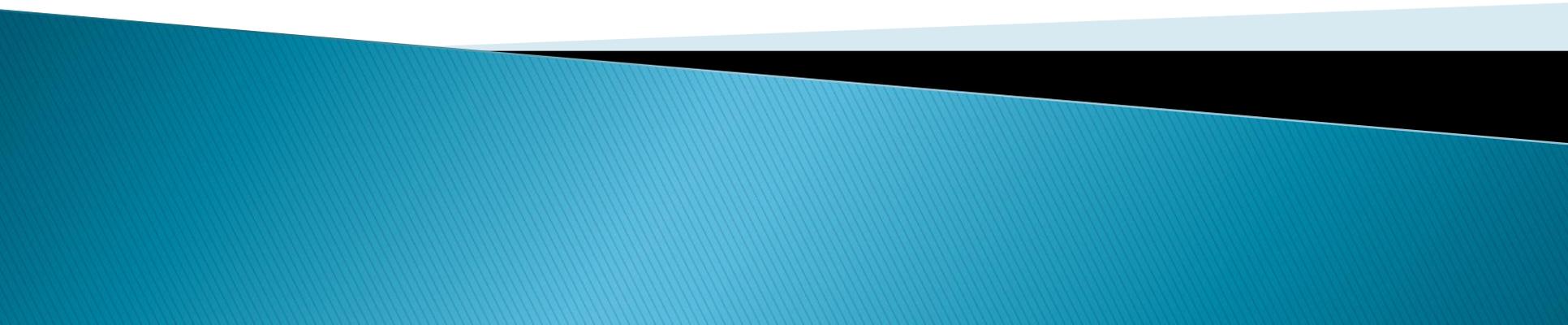


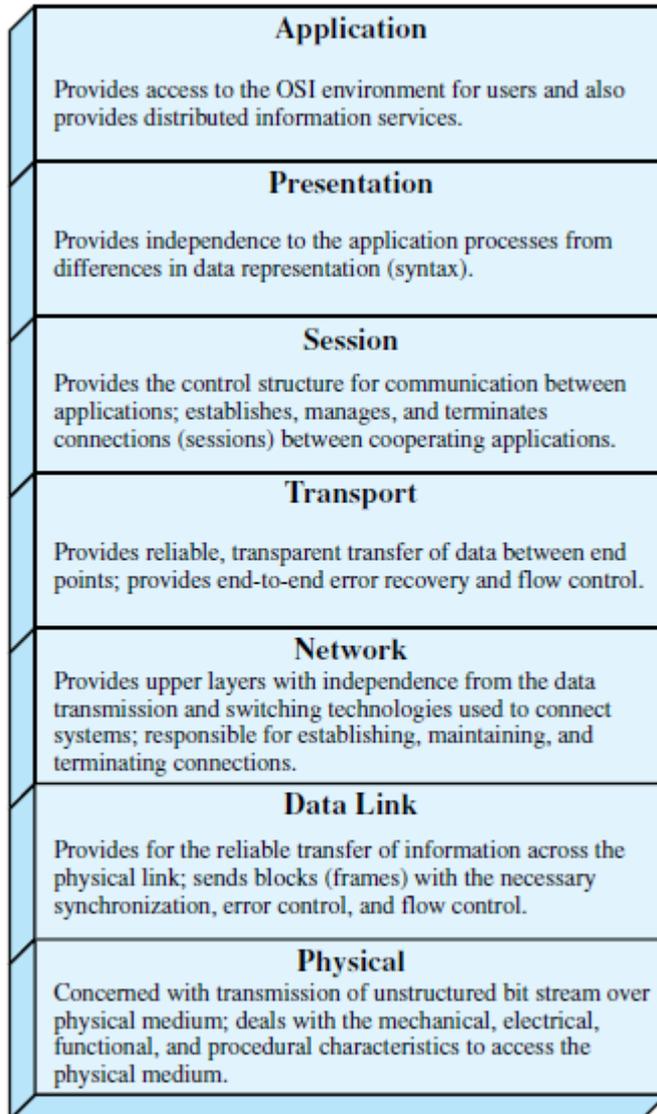
Web Design Internet Programming Introduction

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OSI: Open Systems Interconnection

TCP/IP



Transport: Port number
(Segment)

TCP, UDP

Network: IP (Packet)

Data Link: MAC (Frame)

