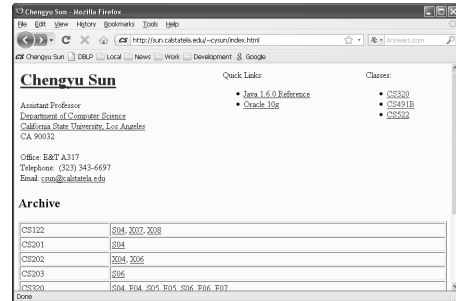## CS320 Web and Internet Programming
Introduction to Web Application Development

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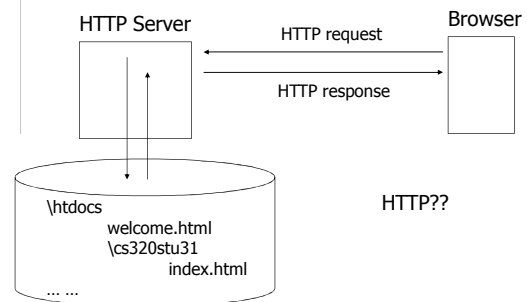

Browsing the Web

URL

http://cs.calstatela.edu:8080/cs320stu31/index.html

??   ??   ??   ??

How the Web Works

HTTP Server   ← HTTP request ←   Browser

→ HTTP response →

\htdocs
    welcome.html
    \cs320stu31
       index.html
... ...

HTTP??

HTML

```
<html>

  <head><title>CS320 Hello</title></head>

  <body>
    Welcome to <b>CS320</b>!
  </body>

</html>
```
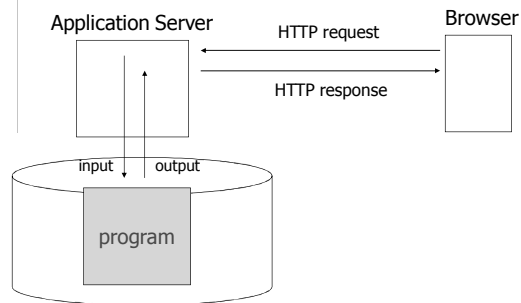

Dynamic Content

- Web search results
- Shopping cart
- ...
- Anything that need to be generated *on the fly* based on user request

Deliver Dynamic Content

Application Server   HTTP request   Browser

HTTP response

input   output

program

Terminology

- ◈ Application server
  - Servlet container
- ◈ *Server-side* programming vs. *Client-side* programming

Server-side Technologies

- ◈ CGI
  - C, Perl
} old

- ◈ Java
  - Servlet/JSP
- ◈ ASP.NET
  - VB, C#
- ◈ PHP
} mainstream

- ◈ Ruby
- ◈ Python
} other

Client-side Technologies

- ◈ HTML, CSS
- ◈ JavaScript
- ◈ Java Applet
- ◈ Rich Internet Application (RIA) technologies
  - Adobe Flex and Flash
  - Microsoft Silverlight
  - Sun/Oracle JavaFX

Why Web Applications?

- ◈ Take traditional businesses to larger audience
  - Amazon, Netflix
- ◈ Replace desktop applications
  - Google Docs
- ◈ Open up new opportunities
  - Facebook, Twitter, Youtube

Advantages of Web Applications

- ◈ Low publishing and distribution cost
- ◈ Potentially large user base
- ◈ Centralized administration
  - No client side installation
  - Professional maintenance
  - Easy data backup
  - Easy upgrade
- ◈ Available anywhere, anytime
- ◈ Piracy proof