming vs Parallel Programming in C#

AutoMapper

- AutoMapper in C#
- AutoMapper Complex Mapping in C#
- How to Map Complex Type to Primitive Type using AutoMapper in C#
- AutoMapper Reverse Mapping in C#
- AutoMapper Conditional Mapping in C#
- AutoMapper Ignore Method in C#
- Fixed and Dynamic Values in Destination Property in AutoMapper

Optional Parameter, Indexers and Enums

- How to make Optional Parameters in C#
- Indexers in C#
- Indexers Real-Time Example in C#
- Enums in C#

.NET Framework Architecture

- DOT NET Framework
- Common Language Runtime in .NET Framework
- .NET Program Execution Process
- Intermediate Language (IL/DASM & ILASM) Code in C#
- Common Type System in .NET Framework
- Common Language Specification in .NET Framework
- Managed and Unmanaged Code in .NET Framework
- Assembly DLL EXE in .NET Framework
- App Domain in .NET Framework
- Strong and Weak Assemblies in .NET Framework
- How to Install an Assembly into GAC in .NET Framework
- DLL Hell Problem and Solution in .NET Framework

Var, Dynamic and Reflection

- Reflection in C#
- Dynamic Type in C#
- Var Keyword in C#
- Var vs Dynamic in C#
- Dynamic vs Reflection in C#
- Volatile Keyword in C#
- Ref vs Out in C#
- Named Parameters in C#

C# 7.X new Features

- C# 7 New Features
- Enhancement in Out Variables in C# 7
- Pattern Matching in C#
- Digit Separators in C# 7
- Tuples in C# 7
- Splitting Tuples in C# 7
- Local Functions in C# 7
- Ref Returns and Ref Locals in C# 7
- Generalized Async Return Types in C# 7
- Expression Bodied Members in C#
- Thrown Expression in C#
- Async Main in C#

C# 8 New Features

- C# 8 New Features
- ReadOnly Structs in C#
- Default Interface Methods in C#
- Pattern Matching in C#
- Using Declarations in C#
- Static Local Functions in C#
- Disposable Ref Structures in C#
- Nullable Reference Types in C# 8
- Asynchronous Streams in C#
- Asynchronous Disposable in C#
- Indices and Ranges in C#
- Null-Coalescing Assignment Operator in C#
- Unmanaged Constructed Types in C#
- Stackalloc in C#

Most Popular C# Books

- Most Recommended C# Books
- Most Recommended Data Structure and Algorithms Books using C#

Multiple Catch Blocks in C#

Back to: [C#.NET Tutorials For Beginners and Professionals](#)

Multiple Catch Blocks in C# with Examples

In this article, I am going to discuss how to implement **Multiple Catch Blocks in C#** to handle different types of exceptions for a single try block with examples. Please read our previous article before proceeding to this article where we discussed the basics of **Exception Handling in C#** with examples. As part of this article, I am going to discuss the following pointers.