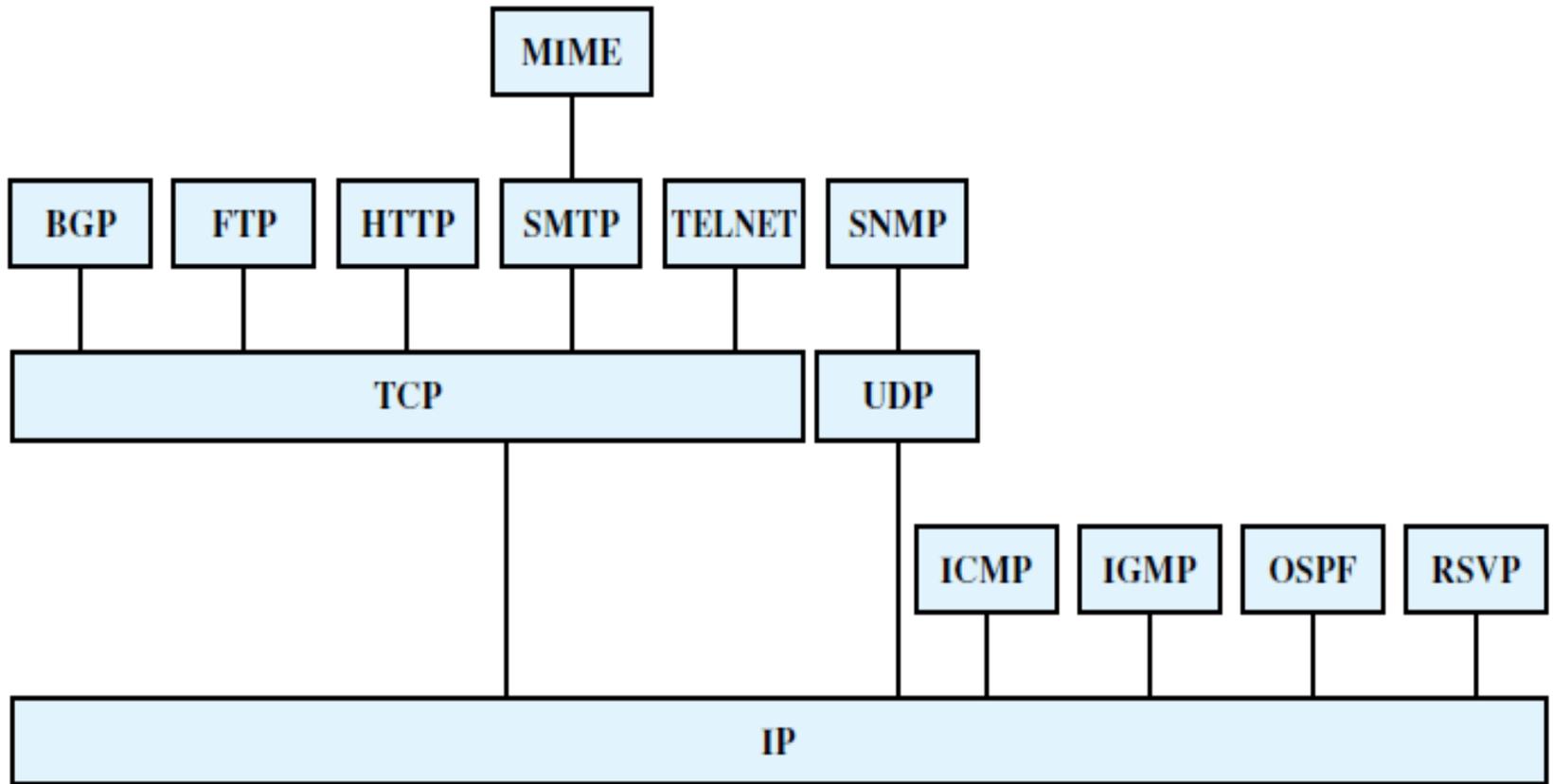
TCP: Transmission Control
Protocol

UDP: User Datagram
Protocol

IP: Internet Protocol

MAC: Media Access Control

PDU: Protocol Data Units



BGP = Border Gateway Protocol
FTP = File Transfer Protocol
HTTP = Hypertext Transfer Protocol
ICMP = Internet Control Message Protocol
IGMP = Internet Group Management Protocol
IP = Internet Protocol
MIME = Multipurpose Internet Mail Extension

OSPF = Open Shortest Path First
RSVP = Resource ReSerVation Protocol
SMTP = Simple Mail Transfer Protocol
SNMP = Simple Network Management Protocol
TCP = Transmission Control Protocol
UDP = User Datagram Protocol

- ▶ Client Server Architecture
 - ▶ DNS: Domain Name System
 - ▶ URL: Uniform Resource Locators
 - ▶ HTML: Hypertext Markup Language
 - ▶ HTTP: Request (GET or POST) & Response
- 

Clients and Servers:

- ▶ What does your web server do?
- ▶ A web server takes a client request and gives something back to the client.
- ▶ A web *browser* lets a user request a *resource*. The web *server gets* the request, finds the resource, and returns something to the user. Sometimes that resource is an HTML page. Sometimes it's a picture. Or a sound file. Or even a PDF document.
- ▶ When we say “server”, we mean either the physical machine (hardware) or the web server application (software).

