ANATOMY OF THE WEB

Week 1 - IST 263

Section M005

AGENDA

- Web Components
- How does the web work?
- Github Walk through

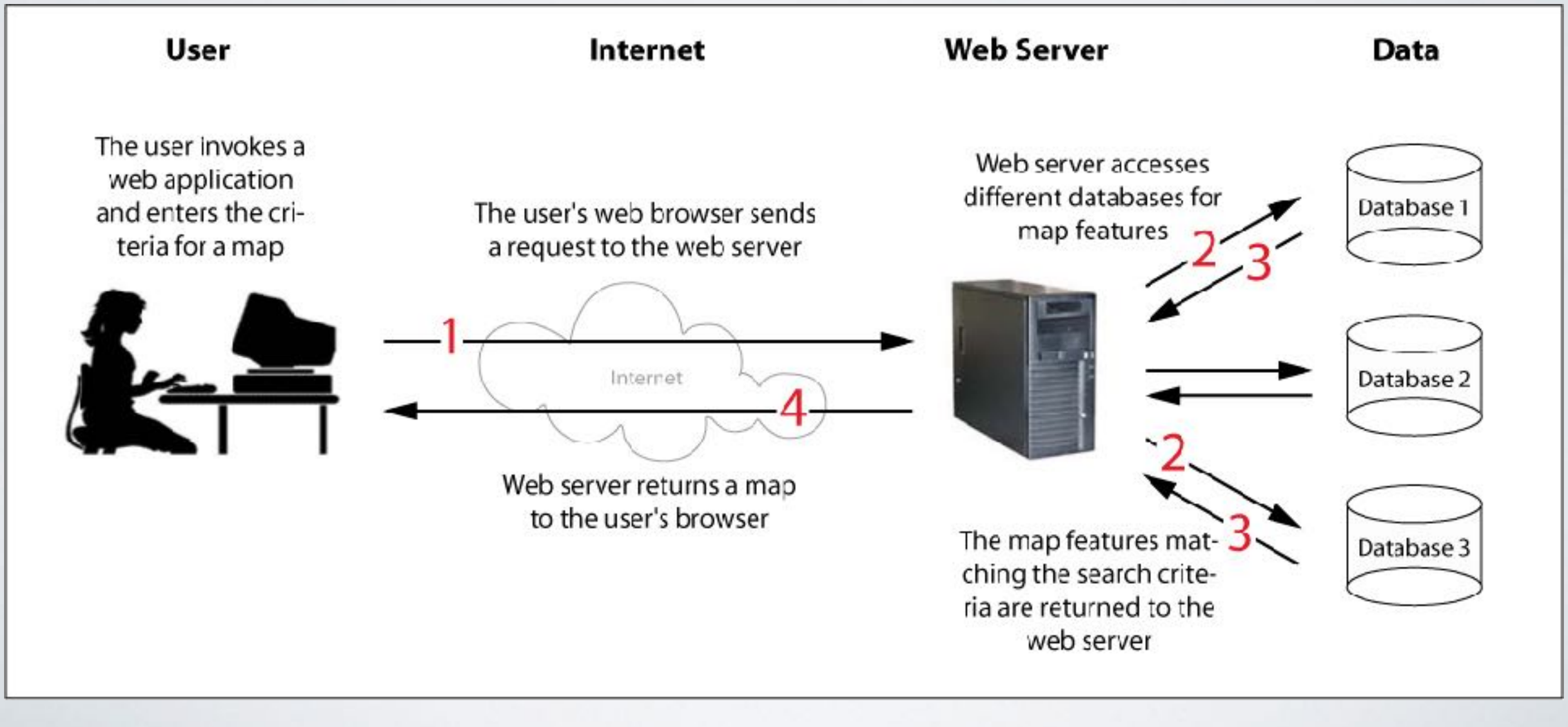
FAVORITE WEBSITE

INTERESTING FACTS

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

- **World Wide Web (Web)**
  This is a byproduct of the Internet. The Web is a system of extensively interlinked hypertext documents

- **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?

  A program that responds to browser requests

- What does it do?

  Listens on a 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, 4xx, 5xx)
    - Header
    - Body

MORE COMPONENTS

- URL

http://google.com

- Protocol

https://maps.google.com

- Host name / IP Address
- Port

https://maps.google.com:8080

- Top-level-domain

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

- Sub-domain

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

Avi Kadaji
400 Ostrom Ave
Syracuse, NY 13210

Asha Prakash
123 Some St
Aurora, IL 60503

SUMMARIZE TODAY'S CLASS

HTML

Next Class

SUPPLEMENTAL INSTRUCTION

Git & GitHub

GIT & GITHUB

- All homework & project has to be submitted via GitHub

- GIT is not the same as GITHUB

- What is GIT?

- What is GitHub?

NEW WORKFLOW

- Pull from GitHub
- Commit to Git
- Push to GitHub