

# Web Applications

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# What is a web application?

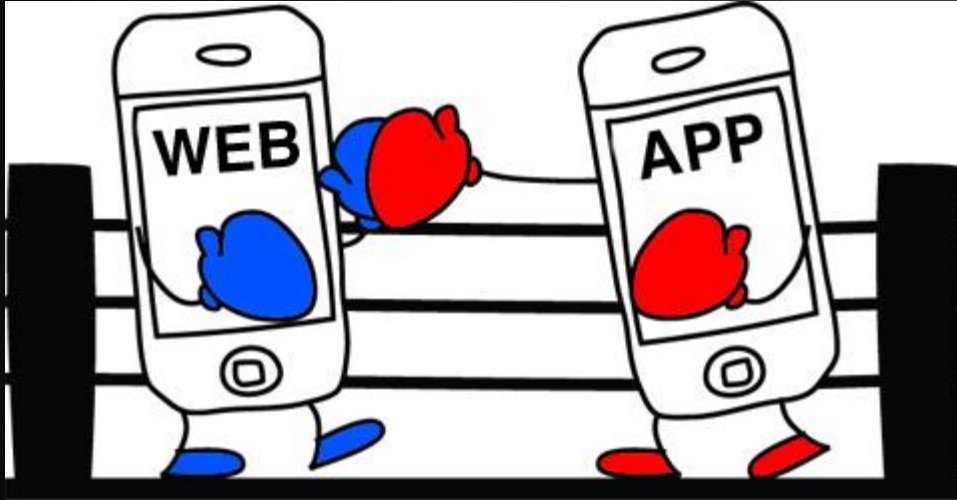
Wikipedia says:

A **web application** or **web app** is any **application** software that runs in a **web** browser and is created in a browser-supported programming language (javascript, html, css, ...)

Its pretty much  
any website  
that does  
**ANYTHING**

**EVEN JUST LOOK NICE**

But sometimes times not



Small In Size

Easier to update

Can be made platform independent

....mostly

...usually

# Origins



The screenshot shows the Apple website from July 1997. The header features the Apple logo and the text "Welcome to Apple" with a large "1997" in the background. A navigation menu on the left includes links like "Find It", "Product Information", "Customer Support", "Technology & Research", "Developer World", "Groups & Interests", "Resources Online", and "About Apple". Below this is a "Where to Buy" section with a list of countries (Switzerland, Taiwan, Turkey, UK & Ireland, United States) and a "Go" button. The main content area is divided into several sections: "Introducing CyberDrive" with a "Register today for a free CD-ROM" link; "What's Hot" featuring "Preorder Mac OS 8" and "Be the First to Know" about new Macintosh software; "Want a PowerBook?" with a contest announcement; "Big Help for Small Biz" with information on leasing; "eMate Special" for parents; "Newton Connects" about network connectivity; "Welcome to Mars" about QuickTime VR; and "Boston Mac Party" for the Macworld Expo/Boston.

**Welcome to Apple** 1997

**Introducing CyberDrive**  
Register today for a free CD-ROM.

**What's Hot**

**Preorder Mac OS 8**  
Now you can [preorder Mac OS 8](#), described by Macworld as "the most comprehensive update to the Mac OS in years, sporting a bold new look, a speedier Finder, more shortcuts and integrated Internet functions."

**Be the First to Know**  
Learn about new Macintosh software releases the moment they become available. Check [Hot Mac Products](#) to hear about programs like Speed Demon, ReBirth RB-338 and QuickCRC.

**Want a PowerBook?**  
Qualify to win a [PowerBook 3400/200](#) by [entering](#) this month's Apple Registration Sweepstakes.

**Big Help for Small Biz** Find out what you need to make your small business a success. [Apple Small Business](#) has information about everything from great deals on leasing to dealing with the SBA.

**eMate Special**  
Parents of school-age children have a limited-time [special opportunity](#) to purchase Apple's exciting eMate 300 mobile computer at promotional prices.

**Newton Connects**  
Newton, Inc., will enhance network connectivity for Newton-based devices this fall via [Newton Internet Enabler 2.0](#). Ethernet capability can connect devices to Local Area Networks.

**Welcome to Mars**  
See alien terrain in [QuickTime VR movies from Sojourner](#), the brave six-wheeler that covers the Red Planet for NASA's Pathfinder mission.