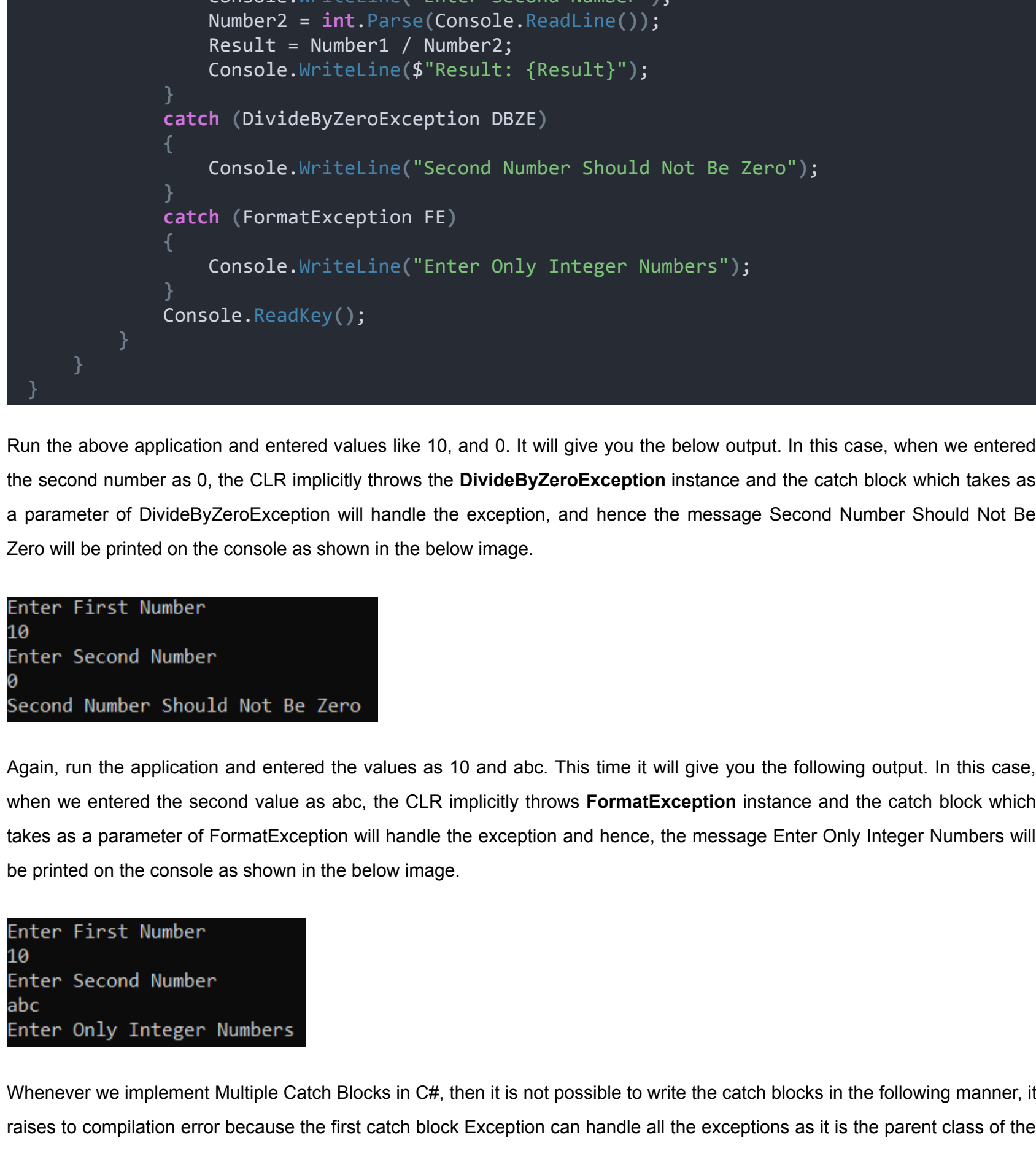
- **How to implement Multiple Catch Blocks in C#?**
- **Is it possible to catch all exceptions using a single catch block?**
- **When should we write multiple catch blocks in C# for a single try block?**

How to Implement Multiple Catch Blocks in C#?

