

Functional Thinking



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Introducing Delegation

Delegates allow us to name
function signatures

EventHandler: (object, EventArgs) → void

EventHandler Delegate Definition

```
public delegate void EventHandler(  
    object sender,  
    EventArgs e  
)
```

EventHandler Delegate Definition

Delegates are a compiler trick

MulticastDelegate is:

...an abstract class which represents one or more methods to be invoked.

Only the compiler can derive
from `MulticastDelegate`

The Evolution of Delegation

- Creating custom delegates
- Classic delegation
- Anonymous methods
- Generic delegate types
- Lambda expressions



Classic Delegation

Interfaces

Anonymous Methods

Generic Delegates and Lambda Expressions

Review

- Delegates are .NET's mechanism for treating functions as data
- Delegates are derived from `MulticastDelegate`
- Generic delegate types provide a common vocabulary for delegation
- Lambda expressions are convenient inline methods