**Boston Mac Party**  
Join the fun at [Macworld Expo/Boston](#), the summer's biggest bash for the Macintosh community.

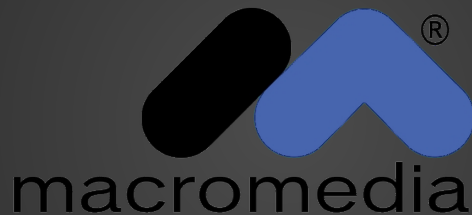
Thick Client

Troubling updates

Static documents

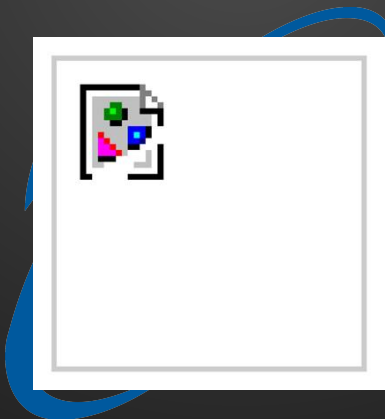
Client-side logic

Javascript  
1995

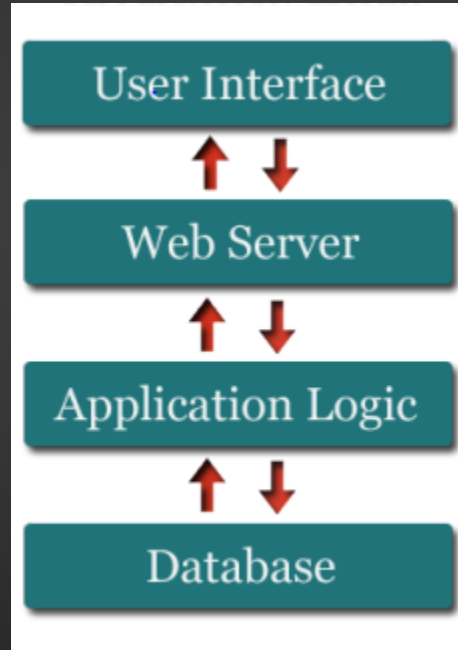


Flash  
1996

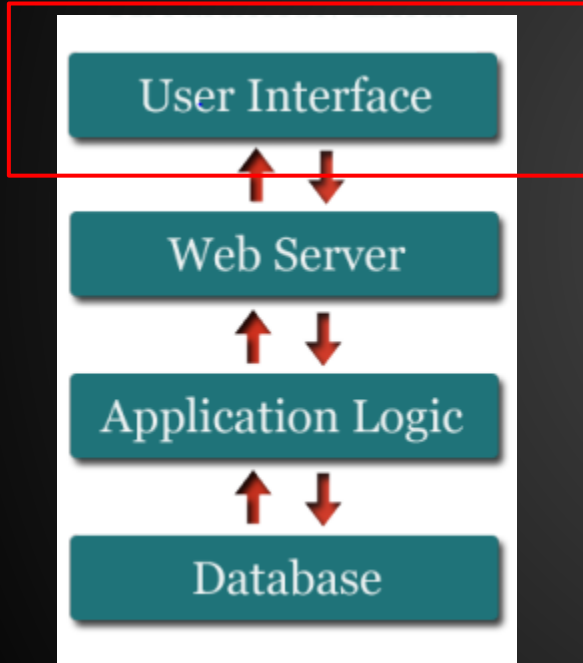
XMLHttpRequest  
1999



# Web Layers



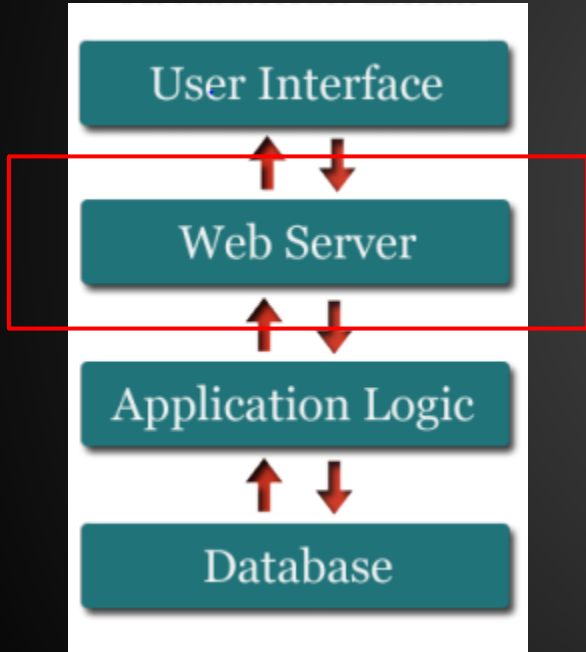
# User Interface



- Level at which user interacts with the web application.
- HTML, CSS, Javascript/jQuery, AJAX, Json

