

# Programming\_\_WebObjects

This is deprecated information!

WebObjects is a an integrated suite of freely available Java frameworks and tools that helps a developer to develop scalable, sophisticated applications for the Internet on most computers with Java support.

It is the most mature platform available for enterprise level web server development, providing object oriented framework support for relational database object persistence (in any JDBC compliant database), Ajax, Web Services, streaming media, Java Client, Rapid Application Development, file upload /download and many other popular web technologies.

Originally developed by and for NeXT computers in the mid 1990's, it was ported by Apple to Mac OS X and Mac OS X Server under Objective C and then completely translated to Java. It is the technology on which Apple's own iTunes Music Store was developed.

It has a very active and helpful developer community with mailing list support at the [WO Developer Mailing List](#).

## Introduction

- [What is WebObjects?](#)
- [Naming Conventions](#)
  - The naming convention for objects in WebObjects is that names are written in what is called "camel case".
  - The various prefixes are not hard to explain. "NS" stands for "NextStep", "EO" for "EnterpriseObject", "WO" for WebObjects.
- [Foundation](#)
- [Objective-C to Java Transition](#)
- [Recent Changes](#)

## License

As of WebObjects 5.3, the deployment of WebObjects-based server applications is now permitted on any platform. The Xcode 3.1 license (The last that included any reference to WebObjects) stated this:

*D. WebObjects Software. Subject to the terms and conditions of this License, you may incorporate the WebObjects Software included in the Developer Software into application programs (both client and server) that you develop on an Apple-branded computer. You may also reproduce and distribute the WebObjects Software unmodified, in binary form only, on any platform but solely as incorporated into such application programs and only for use by end-users under terms that are at least as restrictive of those set forth in this License (including, without limitation, Sections 2, 6 and 7 of this License). For avoidance of doubt, you may not distribute the WebObjects Software on a stand-alone basis, and you may not develop application programs using the WebObjects Software (or any portion thereof) on any non-Apple branded computer.*

## Foundation

- [Foundation](#)
- [Key Value Coding](#)

## Enterprise Object Framework (EOF)

### Introduction

- [Overview](#)

### Modeling

- [Overview](#)
- [Required Reading](#)
  - [Entities](#)
  - [GlobalIDs](#)
  - [Attributes](#)
  - [Entity Inheritance](#)
  - [Fetch Specifications](#)
  - [Common Pitfalls and Troubleshooting](#)
  - [EOModeler](#)
  - [EOModeler on Windows](#)
  - [Booleans](#)
- [Advanced](#)
  - [JDBC](#)
  - [Prototypes](#)

- Custom Attributes
- Examples

## Using EOF

- [Overview](#)
- **Required Reading**
  - [The EOF Commandments](#)
  - [EO Editing Context](#)
  - [Context and Database Locking](#)
  - [Faulting](#)
  - [Fetching](#)
  - [Deleting](#)
  - [Caching and Freshness](#)
  - [Optimistic Locking](#)
  - [Memory Management](#)
  - [EOF Best Practices](#)
  - [Configuration Settings](#)
  - [Common Pitfalls and Troubleshooting](#)
- **Advanced**
  - [EOGenerator](#)
  - [Logging](#)
  - [EOF Performance Tuning](#)
  - [Primary Keys](#)
  - [Compound Primary Keys](#)
  - [Concurrency](#)
  - [Validation](#)
  - [Database Adaptors and Plugins](#)
  - [Undo and Redo](#)
  - [EOSharedEditingContext](#)
  - [Raw Rows](#)
  - [Batch Fetching](#)
  - [Fetch Limits](#)
  - [Bulk Operations](#)
  - [Schema Changes](#)
  - [Delegates and Notifications](#)
  - [Multiple Stacks or Instances](#)
  - [Custom Qualifiers](#)
  - [Localization and Internationalization](#)
  - [Default Values](#)
  - [Custom EOAdaptor](#)
  - [EOF Traces](#)
  - [Problems](#)
- [Tips and Tricks](#)
- [Help!\\_EOF\\_is\\_Doing\\_Strange\\_Things!](#)

## Web Applications

### Introduction

- [Overview](#)

