C# and Microsoft .NET
Exceptions

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Last time…

- Examples
  - Inheritance
  - Abstract classes
  - Interfaces
- Polymorphism and Examples
  - Casting
  - Virtual, override, new
- Were the examples simple enough?
- Were the examples helpful?
- Any other feedback?

Exceptions

- What is an exception?
- Why handle Exceptions
- Advanced exception handling
  - Communicating between layers
  - Wrapping exceptions

Exceptions Hierarchy

- Exception
  - ArgumentException
  - ArgumentNullException
  - ArgumentOutOfRangeException
  - OverflowException
  - FormatException
  - IndexOutOfRangeException
  - InvalidCastException
  - NotSupportException
  - NotImplementedException
  - NullReferenceException
  - StackOverflowException
- ArithmeticException
  - DivideByZeroException

Handling Exceptions

- The **try** section
- The **catch** section
    - Catching the Exception
    - Multiple **catch** sections
    - Re-throwing the exception
- The **finally** section
    - Omitting the finally section
    - Omitting the catch section

Throwing Exceptions

- The **throw** keyword
- Real life examples
  - Do I throw exceptions or do I return false?
  - When .NET framework throws exceptions?

Exception Details

- The **ExceptionMessage**
- The **Stack Trace**
- The **Inner Exception**
- Building custom exceptions (outside of the course scope)

- Debugging with exceptions (example)