

# Features von C#

Sehr ähnlich zu Java.

70% Java, 10% C++, 5% Visual Basic, 15% neu.

## Wie in Java

- ▶ Object-orientation (single inheritance)
- ▶ Interfaces
- ▶ Generics (mächtiger als in Java)
- ▶ Exceptions
- ▶ Threads
- ▶ Namespaces (ähnlich Java packages)
- ▶ Attributes (ähnlich Java annotations)
- ▶ Lambda expressions
- ▶ Garbage collection
- ▶ Reflection
- ▶ Dynamic loading of code
- ▶ ...

# Wie in C++

- ▶ Struct types
- ▶ Operator overloading
- ▶ Pointer arithmetic in unsafe code
- ▶ Some syntactic details

# Wirklich neue Features

im Vergleich zu Java

- ▶ Reference parameters
- ▶ Stack-allocated objects (structs)
- ▶ Block matrices
- ▶ goto statement
- ▶ Delegates
- ▶ System-level programming
- ▶ Versioning
- ▶ Partial Types
- ▶ Anonymous types
- ▶ Nullable types
- ▶ Tuple types
- ▶ Nested methods
- ▶ Ranges

# Syntactic Sugar

- ▶ Properties
- ▶ Indexers
- ▶ Events
- ▶ Iterators
- ▶ Extension methods
- ▶ SQL-like query expressions
- ▶ Asynchronous programming
- ▶ Pattern matching
- ▶ ...

# C# Programme laufen in der .NET Runtime

Managed execution environment (virtual machine)