### Development

- [Overview](#)
- **Required Reading**
  - [WO Adaptor](#)
  - [WO Session](#)
  - [WO Component](#)
    - [Binding Synchronization](#)
    - [Code, Templates, and WODs](#)
  - [Component Actions](#)
  - [Direct Actions](#)
  - [Authentication and Security](#)
  - [General Best Practices](#)
  - [WOForm Best Practices](#)
  - [Direct Connect](#)
  - [Frameworks](#)
  - [Ajax](#)
  - [CSS](#)
  - [Sending Emails](#)
  - [Common Pitfalls and Troubleshooting](#)
- **Advanced**
  - [Audit Trails](#)
  - [Image Thumbnailing](#)

- Database vs Filesystem (aka Images in the Database?)
- Stateless Components
- WOEvents and Logging
- PDF Generation
- Excel Generation
- SSL
- Localization and Internationalization
- Testing and JUnit
- Custom Error Handling
- Custom Templates
- Calling Commandline Applications
- Profiling WO Apps
- J2EE Integration
- WebObjects and Subversion
- Third Party Jars
- Generating Static Pages
- Cocoa EO Applications
- Custom Resource Manager
- Persistent Sessions
- How Forms Work
- Development on Windows
- Tips and Tricks
- Examples
  - Page Layout
  - List Components
  - Calendar Component
  - Path Inspector
  - Alphabetic List
  - Login
  - Anchors
  - Open Link in New Window
  - Return a File

## Deployment

- [Overview](#)
- Required Reading
  - [Apache](#)
  - [Standard Deployment](#)
  - [Logging](#)
  - [Split Install](#)
  - [Common Pitfalls and Troubleshooting](#)
- Advanced
  - [WOStats](#)
  - [Additional Monitoring](#)
  - [Scheduled Restart](#)
  - [Tomcat Deployment](#)
  - [Killing WOA Processes](#)
  - [Debugging Frozen Deployed Instances](#)
- Platform Specifics
  - [Mac OS X Server](#)
  - [Solaris](#)
- Helpful Tools & Shellscripts

## Web Services

- [Overview](#)
- Required Reading
  - [WO as a Web Service Provider](#)
  - [WO as a Web Service Consumer](#)
  - [Common Pitfalls and Troubleshooting](#)
- General Info
  - [Instructions for .NET consuming Direct to WebServices](#)
  - [Testing Services with Terminal](#)
- Advanced
  - [Sending Large Data](#)
  - [How to Trust Any SSL Certificate](#)
  - [Problems](#)
  - [Controlling Enterprise Object Serialisation](#)
  - [Controlling WSDL Service Location](#)
  - [Integration with WebServicesCore on MacOS-X](#)
  - [Working With Temporary GlobalIDs](#)

## Complementary Frameworks

## Project WONDER

- [Overview](#)
- Required Reading
  - [Installing](#)
  - [Quickstart](#)
  - [History](#)
  - [Frameworks](#)
    - [Ajax](#)
    - [ERCalendar](#)
    - [ERChangeNotificationJMS](#)
    - [ERExtensions](#)
    - [ERJavaMail](#)
    - [ERPlot](#)
    - [ERSelenium](#)
    - [ExcelGeneration](#)
    - [PostgresqlPlugin](#)
    - [Validity](#)
    - [WOOgnl](#)
    - [WOPaypal](#)
- [Advanced](#)

## WireHose

- [Overview](#)
- Basic Concepts
  - [Content Management](#)
  - [Access Control](#)
  - [Dynamic Layouts](#)
  - [Rapid Development](#)
- Reference
  - [Online Reference Library](#)
    - [Developer Overview](#)
    - [Java API Reference](#)
    - [Properties Reference](#)
    - [Database setup](#)
    - [Regular Expressions](#)
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## LEWOSTuff

- [Overview](#)

## GVC Frameworks and GVC.SiteMaker

- [Overview](#)

## Development Tools

- [Eclipse and WOlips](#)
- [EOModeler](#)
- [Running Though Apache](#)

## Direct-To

- Required Reading
  - [Web](#)
- [Advanced](#)
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## Java Client

- [Overview](#)

## Testing

- [Load Testing WO Apps with JMeter](#)
- [WJUnitTest](#)

## Database Compatibility / Comparisons

- [FrontBase](#)
- [OpenBase](#)
- [MySQL](#)
- [Postgresql](#)
- [Oracle](#)
- [Data Migration](#)
- [Informix](#)

## Alternative Technologies Pros / Cons

- [Cayenne](#)
- [Ruby on Rails](#)

## Additional Resources

- [Websites](#)
- [Books](#)
- [Training](#)