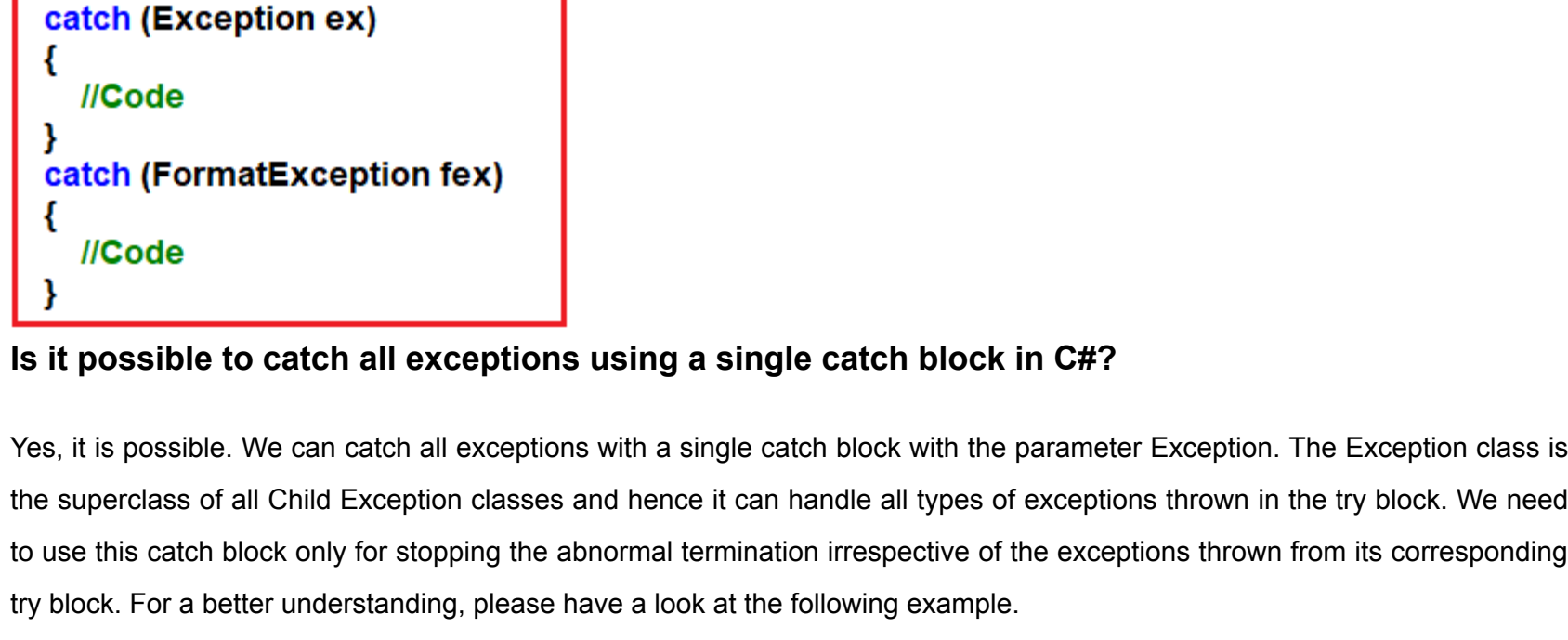
It is possible in C#, to write multiple catch blocks for a given try block. When we implement multiple catch blocks in C# for a given try block, then at any given point of time only one catch block is going to be executed and other catch blocks will be ignored. With this kept in mind, let us proceed and see an example of how to implement Multiple Catch Blocks in C#.

Example to Understand Multiple Catch Blocks in C#

Let us see an example and try to understand how to implement multiple catch blocks for a given try block in C# and also try to understand the execution flow. Please have a look at the following example. As you can see, here, we created two catch blocks for the given try block. The first catch block takes the DivideByZeroException class as the input parameter and the second catch block takes the FormatException class as the input parameter.



