

# Code Contract Samples

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## 1 Building

The Samples folder is a zip file installed under %ProgramFiles%. In order to build and use the sample, please copy the folder(s) of interest to a writable directory and open the solution there.

## 2 Overview

- Rational: Shows how to use different levels of runtime checking.
- Invariants: Shows how to use runtime checking of object invariants.
- GCD: Shows how to use the static checker to prove simple arithmetic properties.
- BinarySearch: Shows how to use the static checker on a binary search example, checking for implicit non-null and array bound obligations.
- LeapYear: Shows how to use the static checker to prove termination and proper functioning of a date computation.
- InterfaceContracts: Shows how to declare interface contracts and how the static checker uses them.
- Chunker: Shows an example of using object invariants together with static checking.
- ApiProtocols: Shows how to declare API protocols as contracts.

## 3 VS2010 Beta1 or Beta2

If you use VS2010 Beta1 or Beta2 with contracts and you want to build against the .NET 4.0 runtime, please follow these steps:

- Start VS2010 and open a sample solution from within VS2010 and let VS2010 upgrade the solution/project.

- Go to the project(s) properties and change the target platform to 4.0.
- Remove the reference to Microsoft.Contracts.dll (otherwise you will get ambiguous reference warnings since mscorlib 4.0 contains the contract class as well).

Without these steps, VS2010 will target the sample to .NET 3.5 using the external Microsoft.Contracts.dll.