Clients and Servers:

- ▶ What does a web client do?

A web client lets the user request something on the server, and shows the user the result of the request.

- ▶ When we talk about *clients*, we usually mean both (or either) the *human* user and the browser *application*.
- ▶ The browser is the piece of software (like IE or Mozilla) that knows how to communicate with the server. The browser's other big job is interpreting the HTML code and rendering the web page for the user. The client is the browser app doing what the user asked it to do.

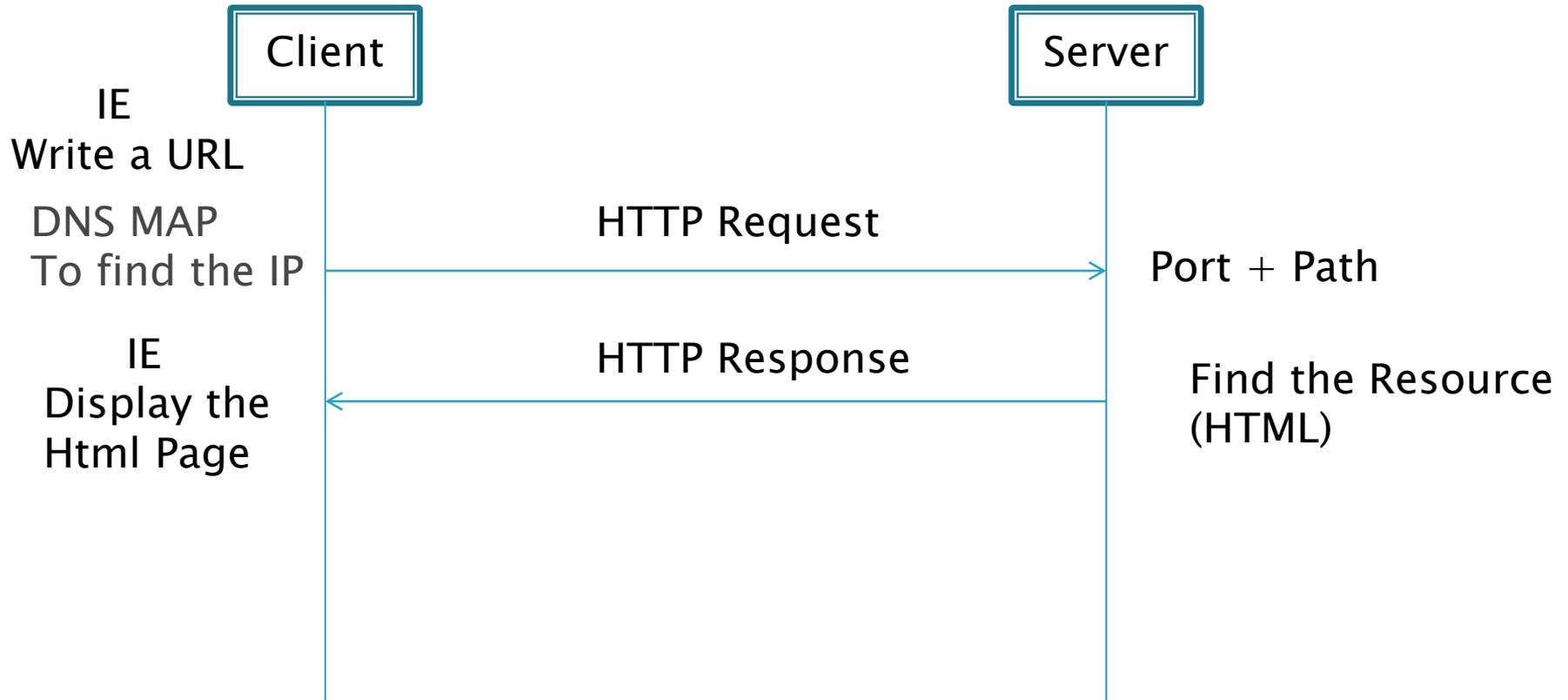
URL

- ▶ `http://www.basrahuni.com:80/education/computer/lab1.html`
 - ▶ **(http://) Protocol:** tells the server which communications protocol.
 - ▶ **(www.basrahuni.com) Server:** the unique name of the physical server you are looking for. This name is maps to a unique IP address.
 - ▶ **(:80) Port:** this part of the URL is optional. A single server supports many ports. A server application is identified by a port.