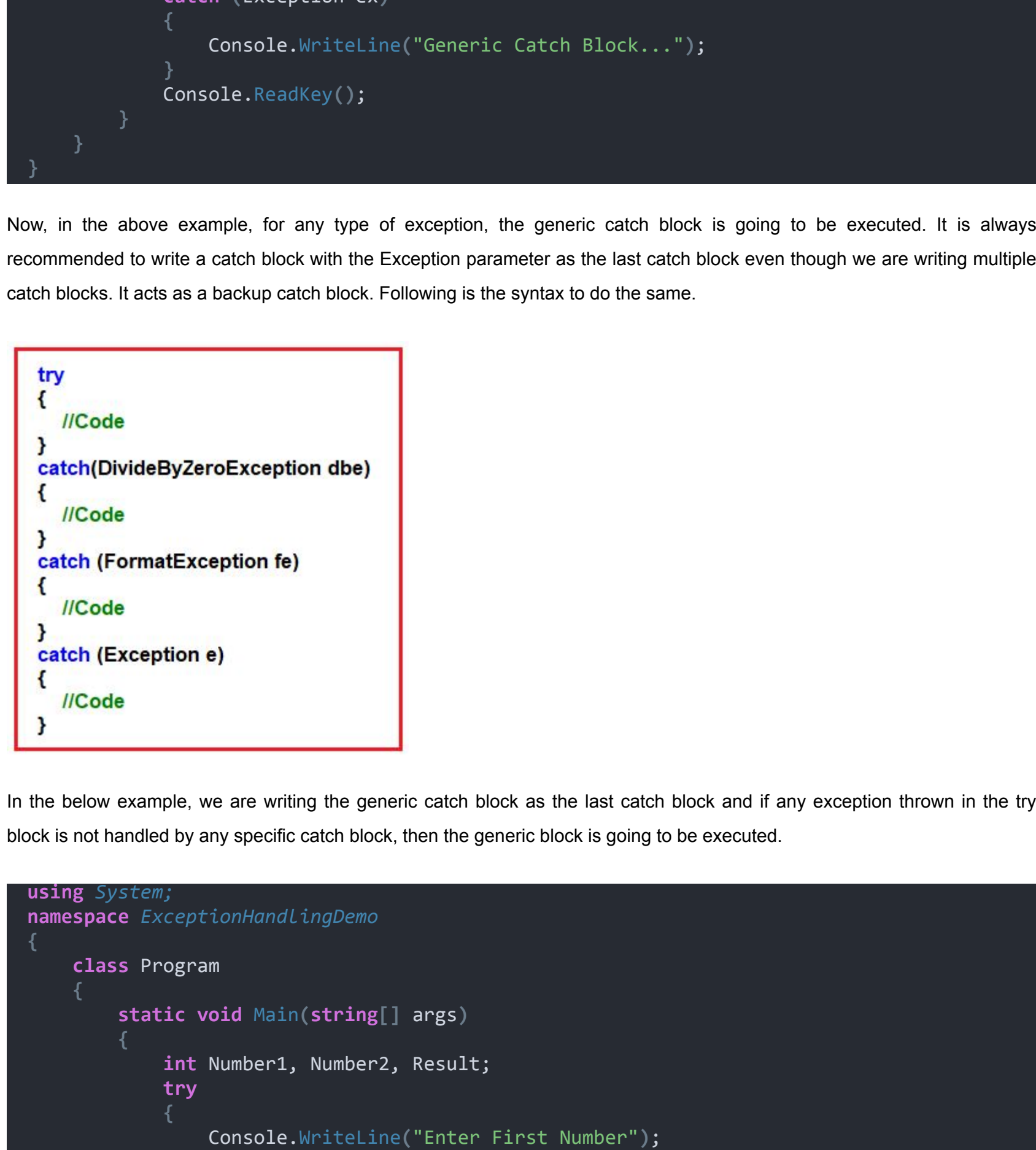
Again, run the application and entered the values as 10 and abc. This time it will give you the following output. In this case, when we entered the second value as abc, the CLR implicitly throws **FormatException** instance and the catch block which takes as a parameter of **FormatException** will handle the exception, and hence the message Enter Only Integer Numbers will be printed on the console as shown in the below image.



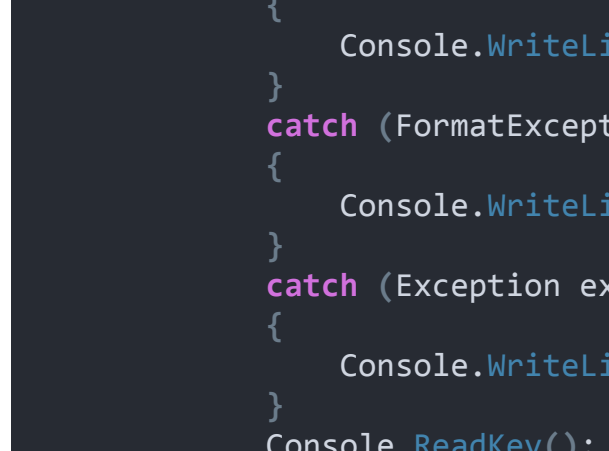
Whenever we implement Multiple Catch Blocks in C#, then it is not possible to write the catch blocks in the following manner, it raises to compilation error because the first catch block Exception can handle all the exceptions as it is the parent class of the child exception classes and it does not make any sense to write the further catch blocks as they are never going to be executed.

Is it possible to catch all exceptions using a single catch block in C#?

Yes, it is possible. We can catch all exceptions with a single catch block with the parameter Exception. The Exception class is the superclass of all Child Exception classes and hence it can handle all types of exceptions thrown in the try block. We need to use this catch block only for stopping the abnormal termination irrespective of the exceptions thrown from its corresponding try block. For a better understanding, please have a look at the following example.