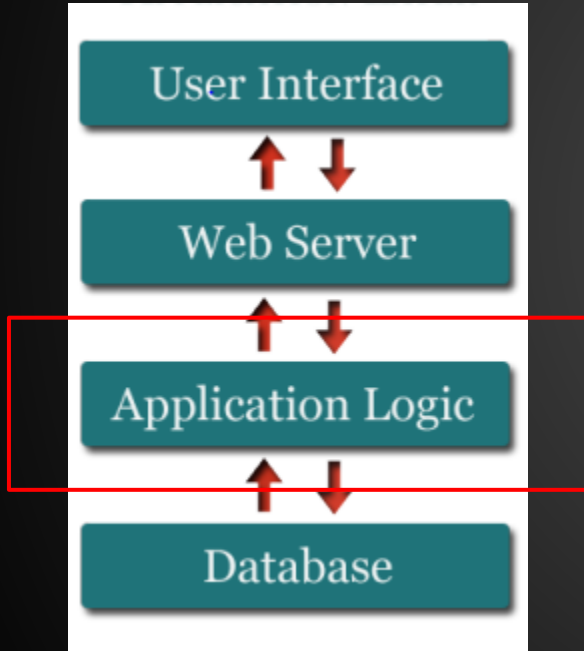


# Web Server



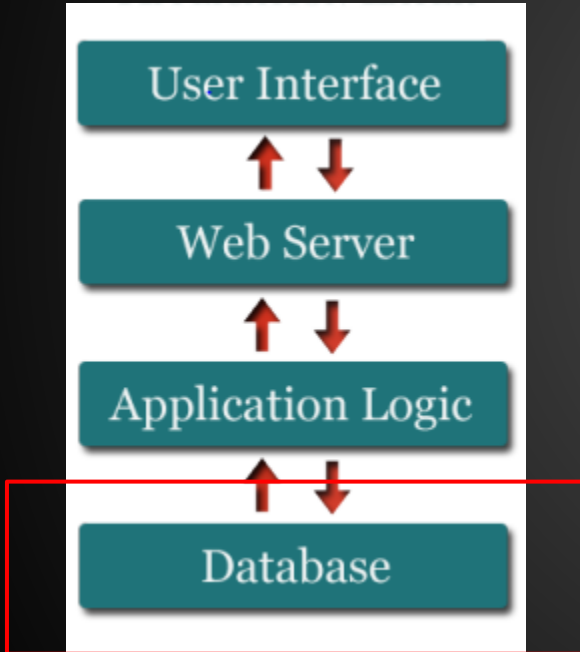
- Primary function is to store, process and deliver web pages to client.
- Apache HTTP Server, Apache Tomcat, Microsoft IIS

# Application Logic



- Coordinates the application, processes the commands and the data entered by the user. Also takes information from database to send to user.
- Could be written in Java, C#, PHP, Javascript, Coldfusion.

# Database



- Layer where persistent information is stored in a database.
- SQL Server, mySQL, Oracle, MongoDB (NoSQL).

# Why use Agile?

- You are able to make sure that everything looks the way that you want it.
- You get a working page as soon as possible.
- Able to get quick feedback on the website, and are able to make changes easily.

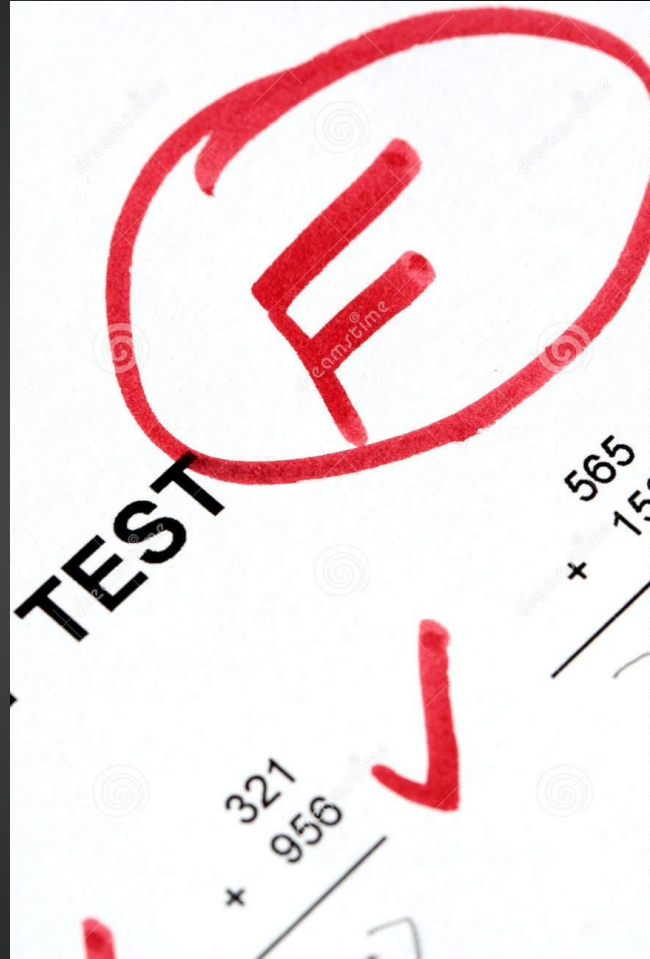
# Extreme Programming

- Allows for more frequent releases
- More user input, which leads to better releases



# Test Driven Development

- Good for apps that are used by many users
- Provokes code that is simple and easy to maintain



# Why not Waterfall?

- You are not able to always see what your webpage looks like, so you cannot make minor tweaks.
- Slower.
- Very little feedback during development.