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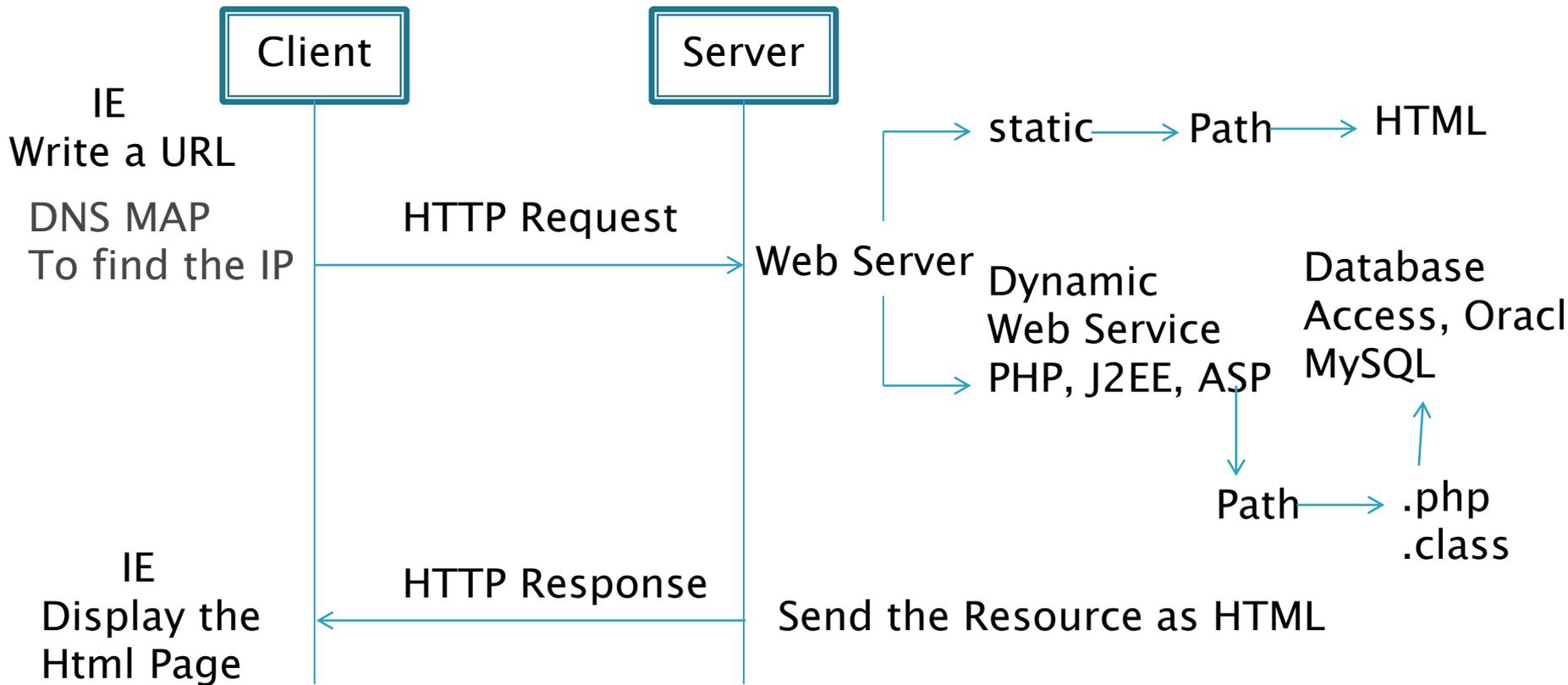
URL

- ▶ (education/computer/) **Path**: the path to the location, on the server, of the resource being requested.
 - ▶ (**lab1.html**) **Resource**: the name of the content being requested. This could be an HTML page, a servlet, an image, PDF, music, video, or anything else the server feels like serving.
 - ▶ If this optional part of the URL is left out, most web servers will look for index.html by default.
- 

Static & Dynamic web pages



Static & Dynamic web pages



Web Server & Services

- ▶ Apache: Web Server
 - ▶ Apache-Tomcat: Web Server + J2EE
 - ▶ WAMP Server: Web server + PHP + MySQL
 - ▶ XAMPP Server: Web server + PHP + MySQL
- 

Internet Terminology

- | | | |
|------------|----------|---------------|
| ▶ Internet | Browser | ISP |
| ▶ www | IP | Modem |
| ▶ Protocol | URL | Search engine |
| ▶ FTP | DNS | |
| ▶ HTTP | Download | |
| ▶ SMTP | Upload | |
| ▶ POP | Email | |

Scripts

