

# ANATOMY OF THE WEB

Week 1 - IST 263

Section M005

# AGENDA

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

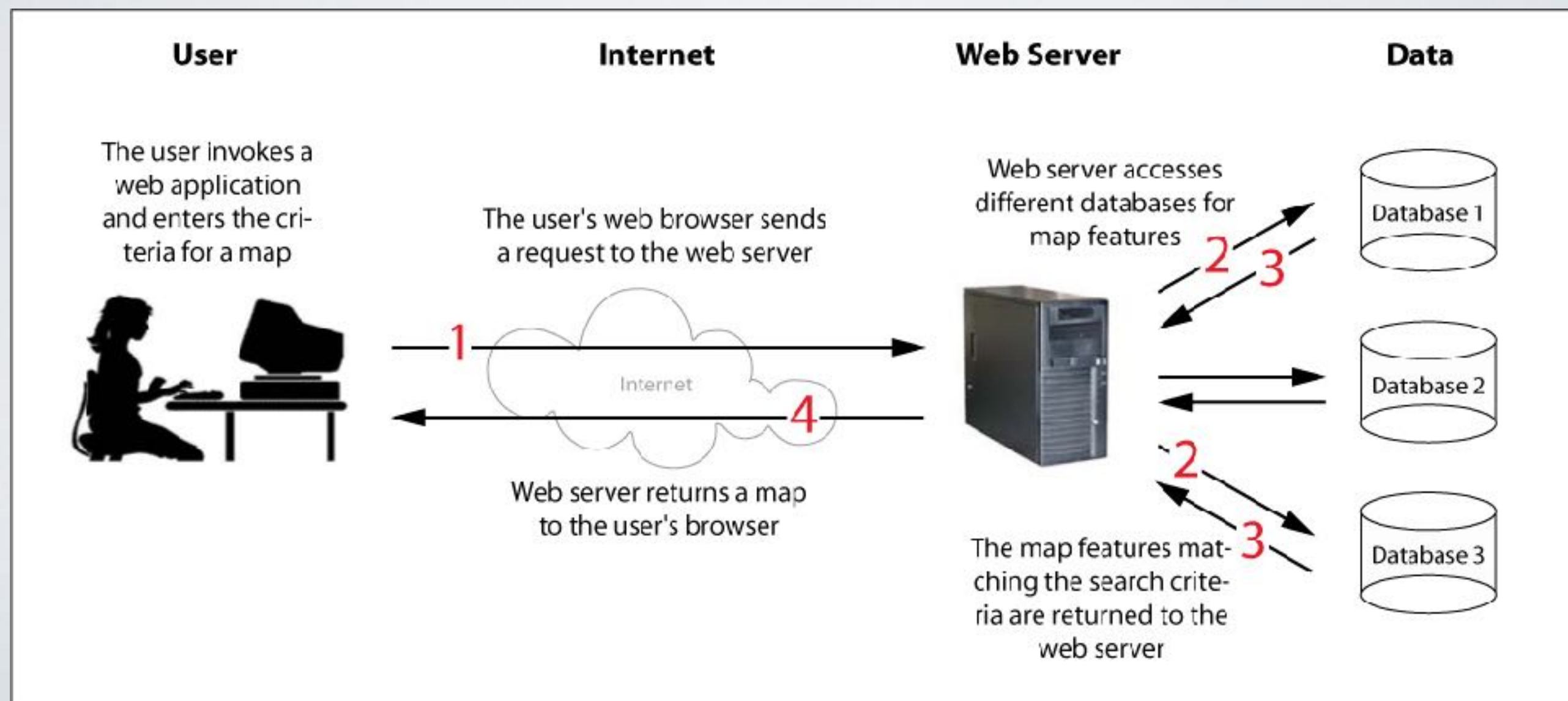
FAVORITE WEBSITE

# 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

## Restaurant

- Strip Mall / Complex
- Building
- Building No.
- Food
- Menu
- Menu Items
- Chef / Cook

## Web

- Internet
- World Wide Web (Web)
- Internet Protocol (IP) Address
- Hypertext documents
- Browser
- Uniform Resource Locator (URL)
- Webserver

# 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
- Type of Browsers
  - Command-line browser
  - Graphical Interface browser
- What purpose do they serve?
- Browser Engines

# WEB SERVER

- What is it?

A Program that uses HTTP to serve files

- What does it do?

Listens on a port for HTTP requests

- Examples

Apache, IIS, Nginx, TomCat

# 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**

# 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
- Sub-domain <http://its.syr.edu/visitors/visitors-future.html>

# HOW DOES POSTAL MAIL WORK?

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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