

The background of the image is a collage of various items: a magnifying glass with an Apple logo on its handle, a green pen holder with several pens, a globe, and some papers. The text is overlaid on this background. The word "Worldwide" is in a gold, serif font. The word "Developers" is in a white, serif font and is enclosed in a white rectangular border. The word "Conference" is in a gold, serif font.

Worldwide

Developers

Conference



Building an Application with WebObjects Builder

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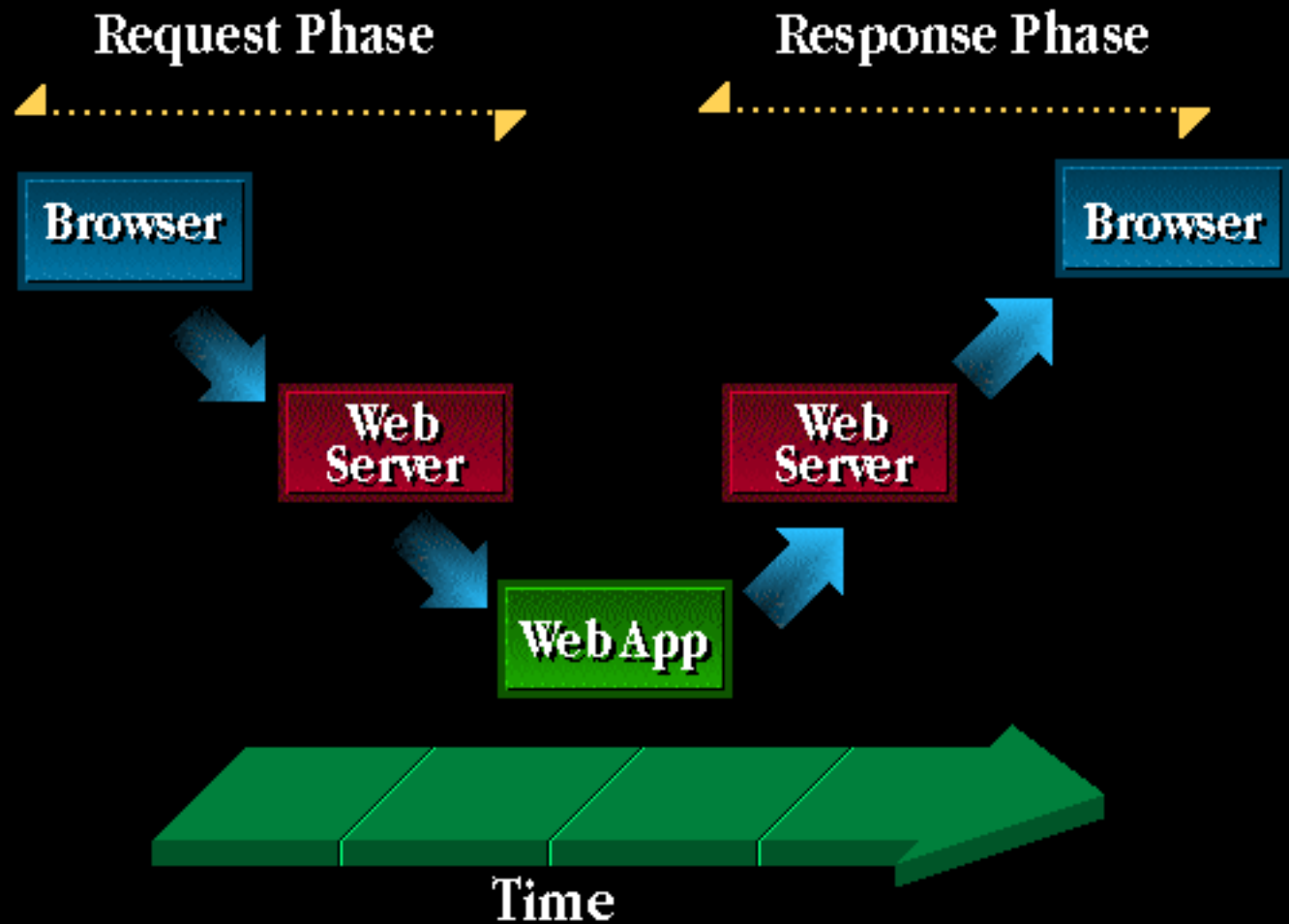
WebObjects Applications

What is a WebObjects Application (or Web App for short)?

- A Web App is a dynamic Web site
 - HTML is generated for each page based on:
 - User input (the *Request*)
 - Application data (e.g. a database)
 - Custom application logic
 - The App keeps track of its users (*Sessions*)
 - Uses other resources (images, sounds, etc.)
- Web Apps can be a “Web Face” for an existing Client-Server application



Application Transaction Timeline



What Makes Up a Web App?