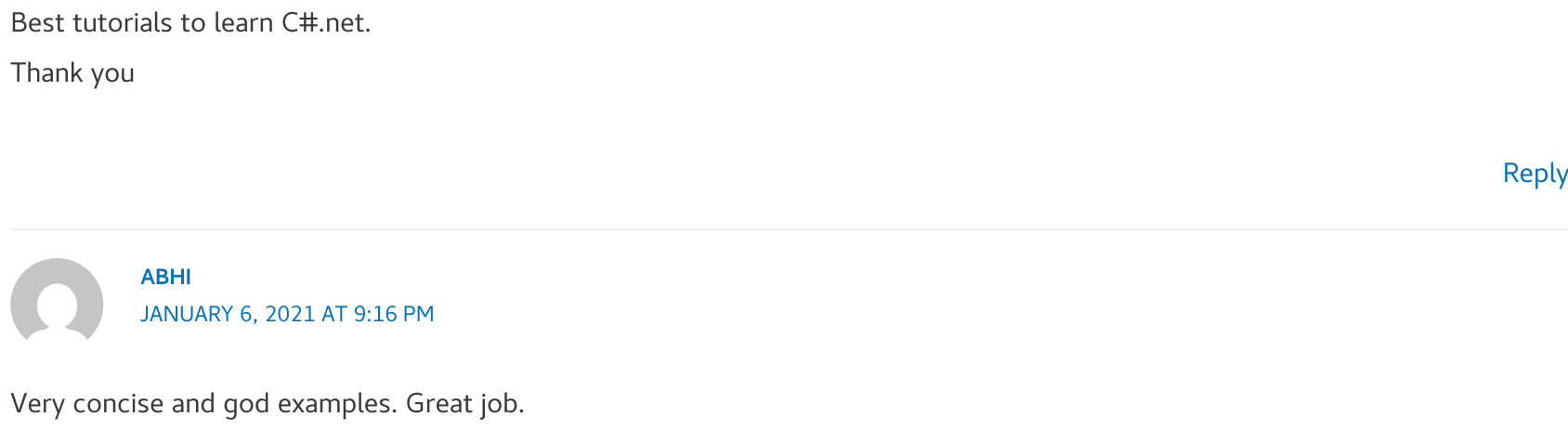
Now, in the above example, for any type of exception, the generic catch block is going to be executed. It is always recommended to write a catch block with the Exception parameter as the last catch block even though we are writing multiple catch blocks. It acts as a backup catch block. Following is the syntax to do the same.



In the below example, we are writing the generic catch block as the last catch block and if any exception thrown in the try block is not handled by any specific catch block, then the generic block is going to be executed.



Now, run the above application and entered big integer values like 23456789234. It will give you the following output. In this case, when we entered the number 23456789234, the CLR implicitly throw the **OverflowException** instance and we don't have any catch block which takes as a parameter of **OverflowException**, hence the generic catch block is going to execute and display the following message.



When should we write Multiple Catch Blocks in C# for a Single Try block?

We need to write multiple catch blocks in C# for a single try block because of the following reasons

- To print messages specific to an exception or
- To execute some logic specific to an exception

In the next article, I am going to discuss how to create a **Finally Block in C#** with Examples. Here, in this article, I try to explain how to implement **Multiple Catch Blocks in C#** with Examples. I hope you understood this as well as enjoy this Multiple Catch Blocks C# with Examples article.

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Dot Net Tutorials

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Pranaya Rout has published more than 3,000 articles in his 11-year career. Pranaya Rout has very good experience with Microsoft Technologies, including C#, VB, ASP.NET MVC, ASP.NET Web API, EF, EF Core, ADO.NET, LINQ, SQL Server, MySQL, Oracle, ASP.NET Core, Cloud Computing, Microservices, Design Patterns and still learning new technologies.

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Previous Lesson

Exception Handling in C#

Next Lesson


Finally Block in C#

2 thoughts on “Multiple Catch Blocks in C#”

 **JAMES**
AUGUST 13, 2019 AT 6:33 PM

Best tutorials to learn C#.net.
Thank you

[Reply](#)

 **ABHI**
JANUARY 6, 2021 AT 9:16 PM

Very concise and god examples. Great job.

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