

# Runtime Versions and Platforms

There are different versions of the Objective-C runtime on different platforms.

## Legacy and Modern Versions

There are two versions of the Objective-C runtime—“modern” and “legacy”. The modern version was introduced with Objective-C 2.0 and includes a number of new features. The programming interface for the legacy version of the runtime is described in *Objective-C 1 Runtime Reference*; the programming interface for the modern version of the runtime is described in *Objective-C Runtime Reference*.

The most notable new feature is that instance variables in the modern runtime are “non-fragile”:

- In the legacy runtime, if you change the layout of instance variables in a class, you must recompile classes that inherit from it.
- In the modern runtime, if you change the layout of instance variables in a class, you do not have to recompile classes that inherit from it.

In addition, the modern runtime supports instance variable synthesis for declared properties (see Declared Properties in *The Objective-C Programming Language*).

## Platforms

iPhone applications and 64-bit programs on OS X v10.5 and later use the modern version of the runtime.

Other programs (32-bit programs on OS X desktop) use the legacy version of the runtime.