🌪️ **Assertions**

Contract.Assert and Contract.Assume methods in C# are **used for making assertions and assumptions** in code contracts.

Both methods work similarly at runtime, but they have different implications for static checking tools

## **Contract.Assert**

Contract.Assert is used to specify conditions that must be true for the code to function correctly. If the assertion fails, an exception is thrown. The more flexible failure-handling mechanisms offered by code contracts can be leveraged in Contract.Assert and static checking tools can attempt to validate the assertions.

## **Contract.Assume**

Contract.Assume is used to specify conditions that are assumed to be true, but may not be verifiable by static checking tools. This is useful in situations where a static checker is unable to prove a condition and may lead to false positives. Changing an assertion to an assumption keeps the static checker quiet.

### **Program Example for Contract.Assert and Contract.Assume**

| **class** **Program** {  **static** **void** **Main**()  {  **int** x = 10;  **int** y = 20;   *// Using Contract.Assert*  Contract.Assert(x == 10, "x must be 10");   *// Using Contract.Assume*  Contract.Assume(y > 10, "y must be greater than 10");  } } |
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