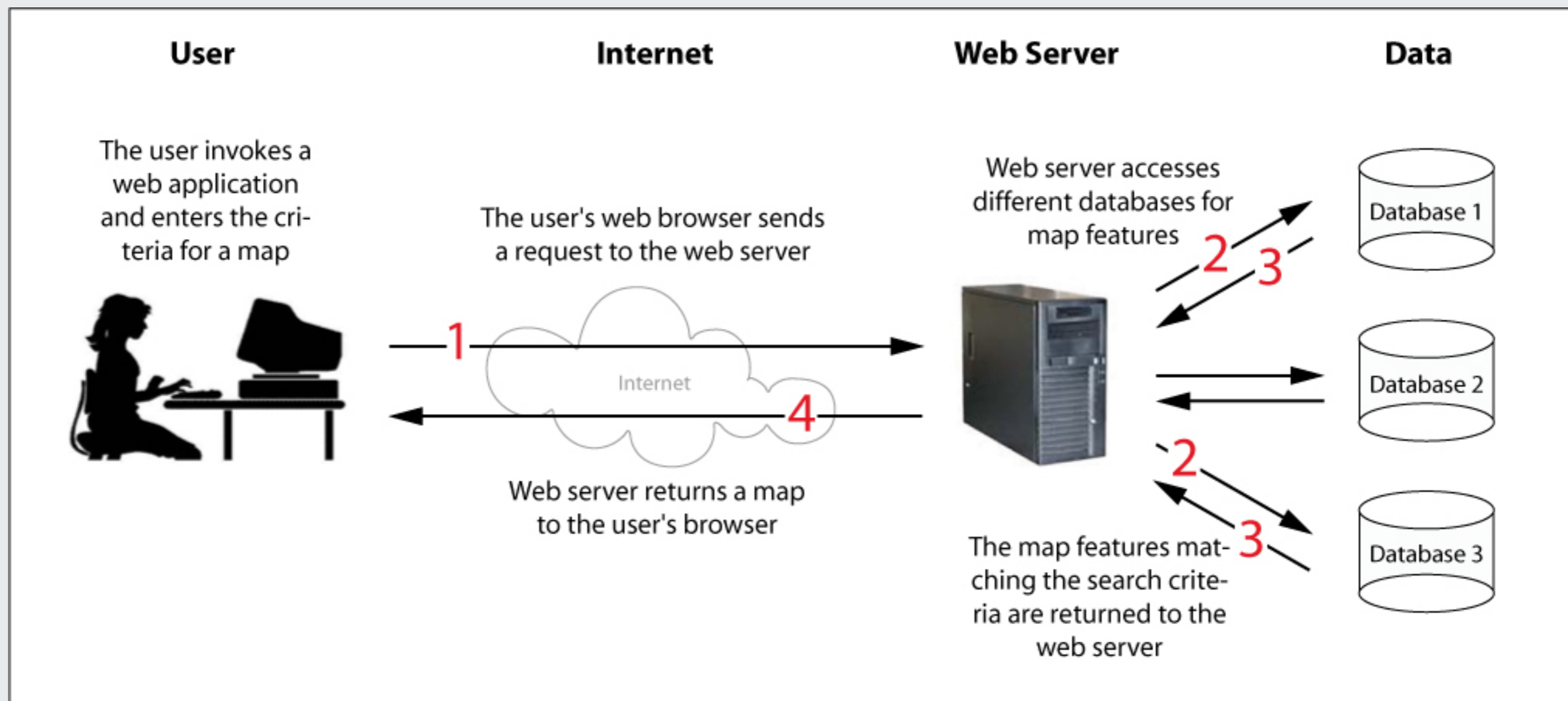# ANATOMY OF THE WEB

AGENDA

- How does the web work?

- Web Components

- Homework Due

- Class Folder

- Working with GitHub

INTERESTING FACTS

- Over to 1.2 billion websites

- Invented by Sir Tim Berners-Lee in 1989 at CERN

- http://info.cern.ch/

- http://web.archive.org/web/19961220154510/http://www.yahoo.com/

- W3C, the governing body that sets standards

HOW DOES THE WEB WORK?

HOW DOES THE WEB WORK?

COMPONENTS

Cheesecake Factory

- Mall / Complex

- Building

- Building No.

- Food

- Menu

- Menu Items

- Chef / Servers

- Health / Safety Inspectors

Web

- Internet

- World Wide Web (Web)

- Internet Protocol (IP) Address

- Hypertext documents

- Browser

- Uniform Resource Locator (URL)

- Web-server / Developers

- W3C

COMPONENTS

- **Internet aka Inter-network**
  Global Communication network that allows almost all computers worldwide to connect and exchange information. Became feasible with development of the TCP/IP protocol for packet switched network traffic.

- **World Wide Web (Web)**
  This is a byproduct of the Internet. The Web is a system of extensively interlinked hypertext documents. Invented in 1989 by Sir Tim Berners-Lee at CERN.

- **Hypertext documents**
  It is a type of document that has 'links' to other texts. All webpages are hypertext documents that are written in HTML.

- **World Wide Web Consortium (W3C)**

- **Internet Protocol (IP) Address**

- **Browser**

- **Uniform Resource Locator (URL)**

- **Webserver**

BROWSERS

- Browsers are web clients / send requests

- Type of Browsers
  - Command-line browser
  - Graphical Interface browser

- What purpose do they serve?

- Browser Engines

WEB SERVER

- What is it?

  Sofware that responds to browser requests

- What does it do?

  Listens on a server port for HTTP requests

- Examples

  Apache, IIS, Nginx, TomCat

HTTP
Hypertext Transfer Protocol

- HTTP Requests

  - What does the request need to have?

- Web Server

  - Handle HTTP requests

  - Creates and sends a HTTP response

- HTTP Response

  - Status Codes (2xx, 3xx, 4xx, 5xx)

  - Header

  - Body

MORE COMPONENTS

- URL

  http://google.com

- Protocol

  https://maps.google.com

- Host name / IP Address

  google.com, 192.168.0.0

- Port

  https://maps.google.com:8080

- Top-level-domain

  .com, .net, .edu, .co.uk, etc.

- Sub-domain

  http://its.syr.edu/visitors/visitors-future.html

IP ADDRESS

- What is your IP address?

- 128.230.74.20

- Special Addresses

  - 127.0.0.1

  - localhost

  - 192.168.x.x

- Host Names

  - DNS

400 Ostrom Ave
Syracuse, NY 13210

My Office Address

43.038161, -76.134894

PACKET ROUTING

David Talley
400 Ostrom Ave
Syracuse, NY 13210

Asha Prakash

123 Some St

Aurora, IL 60503

SUMMARIZE TODAY'S CLASS

HTML

Next Class