

Computer Programming

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Session: Internet Technologies (Web)

Overview of This Lecture



- Networks and Protocols

For more Information

https://en.wikipedia.org/wiki/World_Wide_Web

https://en.wikipedia.org/wiki/Computer_network

Technologies



- LAN and WAN
- Basic Networking
 - Layered Models, IP Address, DNS
- Internet Layers and Protocols
 - (Inter)Network – IP
 - Transport – TCP and UDP
 - Application – HTTP, FTP, Email

World Wide Web



- Need for Large Teams of Physics Researchers to Share portions of reports, drawings, photos, ...
- Copy Multiple Files, Then Search
- Tim Berners-Lee, CERN
 - Proposed HTTP and HTML 1989-91
- Marc Andreessen, NCSA
 - Built Mosaic Browser (91-93)

Dimensions of WWW



- Basic Characteristics
 - Hyperlinks-Distributed Documents
 - URL : Uniform Resource Locator
 - Multimedia data

Web Based Information System



- Servers Containing Information
 - Information Resource
 - HTTP Server, Data Base Server
- Clients Interacting With One or More Information Resources
 - Through Browsers

URL



- Uniform Resource Locator
 - Protocol (Also Called Scheme)
 - DNS Server
 - Local Unique Name of Page
- Protocol Could Be Any Of
 - http, ftp, file, news, telnet, mailto,

Hyper Text Transfer Protocol



- Application layer protocol
- ASCII request-reply based protocol
- `http://host [port] [path to resource]`

HTTP Message Types



- Request *Message*
 - Method may be “GET” or “POST” among others
- *Response Message*
 - Status of Request, Message Body

HTTP Methods



- Get (Request To Read a Page)
- Head (Request To Read Header)
- Put (Request To Store a Page)
- Post (Append To a Named Page)
- Delete (Remove a Page)
- Link (Connect Two Resources)
- UNLINK (Disconnect)

Summary



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