Web Apps are built from components.

Components:

- **Are Objects – they have:**
 - Methods, Variables
 - An Interface
- **Receive and process user requests:**
 - Form data sent by the browser
- **Generate HTML:**
 - Can be a whole page
 - Can be a page “fragment”



Anatomy of a Component

A Component consists of:

- **HTML template – Static layout plus:**
 - WebObjects for computed HTML
 - WebObjects for input data
- **Script**
 - Variables and Methods
- **Bindings**
 - How script variables and methods connect to the WebObjects in the HTML template
- **Other resources (images, applets, etc.)**



WebObjects Builder Is...

The Builder's purpose is to help you write Web Applications. With it, you can:

- Create an application
- Add and edit individual components
- Edit the HTML in a component
- Add WebObjects to components
- Connect WebObjects to your script variables
- Include database access in a component
- Create *Palettes* of useful components



WebObjects Builder Is Not...

The Builder is not intended to replace all your web tools. It is not:

- The world's greatest HTML editor
- The world's greatest code editor
- A graphic design tool
- A site generator
- A Web Browser



My First WebObjects Application

The steps to a Web Application:

- **Start WebObjectsBuilder**
- **Create a new application**
 - In the Web Server Document Root
- **Edit the Main component**
 - The Main component is the first page of your application the user sees
- **Access your app using a Web Browser**
 - Bookmark the start URL!





Demo

Hello WorldWideWeb

- **Main component contains:**
 - Input text field (`WOTextField`)
 - Submit button with an action
- **Hello component has:**
 - Plain text string (`WOString`)
- **Transition from Main to Hello is done by:**
 - Action in Main invokes `sayHello` method
 - `sayHello` returns the new page



Scripting

Scripts are usually written in WebScript

- **WebScript is interpreted Objective-C**
 - You can also use Java-style syntax
- **Or, you can write in:**
 - Compiled Objective-C
 - Java
- **Here's what it looks like...**



The SayHello Method

```
id me;
```

```
- sayHello {  
    id app = [self application];  
    id nextPage = [app  
pageWithName:@"Hello"];  
    [nextPage setWho:me];  
    return nextPage;  
}
```



Reusable Components

*So you don't have to re-invent
the wheel each time*

- **Create a component**
 - Design the HTML layout
 - Add in WebObjects
 - Set up the bindings
- **Define its interface to the outside world**
 - Tell the Builder what to export
- **Create a new palette and drop your component on it**





Demo

Database Connectivity

*I have data in a database;
how does my Web App use it?*

- **Enterprise Object Framework**
 - Models how database rows map to objects
 - Handles fetching/updating/inserting
 - Provides objects for simple and complex tasks
- **What do I do?**
 - Create the *EOModel* (or use existing one)
 - Drag and drop Entity from *EOModeler* to WebObjects Builder





Demo

Putting It All Together

So how do I build a real application?

- **Build a collection of components**
 - Generic components
 - Login Panel, SplitViews...
 - Tricks of the Trade components
 - Art, Whizzy applets, JavaScript, etc.
 - Specialized components
 - Compiled components for extra performance



Putting It All Together (*cont.*)

So how do I build a real application?

- **Design overall app organization**
 - How many pages
 - One per logical “area” in the site, or
 - One very dynamic page, with many faces?
 - Resources
 - Where to put images, applets, sounds?
 - Design EOModel
 - Reuse existing model/database
 - Build model/database from scratch



Putting It All Together (*cont.*)

So how do I build a real application?

- **Construct the app**
 - Use existing components
 - Factor out new Reuseable Components
 - Incorporate Business Logic
 - Existing / Legacy code
 - New code / Enterprise Objects
 - Write script to glue pieces together



Putting It All Together (*cont.*)

So how do I build a real application?

- **Deployment Issues**
 - Internet or Intranet?
 - Security issues
 - Bandwidth issues
 - Client browser issues
 - Performance
 - How many app instances?
 - App on WebServer or different machine(s)?
 - Remote Administration?





Demo



Q&A

The background features a dark, textured surface with a glowing blue and purple sphere in the center. The sphere has a white Apple logo on its top. A magnifying glass is positioned over the sphere, and a pen is visible on the right side. The text "Worldwide Developers Conference" is overlaid on the image. The word "Worldwide" is in a gold, serif font. The word "Developers" is in a white, serif font and is enclosed in a white rectangular border. The word "Conference" is in a gold, serif font.

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